

Pricing the Sky: Analysing Real-World Demand for U-space Services



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A data-driven market
viability analysis for future
U-space Business Models



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We would like to thank each member of the BURDI consortium for the amazing journey we have shared in the BURDI project. This white paper addresses key topics such as market maturity in an infant industry, leveraging derived demand for business models, willingness to pay and price sensitivity, drivers for adoption like safety and efficiency, and the impact of regulatory ambiguity on costs. It aspires to be a guiding light for creating sustainable and scalable U-space ecosystems that foster innovation and the safe integration of drones into European airspace.

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About Future Needs

Future Needs Management Consulting Ltd. is a leading research and consultancy firm dedicated to supporting tech innovators, public institutions, and private stakeholders as they navigate complex, emerging domains. Our mission is to bridge the gap between proof-of-concept and market reality by combining socio-economic analysis, market research, and user-centred methodologies. We support evidence-based decision-making in areas where regulatory frameworks, technological innovation, and societal impacts intersect.

Our expertise covers the full innovation lifecycle:

- **R&D Funding:** We specialise in securing funding for our clients and managing high-impact projects within the EU research landscape.
- **Socio-economic Research:** We leverage social sciences and behavioural insights to test innovations with real markets and users, ensuring solutions are not only technically feasible but also viable, socially acceptable and easy to use.
- **Market Entry & Business Planning:** We transform technical excellence into commercial success through robust go-to-market strategies, business modelling, and financial planning.
- **Strategic Communication:** We ensure research results achieve maximum impact through targeted dissemination and high-quality content creation.

At Future Needs, we believe that sustainable innovation requires more than just advanced technology—it requires a deep understanding of human behaviour and market dynamics. Whether we are helping a start-up enter the market or assisting a consortium in shaping European policy, we provide the practical, policy-relevant insights needed to turn experimentation into real-world deployment. This whitepaper is a prime example of our research work, conducted in the framework of the BURDI project, where Future Needs led the analysis of market and user-related aspects of U-space deployment. By designing demand-side research and analysing stakeholder perceptions on pricing and regulation, we provided the evidence-based insights necessary to assess market maturity and economic feasibility.

<https://futureneeds.eu/>





A Message from our Founder

The integration of drones into European airspace is no longer a technical 'if'—it is a strategic 'when.' As we move from policy design to real-world implementation, the industry faces a critical pivot point: transitioning from regulatory compliance to market viability.

At Future Needs, we recognise that U-space is currently an 'infant industry' at a crossroads. While technical frameworks are maturing, the industry has lacked the empirical data needed to understand true user demand and pricing sensitivity. Through our work with the EU-funded BURDI project, we have bridged this gap. This whitepaper offers a clear-eyed analysis of early demand signals, providing the market intelligence necessary for service providers and policymakers to build a sustainable, scalable ecosystem. We are proud to share these insights to help shape the future of European flight.



**Let's build the future
of the drone industry together.**

Anna Palaiologk
Founder of Future Needs

ABOUT THE METHODOLOGY

What is Willingness to Pay and how is it used?

At its core, Willingness to Pay (WTP) is a concept used to determine the maximum price a customer is willing to spend for a product or service. It isn't just about what something "should" cost; it's about the specific threshold where a consumer decides that the value they receive is equal to the money they give up. If a company sets a price even slightly above this threshold, the consumer will typically walk away because the perceived utility of the item no longer outweighs the cost of the capital.

To uncover this threshold, researchers employ several methodologies, ranging from simple inquiry to complex behavioural modelling. Direct surveys are the most straightforward approach, though they often suffer from strategic bias where respondents intentionally lowball their answers to influence future market prices. To combat this, the Van Westendorp Price Sensitivity Meter uses a series of four targeted questions to identify a range of acceptable prices, helping to pinpoint where a product becomes too expensive to consider or so cheap that its quality is questioned. More sophisticated techniques like Conjoint Analysis force consumers to make trade-offs between various features and price points. By observing these choices, businesses can mathematically isolate the specific dollar value assigned to individual attributes, such as a longer warranty or a more premium material. Alternatively, the Revealed Preference method moves away from hypothetical questions entirely and looks at historical sales data or live A/B test results to see how consumers actually behave when faced with a real transaction.

Why Willingness to Pay matters?

The ultimate goal of analysing WTP is to maximise both profit and customer satisfaction through value-based pricing. This data allows for:

- 01. Price Discrimination:** Companies use it to offer different tiers or discounts to capture various segments of the market without leaving money on the table (e.g., student discounts vs. corporate rates).
- 02. Feature Prioritization:** The engineering team knows where to focus as they can prioritise development efforts toward the attributes that provide the most significant boost to perceived value.
- 03. Value-Based Pricing:** It shifts the conversation from "How much did this cost to make?" to "How much is this worth to the human buying it?" in Product Marketing and Revenue Management teams.

In economic terms, the gap between what a customer was willing to pay and the actual market price is known as consumer surplus. When a business understands this dynamic, they can prioritise the features that drive the highest perceived value while maintaining a price point that feels like a fair trade to the buyer.

