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# Business plan for a new small drone manufacturer

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Master in Applied Management

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BUSINESS
SCHOOL

Department of Marketing, Operations and General Management

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**Resumo**

Atualmente, a indústria de pequenos drones encontra-se sujeita a monopólio e pressão por parte das empresas líderes, sendo que as pequenas empresas, com recursos limitados, enfrentam desafios de sobrevivência em nichos de mercado. Estas necessitam urgentemente de identificar fatores críticos de sucesso para alcançar um desenvolvimento diferenciado. Contudo, as pequenas empresas de drones geralmente deparam-se com problemas como a desadequação dos produtos às necessidades do mercado-alvo, resposta lenta a serviços localizados, fraca capacidade de controlo de custos, preparação insuficiente para enfrentar riscos de conformidade normativa e baixo reconhecimento da marca em áreas especializadas, fatores que restringem severamente a sua sobrevivência e expansão. Por conseguinte, o objetivo deste projeto é identificar sistematicamente os fatores fundamentais que permitam às pequenas empresas de drones estabelecer vantagens competitivas, fornecendo orientação estratégica para a implementação das suas estratégias, aumento da competitividade no mercado e operação sustentável. O processo de investigação combina análise de mercado e emprega métodos de análise qualitativa em cinco dimensões: adaptabilidade do produto, capacidade de serviço, controlo de custos, operação em conformidade normativa e construção de marca. Os fatores críticos de sucesso para as pequenas empresas de drones foram finalmente identificados como: adequação precisa dos produtos ao mercado de consumo de gama média e a cenários industriais regionais, estabelecimento de um sistema localizado de serviço rápido, controlo rigoroso de custos e garantia de estabilidade da cadeia de abastecimento, reforço da gestão da conformidade normativa e construção precisa do reconhecimento da marca em áreas especializadas. Estas conclusões fornecem uma base concreta para as empresas desenvolverem estratégias práticas e melhorarem a sua competitividade.

**Palavras-Chave:** Fabricante de Pequenos Drones, Plano de Negócios, Marketing, Estratégia

**JEL Classification:** M31, L11

**Abstract**

The current small drone industry is subject to monopoly and pressure from leading enterprises, and small companies, with limited resources, face survival challenges in niche markets. They urgently need to identify key success factors to achieve differentiated development. However, small drone companies generally encounter issues such as product misalignment with target market demands, slow response to localized services, weak cost control capabilities, inadequate response to policy compliance risks, and low brand recognition in niche areas, which severely restrict their survival and expansion. Therefore, the goal of this project is to systematically identify the core factors that support small drone companies in establishing competitive advantages, providing directional guidance for their strategy implementation, market competitiveness enhancement, and sustainable operation. The research process combines market analysis and employs qualitative analysis methods across five dimensions: product adaptability, service capability, cost control, compliant operation, and brand building. The key success factors for small drone companies are ultimately identified as: accurately matching products with the consumer-grade mid-tier market and county industry scenarios, establishing a localized rapid service system, strictly controlling costs and ensuring supply chain stability, strengthening policy compliance management, and precisely building brand recognition in niche areas. These findings provide a concrete basis for companies to develop practical strategies and enhance competitiveness.

**Keywords:** Small Drone Manufacturer, Business Plan, Marketing, Strategy

**JEL Classification:** M31, L11

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**Glossary**

CAGR - Compound Annual Growth Rate
COGS - Cost of Goods Sold
FPV - First Person View
IRR - Internal Rate of Return
NPV - Net Present Value
SEO - Search Engine Optimization
SMEs - Small and Medium Enterprises
UAV - Unmanned Aerial Vehicle

## 1. Introduction

In recent years, the global small drone sector has evolved from a niche technology field to a multi-scenario application industry, driven by advancements in flight control, battery, and sensor technologies, as well as the deepening integration of drones into daily life and industrial production. In China, the sector has benefited from supportive policies such as "agricultural modernization" and "low-altitude economy development". The usage scenarios of small drones are becoming increasingly diverse, and relevant policies are becoming more refined. The market hierarchy of small drones is gradually becoming apparent. This project is crucial as it offers practical strategies to adapt to trends, bridges the theory-practice divide, and promotes the long-term growth of the enterprise.

This thesis addresses two core research questions: First, what development opportunities exist for the small drone industry amid the growing demand in consumer aerial photography, agricultural plant protection, and surveying and mapping inspection? Second, how can start-up small drone companies formulate and implement actionable business plans to mitigate key operational challenges, including cumbersome qualification approval procedures, limited financial resources, and ambiguous market positioning? The research scope is delimited to start-up enterprises in the small drone sector, focusing on the design of business plan systems that integrate industry policies, market demands, and resource constraints, with the ultimate goal of providing strategic frameworks and practical solutions for such enterprises to achieve sustainable operation.