Introduction

The deployment of U-space* services is a key enabler for the safe and efficient integration of drones into European airspace. As regulatory frameworks move from design toward early implementation, understanding not only technical readiness but also market and demand conditions becomes increasingly important.

While policy and technical aspects of U-space have been widely discussed, less empirical evidence exists on how potential users perceive these services, how frequently they expect to use them, and under what pricing conditions adoption may occur. This gap is particularly relevant given that U-space currently exhibits many characteristics of an emerging or “infant” industry, including limited adoption, evolving regulatory implementation, and high sensitivity to costs.

This paper addresses these issues by analysing early demand signals for U-space services based on survey evidence collected within BURDI, an EU-funded project. Focusing on users’ willingness to pay, anticipated usage patterns, preferred pricing models, and perceptions related to regulatory requirements across different national contexts, the paper aims to support informed discussion among policymakers, service providers, and other stakeholders as U-space moves toward broader deployment.

The scope of the whitepaper is intentionally limited to the early deployment phase of U-space, reflecting a market that is still evolving in terms of operational maturity, regulatory implementation, and commercial structures. The findings are derived from 42 respondents who use it on a trial basis (or intend to use it) for various purposes, such as research, B2B services, such as city operations, port operations, premises inspections, and hobby flying. These services are used to characterise the current state of demand, price sensitivity, and adoption drivers, rather than to forecast long-term market size or revenue potential.

This paper does not aim to provide a full cost–benefit analysis, detailed financial projections, or regulatory impact assessments. Instead, it seeks to inform policymakers, service providers, and other stakeholders about key economic and behavioural factors that may influence the transition from a supported, early-stage U-space environment to a more mature and commercially viable market. The insights presented are therefore intended to support strategic discussion, policy design, and business model development, while acknowledging the uncertainties inherent in an emerging sector.

* A set of new services relying on a high level of digitalisation and automation of functions and specific procedures designed to support safe, efficient and secure access to airspace for large numbers of UAS.

Source: uspacewiki.eu/terms/u-space

01 Market Maturity: The "Infant Industry" Dilemma

In economic terms, an “infant industry” refers to a market that has not yet reached sufficient scale, operational stability, or cost efficiency to sustain itself without support. At this stage, limited adoption, high uncertainty, and strong sensitivity to costs are common characteristics, even when long-term interest and underlying value are present. The survey's findings are heavily weighted toward the Benelux market, as over 80% of responses originated from the Netherlands and Belgium. This sample consists of drone operators including primarily commercial users (over 61% for Work) and secondarily hobbyists (32%).

Our analysis indicates that the U-space market is currently at an early stage of development. As illustrated in Figures 1 and 2, current market penetration

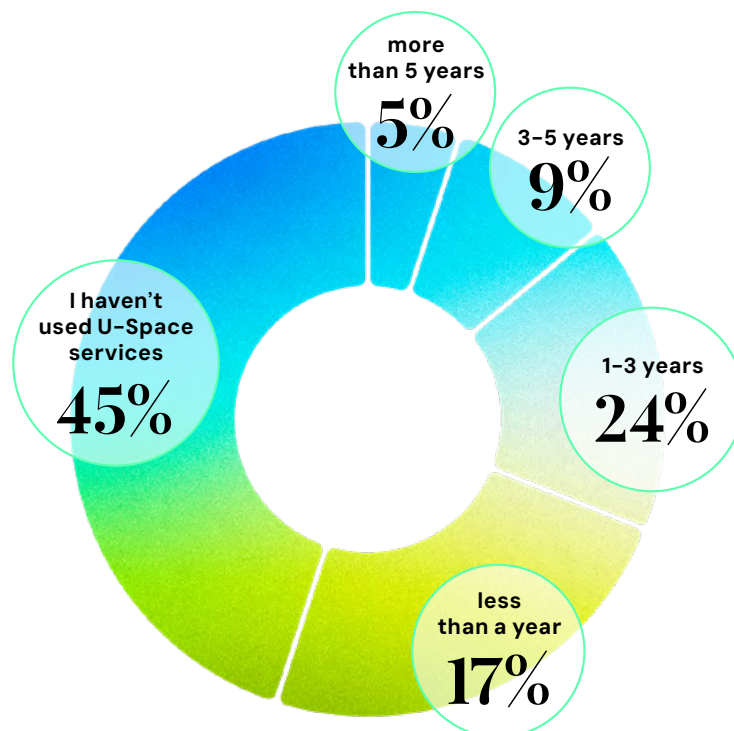


Figure 1 For how long have you been using U-space services?