The academic relevance and contribution of this thesis are reflected in two aspects. From the perspective of academic gap filling, existing literature on the drone industry primarily focuses on technological innovation or large enterprise business models, with limited attention to the specific operational challenges and business plan design for small drone start-ups. This thesis addresses this gap by developing a business plan tailored to the resource constraints of small enterprises, enriching the academic research on small and medium-sized enterprises (SMEs) in the high-tech sector. In terms of practical application, the research findings provide clear decision-making bases for small drone start-ups—including target market positioning and phased implementation steps—and offer actionable insights for similar enterprises to optimize their operational plans. Furthermore, the integration of industry policies and market data in the business plan system helps bridge the gap between theoretical research and practical operation, making the thesis valuable for both academic reference and practical guidance.

To answer the research questions, the thesis adopts a multi-methodological approach. First, the PESTE analysis is employed to systematically examine the macro-environmental factors influencing the small drone industry. Second, SWOT analysis is utilized to assess the

external opportunities and threats. Additionally, surveys are conducted: quantitative surveys collect data on market demand, price sensitivity, and service preferences from potential clients. These methods collectively ensure the validity and comprehensiveness of the research data and analysis.

This thesis is structured into five chapters. Chapter 1 (Introduction) outlines the research background, clarifies the core research questions and objectives, and specifies the research methods and scope. Chapter 2 (Literature Review) provides a systematic review and definition of key concepts, including market positioning, marketing strategies, and business models for high-tech SMEs, while summarizing existing research progress and identifying the academic gaps. Chapter 3 (Methodology) details the design and implementation of the PESTE analysis, SWOT analysis, and survey methods, and verifies the validity and reliability of the research data through triangulation. Chapter 4 (Business Plan for Small Drone Manufacturers) focuses on the core content of the business plan, including target market segmentation, product strategy design, channel layout, and promotion tactics, while integrating economic and financial feasibility analysis. Chapter 5 (Conclusion) summarizes the main research findings, clarifies the theoretical and practical implications of the study, and proposes limitations and directions for future research.

## 2. Literature Review

This literature review aims to systematically explore how companies can build sustainable competitive advantages in technology driven markets. The review delves into four key areas in sequence. Firstly, examine the market orientation and strategic marketing in the high-tech field, lay a theoretical foundation, and analyse how enterprises should balance market driven and technology driven in the environment of rapid technological iteration. Secondly, extend the perspective to business model innovation and marketing strategies in emerging industries, exploring how value creation and marketing activities can evolve in synergy and jointly shape new markets in the absence of mature market rules. Then, the review shifts to the demand side, analysing the consumer adoption process of disruptive technologies and revealing the key psychological and social factors that influence user acceptance of new technologies. Finally, focusing on digital marketing and customer experience, this review elaborates on how enterprises can use digital touchpoints to create seamless and personalized experiences in today's digitized user journey, in order to fulfill their value proposition and maintain customer loyalty. Through this structure, this review aims to provide an integrated framework to understand the full picture of modern marketing under technological change.

### 2.1. Market Orientation and Strategic Marketing in High-Technology Sectors

The high-tech industry is renowned for its high-speed innovation, technological complexity, market uncertainty, network effects, and short product lifecycle. These characteristics pose significant challenges to traditional marketing paradigms. In this context, Market Orientation, as the core philosophy of strategic marketing and the specific practice of strategic marketing itself, has become a continuous focus of attention in academia and industry for its application and evolution in the high-tech field.

Market orientation can be characterized from two different perspectives, cultural perspective and behavioural perspective. On the one hand, market orientation can be seen as a corporate culture that drives companies to create and deliver exceptional value to customers. On the other hand, there is the behavioural perspective in market orientation, which can be defined as the generation of market intelligence across the entire organization, involving the process of implementing marketing concepts in practice by the company. It should be noted that the cultural and behavioural perspectives of market orientation are complementary, and organizational culture generates abilities that are manifested in certain market-oriented behaviours.(Joensuu-Salo, 2021)

Shahzad and Zhang (2025) discussed how high-tech small and medium-sized enterprises (SMEs) can enhance international marketing agility and business performance by adopting metaverse related technologies. Research has found that institutional environments, such as government policies and industry standards, have a significant impact on companies' willingness to adopt metaverse technology. The adoption of metaverse technology can enhance companies' market flexibility, increase brand exposure, and optimize consumer interaction. They also point out that the absorptive capacity of enterprises plays a key intermediary role in the application of metaverse technology, affecting their international market competitiveness and innovation capabilities.

However, overreliance on feedback from existing customers may lead businesses to overlook opportunities for disruptive technologies in order to meet current mainstream customers. Therefore, these classic frameworks appear inadequate in explaining companies that successfully drive new markets, fuelling the ongoing debate about the relative merits of "driving markets" versus being "market driven."