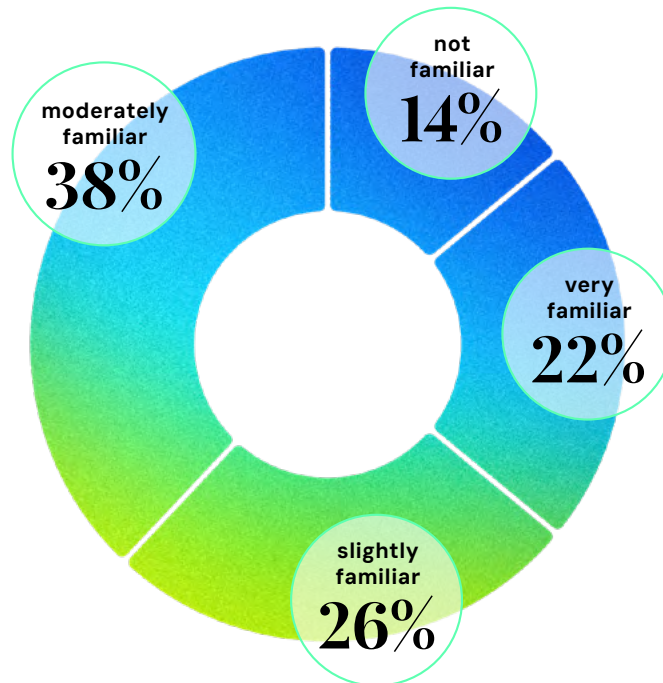


Figure 2 How familiar are you with U-space value added services?

remains limited, confirming that U-space exhibits the classic characteristics of an infant industry. However, low current usage should not be mistaken for a lack of interest. Despite the limited familiarity with U-space services revealed by many respondents, Figure 3 shows that more than half of the participants express a strong interest in the future development of the U-space sector.

This contrast between limited present adoption and high stated interest highlights the presence of latent demand in the U-space market, meaning that consumers want or need something, but they can't buy it yet because it isn't available in the market. While current uptake remains low, the survey results indicate that future demand could materialise as operational experience grows and as economic, regulatory, and organisational barriers are progressively addressed.

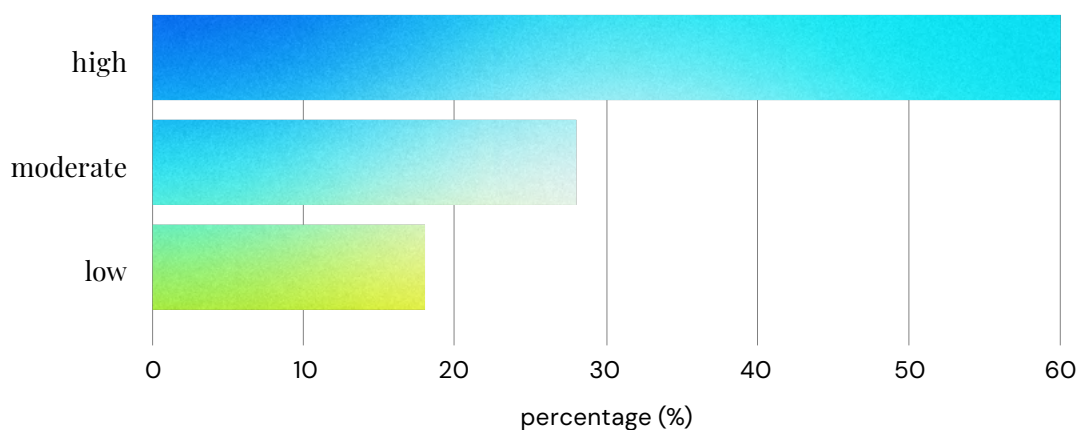


Figure 3 How would you evaluate your interest in future U-space developments?

02 Leveraging Derived Demand to develop viable Business Models for U-space services

Understanding the nature of demand is a prerequisite for designing sustainable and realistic business models for U-space services. The survey results presented in Figure 4 show that most respondents expect to use U-space services on an occasional basis rather than continuously. From an economic perspective, this pattern indicates that demand is tied to specific tasks, missions, or projects, classifying it as a "derived demand".

In practical terms, this means that demand for U-space services does not exist on its own, but only arises when a specific drone** operation requires additional coordination, authorisation, or safety assurance. When such missions are absent, demand for U-space services also falls, reinforcing the episodic and mission-driven nature of usage observed in our analysis.

* Derived demand, in economics, is the demand for a good or service that results from the demand for a different, or related, good or service.

** A colloquialism for an unmanned aircraft or vehicle designed to operate autonomously or via remote control. Technical terms for aircraft include Unmanned Aircraft System (UAS), Unmanned Aerial Vehicle (UAV), or Remote Piloted Aircraft System (RPAS). **Source:** uspacewiki.eu/terms/drone

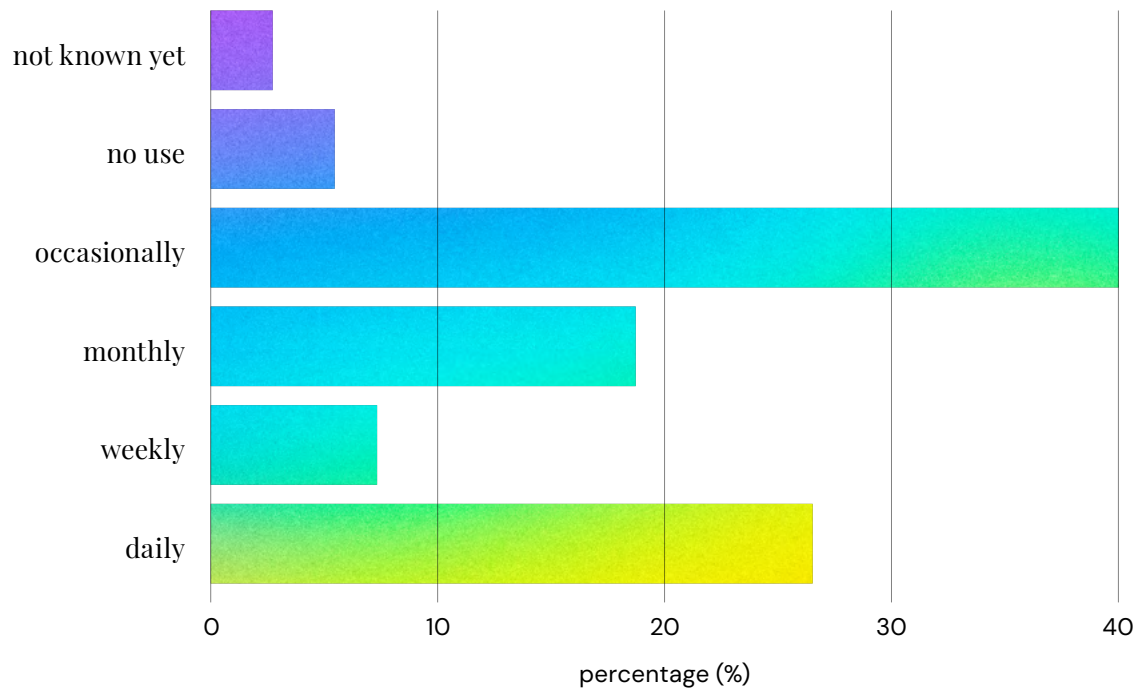


Figure 4 How often do you plan to/ would you conduct operations requiring U-space services?

This usage profile has important strategic implications for revenue model design. In particular, it suggests that pricing structures aligned with mission-based or per-operation usage are better suited to current demand characteristics. Models relying on monthly or annual subscriptions appear less well aligned at this stage, as they do not reflect the sporadic and mission-critical nature of user operations. This conclusion is further supported by the clear user preference expressed for pay-per-flight pricing schemes.



03 Willingness to Pay and Price Sensitivity

Willingness to pay refers to the maximum amount an individual or organisation is prepared to pay for a good or service under given conditions. In emerging markets such as U-space, where pricing structures are still evolving, willingness-to-pay analysis is commonly used to assess demand-side expectations, price sensitivity, and adoption thresholds in the absence of established market prices.

Our willingness-to-pay analysis provides critical insights into the current commercial viability of U-space services. As illustrated in Figure 5 and 6, the survey reveals a high degree of price sensitivity among participants. Approximately 40% of respondents state they have no current intention to use or pay for U-space services, and among those who do, the maximum

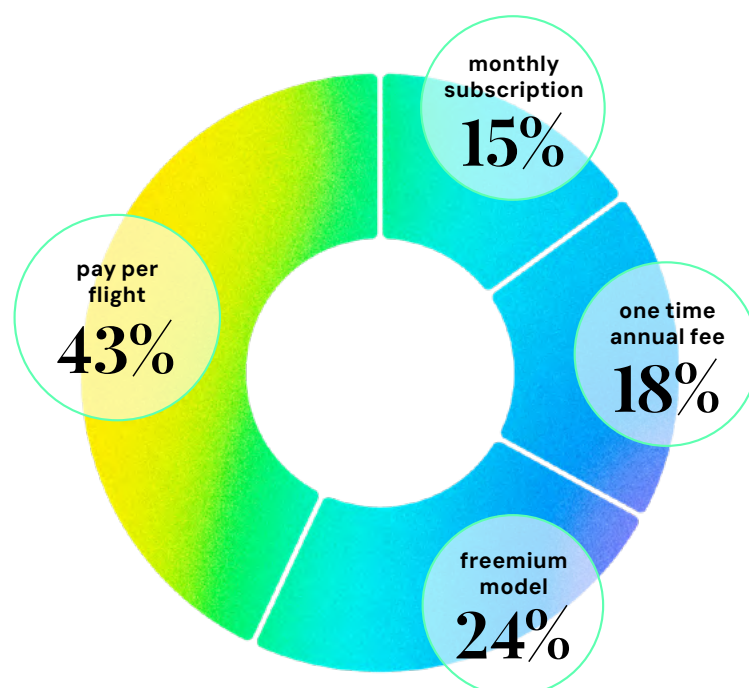


Figure 5 What is your preferred mode of paying for these services?