### 2.2. Business Model Innovation and Marketing Strategy for Emerging Sectors

Emerging markets refers to countries with relatively fast economic development rates and have begun economic liberalization and market economy. The characteristics of a business model typically not only define the customer value proposition and pricing mechanism, but also indicate how the company will organize itself, who it will collaborate with to create value, and how it will build its supply chain. (Saqib & Satar, 2021)

Marketing strategy refers to a long-term plan to build sustainable competitive advantage through market segmentation and targeting, value proposition positioning, and marketing mix. In emerging industries, the focus has shifted from competing for market share to co creating the market and shaping new categories. (Saqib & Satar, 2021)

Emerging industries are characterized by their disruptive technology, market uncertainty, ambiguous rules, and nascent ecosystems. In these fields, traditional business models and marketing strategies based on incremental improvement often fail. On the contrary, business model innovation and marketing strategy are no longer a sequential relationship, but a deeply intertwined symbiotic relationship. (Saqib & Satar, 2021)

Many case studies on business model innovation exhibit retrospective bias. They often conduct attribution analysis after the success mode has become clear, but fail to fully reveal the chaos and trial and error process faced by enterprises in highly uncertain decision-making situations. This provides entrepreneurs with overly linear and idealized roadmaps, lacking profound insights into failure patterns.

### 2.3. Consumer Adoption of Disruptive Technologies

In recent years, the concept of disruptive technology has received widespread attention (King and Baatartogtokh, 2015; Sandstrom et al. 2014), whose importance has been widely recognized by scholars and practitioners (Linton, 2002). In this phenomenon, disruptive technologies initially serve isolated market niches, but as they mature, they change industry boundaries by replacing established technologies in mainstream niche markets (Adner and Zermsky, 2005). Kristensen is a pioneer of this theory, primarily focusing on technological innovation and exploring how new technologies can surpass seemingly superior ones in the market (Kristensen, 1997). Later, Christensen and Raynor (2003) expanded the scope of application of the term to include not only technology, but also products, services, and business models (Markides, 2006).

Christensen (1997) defined disruptive technology as providing value that differs from mainstream technology. Initially, it was inferior to mainstream technology in terms of performance that was important to mainstream customers, although this technology product may have some other features that edge customers value. In Christensen's view, products based on disruptive technologies are usually cheaper, simpler, smaller, and more convenient to use, but may initially have lower performance. However, the performance provided by disruptive technology products will improve over time and ultimately exceed the minimum level required by mainstream customers. In this process, the entrant companies that support this disruptive technology have replaced the existing companies that support the existing technology.

Accepting disruptive technologies may require consumers to invest a significant amount of effort in changing their behaviour and learning how to use disruptive technology products. This may also require some sacrifices, as disruptive technology products has some drawbacks in addition to its advantages, making disruptive technology products switching a trade-off.(Kamolsook et al., 2019)

Classical theories, such as the Technology Acceptance Model, show deficiencies in explaining the adoption of disruptive technologies. These models are typically based on users' rational perceptions of a technology's usefulness and ease of use, but they often underestimate the critical roles of social construct factors and ecosystem maturity.

### 2.4. Digital Marketing and Customer Experience

Over time, the term 'digital marketing' has evolved from a specific term describing the use of digital channels to market products and services to a general term that describes the process of using digital technology to acquire customers, establish customer preferences, promote brands, retain customers, and increase sales. Alternatively, digital marketing can be seen as activities, institutions, and processes facilitated by digital technology that create, communicate, and deliver value to customers and other stakeholders. If a more inclusive perspective is adopted, digital marketing can be defined as an adaptive, technology supported process through which businesses collaborate with customers and partners to create, communicate, deliver, and maintain value for all stakeholders.(Kannan & Li, 2017)

Lemon, K. N., & Verhoef, P. C. (2016) concluded that the overall customer experience is a multidimensional structure that involves cognitive, emotional, behavioral, sensory, and social components. However, the experience may be related to specific aspects of the product, such as brand or technology, which consist of personal connections between the company and the customer at different points of the experience (known as touchpoints). By collecting these touchpoints at multiple stages of the customer decision-making or purchasing process, experiences can also be established. Overall, customer experience is a multidimensional structure that focuses on customers' cognitive, emotional, behavioral, sensory, and social responses to the company's products throughout the entire purchasing process.

A significant portion of the current literature on digital marketing and customer experience over-focuses on metrics, optimization, and tools. While this "data-ism" paradigm enhances efficiency, it may lead firms to prioritize short-term tactical optimization at the expense of long-term brand building and genuine emotional connection.

## 3. Methodology

The selection of a mixed methods approach in this thesis is driven by the multi-dimensional and complex nature of small drone company business plan research. Small drone enterprises operate within a context shaped by macro-policy constraints, meso-level competitive pressures, and micro-market demand fluctuations. A single research method would fail to capture this multi-layered context: macro models alone cannot reflect market-specific demands, while surveys alone lack strategic guidance from environmental and competitive analysis. By combining four complementary methods, the study ensures that the business plan is grounded in both systemic strategic thinking and real-world market insights, addressing the research gap of "disconnection between theory and practice" in existing small drone industry studies.