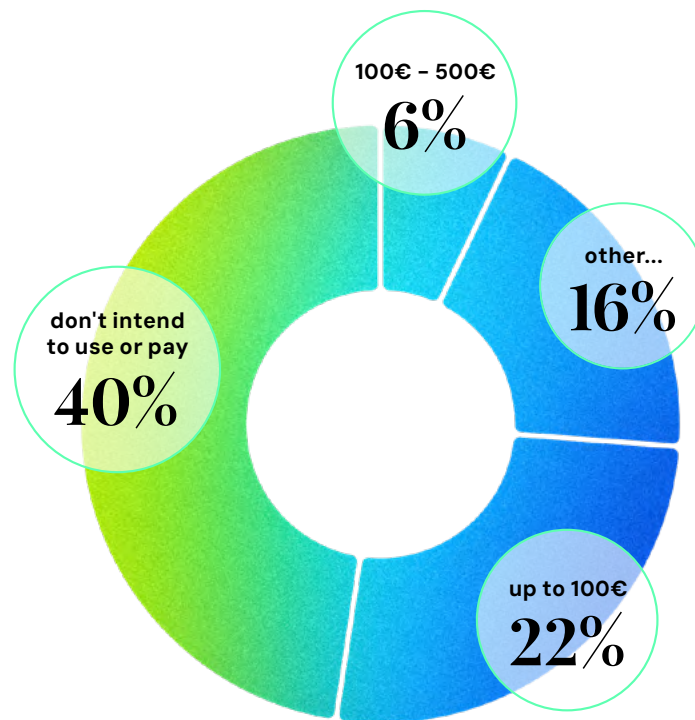
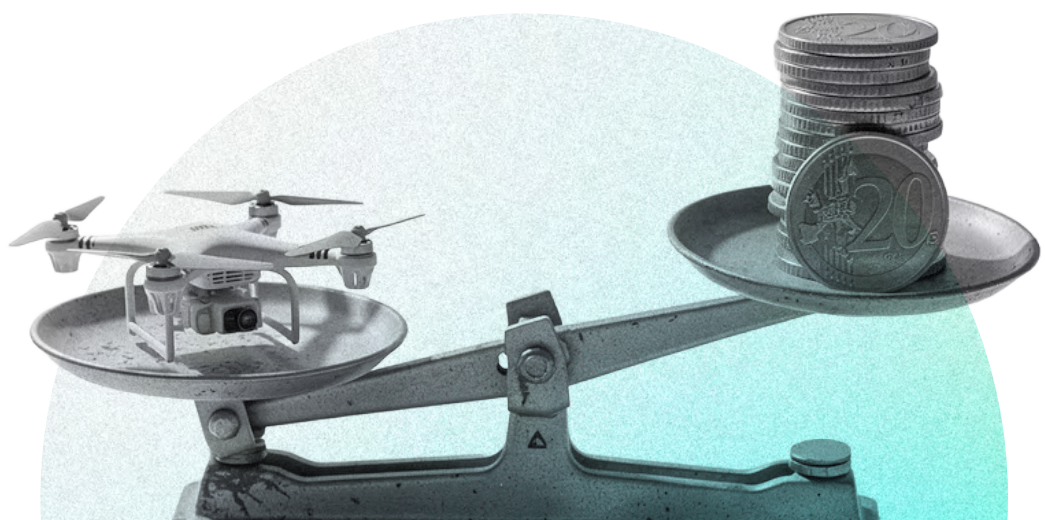


Figure 6 How much do you intend to pay per typical operation using U-space services?

willingness-to-pay caps at approximately €100 per operation. These findings indicate that demand is currently highly price-sensitive (elastic), which means that consumers are very reactive to changes in price. Even a small "nudge" in what you charge leads to a massive swing in how much people buy.

A closer examination of the Willingness to Pay (WTP) data reveals significant divergence across user groups and national markets. 83% of respondents from the Netherlands stated they "Do Not Intend to Pay" for a typical U-space operation. This indicates a high level of price resistance or an expectation that these services should be free or heavily subsidised. Only 54% of Belgian



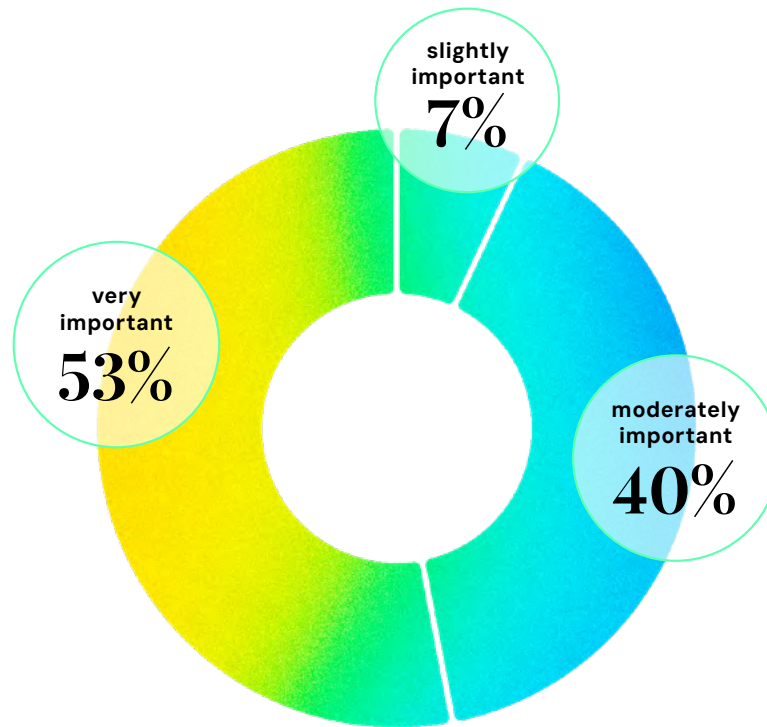


Figure 7 How important do you consider the cost in decision-making to use U-space services?