Each method contributes uniquely to the development of the business plan:

PESTE Analysis serves as the foundation for macro-environmental scanning. By examining political factors, economic factors, social factors, and technological factors, it identifies external opportunities and threats, thereby defining the "strategic boundary" of the business plan and ensuring its adaptability to the broader operating environment.

Porter's Five Forces Model focuses on meso-level competitive landscape analysis. By evaluating the intensity of rivalry among existing small drone manufacturers, the threat of new entrants, the threat of substitutes, the bargaining power of suppliers, and the bargaining power of buyers, it clarifies the differentiated competitive direction for small companies—for example, avoiding direct competition with large enterprises in high-R&D segments and instead focusing on niche markets where buyers have lower bargaining power, thus guiding the "competitive positioning" module of the business plan.

Questionnaire Survey provides micro-empirical support. By collecting data on the needs, price sensitivity, and service preferences of consumer-grade and industry clients, it validates or adjusts assumptions from macro/meso analyses—for example, verifying whether the assumed demand for low-cost agricultural drones aligns with actual farmer preferences—thus ensuring the business plan’s "market practicality" in product design, pricing, and channel layout.

The questionnaire design is divided into two stages to ensure effectiveness and relevance: the design stage divides it into three modules - respondent demographics, consumer demand, and pricing and purchasing factors - primarily using closed ended questions for quantitative analysis, supplemented by 1-2 open-ended questions to gain unexpected insights. The distribution stage adopts online methods and conducts online distribution through professional platforms. The data collection was conducted in July 2025 for a period of one month, with a final effective response rate of 93.3%.

This small drone questionnaire adopts the convenience sampling method within non-probability sampling. The core logic is selecting individuals who are easily accessible and approachable as survey respondents to collect data quickly and efficiently. In specific implementation, the survey respondents are relatives, friends, and colleagues on social media platforms. Questionnaire links are distributed to relatives, friends, and colleagues in the personal contact list via the WeChat social platform. The core advantages of this sampling method lie in its low threshold and high efficiency. Regarding the attributes of the survey respondents, relatives, friends, and colleagues on social media platforms cover different age groups and occupational types. Although the representativeness of the sample is limited by the scope of the personal social circle, it can truly reflect the usage requirements, purchasing preferences, etc., of this group regarding small drones.

Questionnaire data were analysed using descriptive statistics to summarize key findings and identify core trends. Descriptive metrics included frequencies and percentages, which were used to quantify market demands. Cross-analysis was also conducted to explore inter-group differences—for example, comparing price sensitivity between student and office worker consumers. All analyses were performed using Microsoft Excel, with tools such as pivot tables and data visualization to organize and present results clearly, directly supporting the business plan’s target market segmentation and product feature design.

The thesis adhered to ethical principles throughout the survey process: Informed Consent was obtained by beginning each questionnaire with a clear introduction of the research purpose, sponsor, and data usage scope, with respondents confirming "willingness to participate" before proceeding; Anonymity and Confidentiality were maintained by not collecting any personally identifiable information, storing survey data in encrypted files with access restricted to the research team only, and retaining data for 3 years before secure deletion; Voluntary Participation was ensured by informing respondents that they could withdraw from the survey at any time without penalty and refraining from offering incentives to avoid inducing biased responses. These measures ensured the ethical integrity of data collection and protected respondents’ rights.

SWOT Analysis bridges internal and external insights. By aligning the internal strengths and weaknesses of small drone start-ups with external opportunities and threats identified via PESTE and Porter’s Five Forces, it formulates targeted strategies: for instance, leveraging strengths in customization to seize opportunities in niche industry markets, or addressing weaknesses in R&D by collaborating with technology firms. It also develops risk management plans and strategic trade-offs, directly supporting the "risk control" and "strategic implementation" sections of the business plan.

This thesis has two key limitations in methodology. On the one hand, the questionnaire sample size was 42, which is relatively small for quantitative research. A small sample may

reduce the statistical representativeness of results—for example, conclusions about "industry clients' preference for long-battery-life drones" may not fully reflect the broader market due to insufficient data points, limiting the generalizability of the business plan's market recommendations. On the other hand, the survey relied on self-reported data from respondents, which may be affected by social desirability bias or recall bias. Such biases could lead to deviations between survey results and actual market conditions, impacting the accuracy of product strategy design in the business plan.

# 4. Business Plan

## 4.1. Executive Summary

This thesis delivers targeted strategic solutions—blending theoretical rigor with practical operability—for small drone startups by addressing their core development challenges through systematic business plan formulation and implementation. Key insights drawn from the research directly inform actionable decisions for business operations:

User demand insights guide product and pricing decisions. A targeted survey of 30 consumer drone users reveals three non-negotiable needs: price sensitivity, prioritization of endurance, and emphasis on portability. These quantitative findings drive two critical decisions: (1) Product design will focus on "cost-effective, long-endurance portable models" to align with mass demand; (2) Pricing will adopt a tiered structure to avoid overpricing for price-sensitive groups while meeting industry clients' functional expectations.

Environmental and competitive analysis shapes market positioning and risk mitigation. PESTE analysis identifies policy opportunities and threats, leading to the decision to prioritize "county-level agricultural plant protection" and "urban consumer aerial photography" as niche markets—avoiding high-qualification barriers in industrial sectors. SWOT analysis further clarifies that small startups should leverage their strength in "small-batch customization" to offset weaknesses in limited R&D budgets, while proactively addressing risks with contingency plans.

Feasibility verification solidifies implementation pathways. By integrating industry policy data and market demand signals, the thesis defines phased implementation decisions: (1) Short-term : Complete core qualification applications and launch entry-level consumer models via e-commerce platforms; (2) Mid-term : Expand into agricultural markets by partnering with local cooperatives, and roll out customized industry models with extended battery life; (3) Long-term : Build a post-sales service network to retain customers.

Core conclusion of financial plan is the five-year financial plan demonstrates a clear path to sustainability and growth, underpinned by an initial and a follow-on equity investment totalling €302,308. While the company is projected to invest aggressively in marketing and R&D, leading to net losses in the first three years as it builds market presence, it achieves profitability in Year 4. The model forecasts a strong revenue compound annual growth rate (CAGR) which is 60.2%, reaching over €670,000 by Year 5, by which time the cumulative net profit turns positive. Critically, the plan ensures positive cash flow from operations beginning in Year 4 and a robust cash balance of over €186,000 by the end of the forecast period, providing a solid foundation for future expansion. From a financial perspective, the 10-year

cash flows result in a Net Present Value (NPV) of €37143 and an Internal Rate of Return (IRR) of approximately 22.5% when applying a 20% discount rate.

The combination of literature analysis, surveys, and strategic frameworks ensures these decisions are not only data-driven but also adaptable to market changes—directly addressing small drone startups' operational challenges of complex qualifications, limited funds, and unclear positioning, while ensuring the business plan's scientific validity and real-world applicability.

## 4.2. External Situational Analysis

### 4.2.1. PESTE Analysis

#### 4.2.1.1. Political and Legal Context

Industry access qualifications are of primary concern. According to the "Interim Measures for the Administration of Unmanned Aircraft Operating Licenses" issued by the Civil Aviation Administration, enterprises engaged in drone research and development, sales, and operational services must clarify their business scope and apply for corresponding licenses. For example, those conducting agricultural plant protection operations need to obtain additional operational qualifications, while the sale of consumer-grade drones must comply with product quality certification standards.

Flight control policies have a direct binding effect on the implementation of corporate business scenarios. Currently, China implements classified airspace management. Except for suitable airspace, drone flights require prior application for airspace usage permits from the corresponding air traffic control department. In particular, there are strict flight restrictions in urban core areas, airport clearance zones, military management zones, and other areas.

Laws related to data security and privacy protection impose higher requirements on business compliance. According to the Data Security Law and the Personal Information Protection Law, geographic information and image data collected during drone operations must comply with data storage, transmission, and usage standards, and unauthorized disclosure or abuse is prohibited. (Mekdad et al., 2023)

#### 4.2.1.2. Economic Context

The growth of industry market size is the core opportunity point. In recent years, the global drone market has shown a dual growth trend of consumer level and industry level. The consumer level drone market has maintained a compound annual growth rate of 15% -20% due to the demand for short video creation and tourism aerial photography; The industry level

market benefits from the modernization of agriculture and the digitization of infrastructure, with an annual growth rate of over 25%. (Salinas & Lewandowski, 2025) In addition, the demand for segmented fields such as county-level agriculture and small and medium-sized surveying and mapping enterprises has not yet been fully saturated, providing differentiated market space for small companies.

The purchasing power level of target customers determines product pricing and market penetration pace. From the consumer perspective, the middle-income group in China has the highest acceptance of consumer grade drones in the price range of 360-600 euros, with a market share of over 60% in this price range. (Garg et al., 2024) This requires small companies to control costs during product development and avoid pricing too high and leaving the mainstream consumer group; From an industry perspective, the annual procurement budget for unmanned aerial vehicles by county-level agricultural cooperatives is mostly concentrated in the range of 6050 to 18160 euros, and they tend to prefer lightweight crop protection models with high cost-effectiveness. (Nonami & Ieee, 2025) Small and medium-sized surveying and mapping enterprises have a strong willingness to pay for customized solutions. These purchasing power data provide key references for product pricing strategies and customer segmentation expansion in business plans, ensuring that income structure matches customer payment ability.

Cost fluctuations have a direct impact on the profitability of small companies. Core components such as lithium batteries, high-definition cameras, and flight control systems account for 60% -70% of the production cost of drones, and their prices are greatly affected by fluctuations in the raw material market. For example, if the price of lithium batteries rises by 10%, it will lead to a 5% -8% increase in single machine costs; (Suchat et al., 2020) In addition, there are regional differences in logistics transportation costs and industrial park rents. This requires small companies to establish cost control mechanisms in their business plans, while incorporating cost fluctuation risks into profit calculations to ensure that gross profit margins have buffer space.