respondents stated they "Do Not Intend to Pay." Furthermore, a higher percentage of Belgian respondents provided a payment range (e.g., "Up to 100€") or selected "Other..." (30.77%). This suggests a greater willingness to consider and engage with a paid service model, potentially due to different market maturity, regulatory environments, or current user habits. 80% of Hobby Flying users stated they "Do Not Intend to Pay." For non-commercial, recreational activities, a fee-based model is clearly less appealing and could be a major barrier to adoption. 63% of Work users also stated they "Do Not Intend to Pay," but this is a lower percentage than for Hobby Flying. Crucially, Work users account for nearly all responses in the "Other..." payment category (26.32% of this group).

This pronounced price sensitivity is consistent with the early stage of market development and the limited operational experience many respondents report with U-space services. Rather than indicating a lack of perceived relevance, the results suggest that users have not yet fully internalised U-space as a distinct, value-differentiated service within their existing cost structures. As shown in Figure 7, cost considerations play a dominant role in decision-making regarding the adoption of U-space services, underscoring the importance of affordability and proportional pricing in early deployment phases.

04 Drivers for Adoption: Cost vs. Value

The survey results provide important insights into the factors driving user adoption of U-space services. As illustrated in Figure 8, respondents tend to prioritise direct, operational benefits when evaluating the potential value of U-space. Safety is consistently ranked as the most important expected benefit, followed by efficiency-related aspects, while broader environmental and social impacts receive comparatively lower but significant scores.

These findings suggest that, from the perspective of end users, at this moment in time immediate and tangible operational outcomes play a more decisive role in adoption decisions than wider societal objectives. This does not imply that policy-oriented goals are unimportant, but rather that individual users primarily assess U-space services based on how effectively

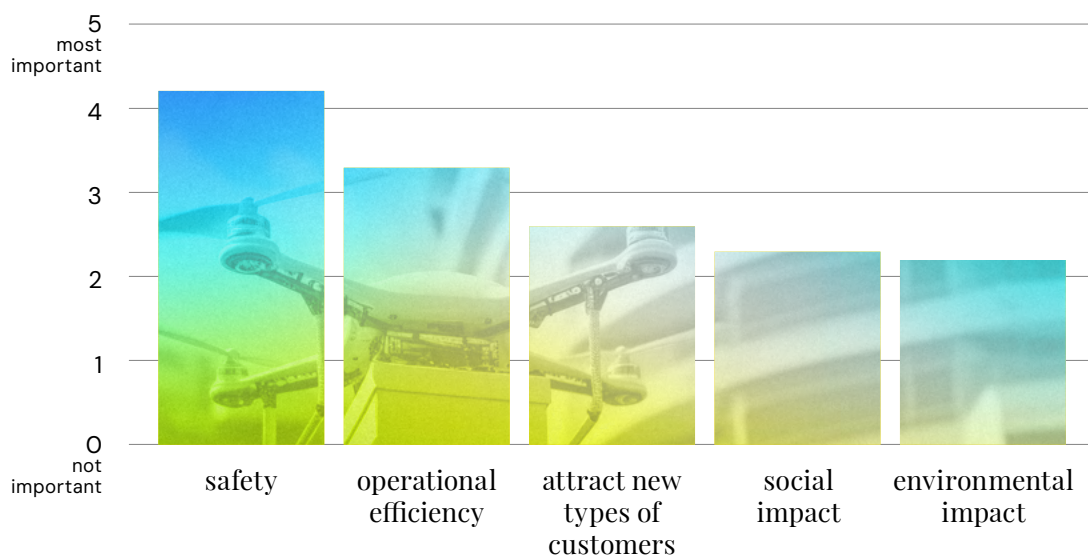


Figure 8 Rank the following expected benefits from the implementation of U-space services.

they support safe, reliable, and efficient operations. Consequently, early-stage communication and engagement strategies for U-space may be more effective when they emphasise user-relevant benefits such as safety assurance and operational efficiency, while remaining aligned with broader policy objectives.

Beyond cost considerations, our analysis highlights several additional factors influencing adoption. As shown in Figure 9, service quality, availability, and operational complexity emerge as the most influential non-price determinants of users' willingness to adopt U-space services. In fact, users want services that are easy, available, and trustworthy. This suggests that while regulatory compliance is the baseline, user experience is the catalyst required to convert latent desire into real-world demand. If the operational burden of accessing U-space outweighs the perceived efficiency gains, even the most technically advanced services will struggle to gain traction. Consequently, U-space should be developed and marketed not just as a set of rules, but as a sophisticated service ecosystem where reliability and ease of use are the primary drivers of commercial scaling.