#### 4.2.1.3. Socio-Cultural Context

The differentiation of user demand preferences is the core guiding factor. There is a clear demand difference among the consumer drone user group: young people are more concerned about the portability and intelligent functions of products to meet their social sharing needs for short video creation and travel check-in; Middle aged and elderly users value ease of operation and safety more, have lower acceptance of complex functions, and are more inclined to use them for scenarios such as family gatherings and recording.

The society's perception and behavioral habits towards drones have a profound impact on market acceptance and usage scenarios. On the one hand, the public's attention to drone flight safety continues to increase, and there are concerns about drone "black flying" interfering with civil aviation, infringing on privacy, and other issues. This social awareness prompts users to pay more attention to compliance and brand reputation when choosing products, and also requires small companies to strengthen after-sales service in their business plans, such as providing compliant flight training, establishing flight consultation channels, and reducing user concerns; On the other hand, the social acceptance of drone application scenarios is gradually expanding. For example, in the agricultural field, farmers' recognition of drone crop protection has shifted from early "wait-and-see" to "active adoption", believing that it can improve operational efficiency and reduce labor costs. This change in behavior habits has provided convenience for the development of industry level drone markets.

Regional cultural differences and lifestyles affect market layout and product promotion strategies. In urban areas, residents have a fast-paced lifestyle and strong social needs. The "instant use" and "quick sharing" attributes of consumer grade drones are more easily accepted, and market promotion can focus on offline pop-up stores and commercial district experience activities; In rural areas, agricultural production is the core demand, and farmers are more concerned about the actual operational effectiveness of drones, with a high sensitivity to prices. When promoting, it is necessary to enhance trust through field demonstrations and sharing of farmer cases. In addition, cultural customs in different regions also need to be considered. Some regions have traditional differences in their understanding of aircraft, and misunderstandings need to be eliminated through localized promotion.

The increasing recognition of "technology empowering life" in society provides a cultural foundation for the expansion of drone application scenarios. With the popularization of technology, the public's acceptance of the application of drones in the field of people's livelihood has increased, and they believe that it is a manifestation of "technology improving life". This social consensus provides space for small companies to explore new scenarios.

#### 4.2.1.4. Technological Context

The iteration of core technology is a key variable that affects product competitiveness. In the field of power technology, the energy density of lithium batteries continues to improve, and solid-state battery technology is gradually commercialized, which can further extend the range and shorten the charging time. Clarify the pace of technology follow-up in the R&D process, prioritize the application of mature high-energy density lithium batteries in core products, and pay attention to the cost reduction nodes of solid-state batteries to avoid excessive investment in immature technologies; In terms of control and perception technology, the visual obstacle

avoidance system has been upgraded from "binocular vision" to "multi-sensor fusion", combined with GPS+Beidou dual-mode positioning, which can significantly improve flight safety.

The compatibility between technological barriers and the R&D capabilities of small enterprises determines the R&D path adopted by the enterprise. There are certain technical barriers to the core technology of unmanned aerial vehicles. Large enterprises can independently research and develop based on their financial and talent advantages, while small companies are limited by a core team size of 3-5 people and cannot afford the full chain research and development costs.

The expansion of technology applications opens up new market space for small drone companies and guides the direction of scenario innovation in business plans. In the field of intelligent technology, the combination of AI image recognition and big data analysis enables drones to achieve integrated services such as agricultural crop disease and pest identification, power line defect detection, etc., without being limited to simple flight and shooting functions; With the support of IoT technology, the linkage between drones and ground equipment has become possible, improving the automation level of work processes.

In addition, industry trends in technical standards and compatibility affect the long-term development layout of small companies. The current drone industry is gradually promoting the standardization of technology, and it is necessary to pay attention to the dynamics of industry standards to ensure that products meet future compatibility requirements and avoid product obsolescence due to standard iteration. (Mohsan et al., 2023)

#### 4.2.1.5. Environmental Context

Policy driven environmental standards are the core constraints and guidance. The current global and domestic efforts are gradually strengthening environmental supervision of electronic devices, such as the EU RoHS directive restricting the use of harmful substances in core components of drones, and China's "Management Measures for Pollution Control of Electronic Information Products" requiring products to be labeled with environmental protection labels and provide recycling plans; At the same time, some regions have put forward control requirements for high-energy consumption production processes. This requires small companies to incorporate environmental compliance into their supply chain management and product design in their business plans, and to plan product recycling systems in advance to avoid market access restrictions or fines due to environmental non-compliance.

Green practices in production and operation have become an important path for small drone companies to control costs and enhance brand image. On the production side, small companies can reduce environmental impact by optimizing assembly processes, using

environmentally friendly packaging materials, and reducing the cost of handling scraps and waste; On the operational side, measures such as recycling drone batteries and remote technical support can not only reduce costs, but shape the image of a green enterprise.

In addition, green technology innovation has opened up new growth opportunities for small drone companies. With the gradual maturity of green power technologies such as photovoltaic power supply and hydrogen fuel cells, the balance between drone endurance and environmental friendliness has become a technological breakthrough direction; The development of biodegradable body materials also provides new possibilities for the industry.

### 4.2.2. Sector Analysis

The scale and growth trend of the small drone industry provide clear market space for small companies. From a global market perspective, the overall market size of drones will exceed 50 billion US dollars by 2024, with small drones (weighing less than 25kg) accounting for over 70% and maintaining a compound annual growth rate of 18% -22%; The domestic market has greater potential, with annual sales of consumer grade drones exceeding 1.5 million units and industry level markets (such as agricultural crop protection and surveying) growing at an annual rate of over 25%. (Nonami & Ieee, 2025) Especially in segmented fields such as county-level agriculture and small and medium-sized surveying, there are a large number of unmet needs due to insufficient coverage by large enterprises. This provides opportunities for small companies to avoid red ocean competition and focus on vertical scenarios, as well as industry data support for revenue expectations and market positioning in business plans.

*Figure 4.1-Small Drone*

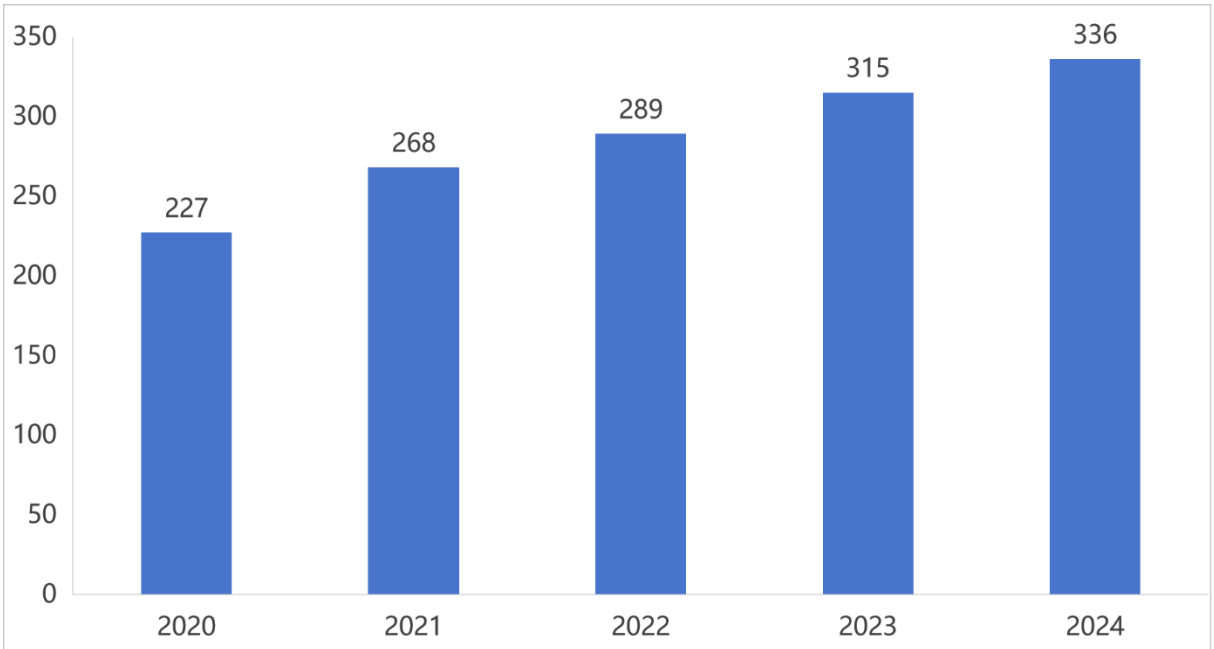
Source: Chengdu Daily Jinguan News, 2024

The industry chain structure determines the resource integration and profit model selection of small drone companies. Upstream is the core component supply (such as lithium batteries, flight control systems, high-definition cameras), and top suppliers (such as DJI Innovation Supply Chain Enterprises) have strong bargaining power. However, there are also small and medium-sized component manufacturers who provide cost-effective products. Small companies can reduce costs through centralized procurement and long-term cooperation; The midstream involves the research and development, assembly, and sales of unmanned aerial vehicles, which are the core business processes for small companies. It is necessary to focus on differentiated advantages (such as customized functions and segmented scenario solutions) and avoid competing with large enterprises on general hardware; Downstream provides application scenario services (such as plant protection operations, operation training, and maintenance), with higher profit margins than midstream hardware sales (gross profit margin can reach 30% -40%). Small companies can rely on the "product+service" model to improve their profitability, and this industry chain feature needs to be included in the supply chain management and profit model design module of the business plan.