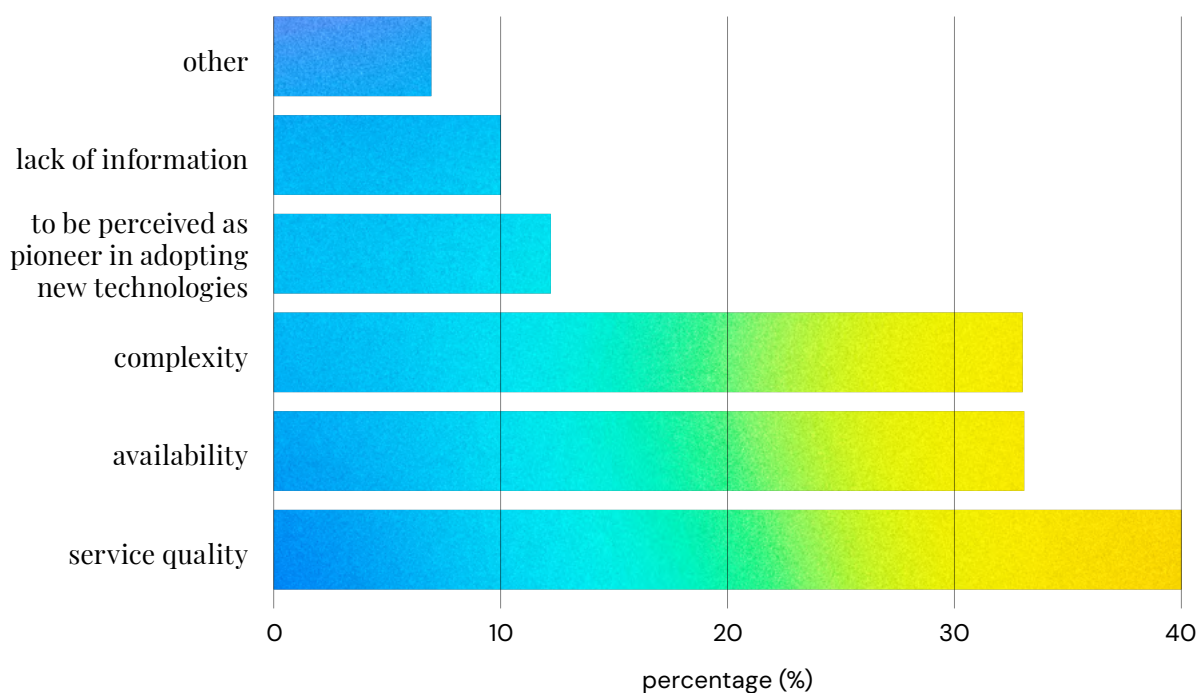


Figure 9 What other factors influence your willingness to adopt U-space services?

05 The Regulatory Barrier: Ambiguity as a Cost

Our analysis indicates that regulatory uncertainty is a primary driver of cost perceptions and a significant deterrent to investment in U-space services. The data in Figure 10 reveals a polarised market: while approximately half of the respondents expect differing national regulations to have a 'Significant impact' on costs, the remainder anticipates only a 'Minimal' effect. This divergence reflects a profound state of market ambiguity, which in itself serves as a barrier to entry. Notably, the majority of respondents (51%) indicated that their outlook 'depends on the new requirements.' This suggests that the core challenge is not merely the potential for price increases, but the operational complexity born from regulatory fragmentation. Ultimately, these findings underscore the economic necessity of cross-border harmonisation; uniform regulations across European member states are essential to provide the predictability required for robust market planning and long-term investment. In short, besides the price-tag, the industry is currently in a 'wait-and-see' state because the rules are still a moving target.

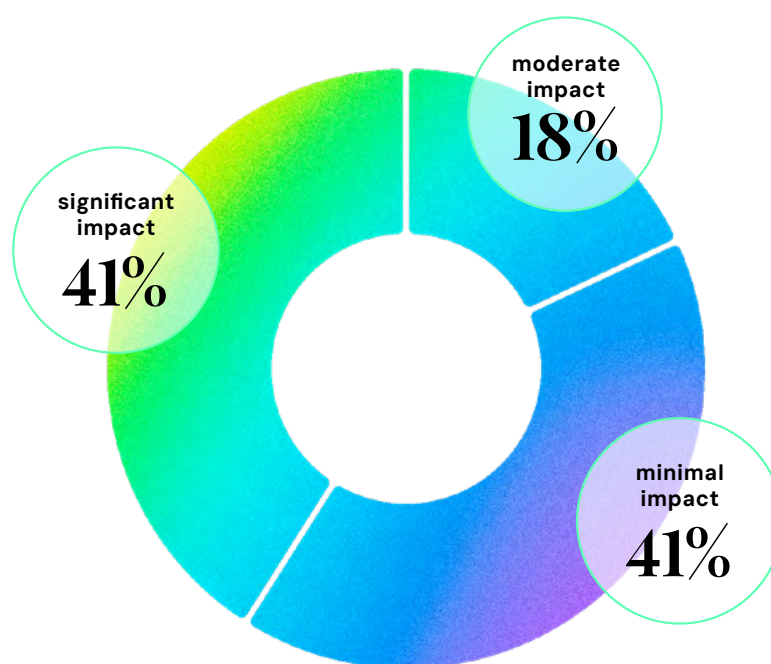


Figure 10 How do you anticipate regulatory requirements in different countries (e.g., Belgium vs. Netherlands) influencing the cost of U-space services?

06 High Cost-Sensitivity in Early Adoption

The U-space sector possesses strong underlying fundamentals but faces immediate hurdles typical of an infant industry. As illustrated in Figure 11, users report very limited willingness to allocate additional budget for supporting fees such as equipment upgrades or training. In practice, this implies that even relatively small additional costs can influence whether users decide to adopt or expand U-space-enabled operations, particularly at this early stage of market development. In many cases, respondents indicate little to no tolerance for extra costs beyond their current average operational expenses. These findings suggest that successfully managing the transition from a heavily supported early-stage market to a more mature and commercially viable U-space ecosystem will require adjustments in strategy from all market players. In particular, supply and demand models should remain closely aligned with project- or mission-based usage patterns, reflecting the episodic nature of demand observed in the survey. At the same time, service providers will need to focus on reducing complexity and improving usability in order to strengthen perceived value and encourage adoption.

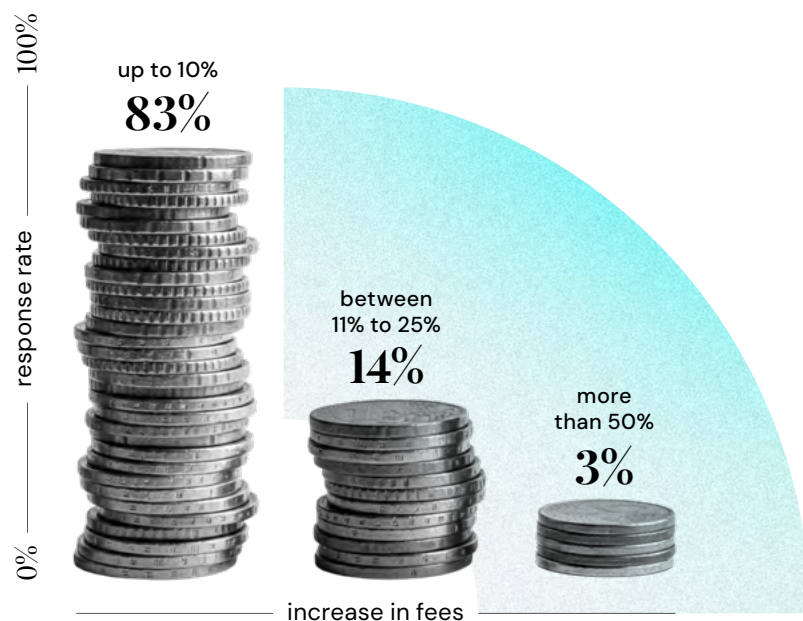


Figure 11 How much more would you be willing to pay for supporting fees (for equipment, training etc.) for replacing or expanding your current activities with U-space services compared to your current average costs?

Key Take-Aways and Recommendations

The aim of our research and this whitepaper is to help Innovative Air Mobility* stakeholders to successfully manage the transition from a heavily subsidised infant industry to a fully mature and commercially viable market. To navigate this transition, stakeholders should align their commercial strategies with the following market realities:

- 1 While current market penetration is low, over 50% of stakeholders express **strong interest in future U-space developments**. The challenge is not a lack of interest, but a lack of market availability and operational experience.
- 2 Supply and demand models should remain closely project or mission-based, reflecting the highly inelastic nature of demand. Stakeholders prefer **pay-per-flight pricing structures** over subscriptions, requiring providers to align their revenue models with episodic, project-based usage.
- 3 The market is currently highly price-sensitive (elastic). With 40% of users reluctant to pay at all and most others capping their willingness at **max €100 per operation**, even minor price "nudges" can significantly halt adoption.
- 4 Providers should be able to get out of the commodity trap** by offering the best user experience and simplicity. While safety is the top priority, **service quality and operational simplicity are the ultimate catalysts** for adoption. To move beyond a "rules-only" framework, U-space must be developed as a user-friendly ecosystem that minimises the operational burden on the flyer.
- 5 Regulatory ambiguity is a "hidden cost." With 51% of users citing "new requirements" as their primary concern, **cross-border harmonisation is economically essential** to provide the predictability needed for long-term investment.
- 6 U-space service providers should consider **lowering entry barriers** like additional costs for equipment upgrades or extra training, while early adopters still depend on **continued public funding** to sustain the industry's development phase.

* Innovative Air Mobility (IAM) aims to transform the aviation sector by introducing new technologies and enabling both manned and unmanned aircraft operations. It covers urban, regional, and international air mobility, focusing on the safe and sustainable transport of passengers and goods. IAM supports a multimodal transport system that benefits communities, society, and industry. **Source: [uspacewiki.eu/terms/innovative-air-mobility-\(iam\)](https://uspacewiki.eu/terms/innovative-air-mobility-(iam))**

** A commodity trap is a situation where products and services have slipped into purely price-based competition.

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