The differentiated characteristics of segmented markets guide the precise positioning of small drone companies. The consumer market presents the characteristics of "high-end niche and mid-range popularization": the high-end market (unit price above 970 euros) is dominated by top enterprises, and small companies find it difficult to break through; The mid-range market (360-600 euros) has the strongest demand, and users are concerned about portability, intelligence, and cost-effectiveness, making it suitable for small companies to launch high cost-

effective models; Industry level markets need to be segmented by scenario, and the agricultural crop protection market has high requirements for "endurance+load capacity+precise spraying", and customers (agricultural cooperatives) focus on cost recovery cycles; The surveying market has high requirements for "image accuracy+data processing", and customers (small and medium-sized surveying companies) are willing to pay for customized services. Small companies need to clearly target 1-2 segmented markets in their business plans to avoid resource dispersion, such as focusing on county-level agricultural crop protection or mid-range consumer level aerial photography and forming a targeted product and service system.

*Figure 4.2-Global drone market size from 2020 to 2024 (unit: USD 100 million)*




Source: Drone Industry Insight, 2024

The industry development trend points out the long-term layout direction for small drone companies. Technologically, unmanned aerial vehicles are iterating towards "intelligence (AI obstacle avoidance, autonomous operation), lightweight (portable design), and long endurance (new battery)". Small companies need to track mature technology applications and avoid blindly investing in cutting-edge research and development; In terms of policy, airspace management is gradually standardized and refined, and the flight approval process is simplified for different scenarios, providing convenience for the large-scale application of industry level drones; In terms of demand, the integration of "drones+industries" is deepening, such as pest and disease monitoring in "drones+agriculture" and low altitude sightseeing in "drones+cultural tourism", with new scenarios constantly emerging. Small companies need to reserve a budget for scenario expansion in their business plans, such as developing suitable

small aerial drones and service packages for emerging low altitude cultural and tourism needs. At the same time, they should pay attention to policy dynamics, adjust their business direction in a timely manner to fit industry trends, and ensure long-term development competitiveness.

#### 4.2.3. Competitor Analysis

**Industry-leading enterprises (DJI Innovation and Yihang Intelligence)**

The competitors of small drone companies first come from industry-leading enterprises, represented by DJI Innovation and Yihang Intelligence. This type of enterprise has significant advantages: it has a mature research and development system, a large supply chain scale, high brand awareness and extensive sales channels, and strong financial strength, which can support high R&D investment and market promotion. Its disadvantage lies in targeting niche markets (slow response, high product pricing, and difficulty in meeting the needs of price sensitive small and medium-sized customers). For small companies, they need to avoid direct competition with top enterprises in the general hardware market, focus on vertical scenarios with insufficient coverage, and form differentiation through "small but refined" customized solutions.

**Similar small drone companies**

Similar small drone companies are more direct competitors, as they tend to focus on a single niche area with a scale and resources similar to the target company. Its advantages lie in flexible decision-making, greater sensitivity to regional market demand, and lower product pricing (consumer grade models can be lowered to 240-360 euros, and service fees are more flexible); its disadvantages are reflected in limited research and development capabilities, insufficient supply chain stability, and weak brand influence. Faced with such competitors, small companies need to strengthen their core advantages or enhance customer stickiness through a combination of "product+training" services to avoid falling into low price competition.

**Cross border entrants**

Cross border entrants pose potential competitive threats, mainly including two types: one is traditional electronic device manufacturers (such as Xiaomi and Huawei), relying on existing brand traffic, supply chain resources, and channel advantages to launch cost-effective consumer grade drones, quickly seizing the entry market with "cost-effectiveness+brand endorsement"; The second is industry equipment enterprises, which enter the field of drones through self-research or cooperation, focus on industry level applications, and launch integrated solutions of "drones+traditional equipment" based on a deep understanding of industry customer needs. The advantage of these competitors is their strong resource integration ability and solid customer base, while the disadvantage is their insufficient cultivation of core drone technology and the need to gradually optimize product adaptability.

Small companies need to closely monitor the dynamics of cross-border players and consolidate the technological and customer barriers in segmented scenarios in advance, such as signing long-term cooperation agreements with regional agricultural cooperatives or developing exclusive functions that are suitable for specific industry needs to reduce the impact of cross-border players.

From the perspective of competitive strategy response, small drone companies need to build a dual advantage of "differentiation+low cost" based on their own resource endowments: on the product side, focus on 1-2 segmented scenarios, polish core functions, and avoid cost increases caused by functional redundancy; On the server side, strengthen localization and personalized services to compensate for brand and scale disadvantages; On the supply chain side, cost reduction is achieved through centralized procurement, signing long-term agreements with small and medium-sized component manufacturers, and establishing a pool of alternative suppliers to address risks. In addition, industry cooperation can broaden business boundaries, form "scenario barriers", reduce direct confrontation with various competitors, and achieve differentiated development.

*Table 4.1-Comparison Table between Our Company and Competitors*

| Comparison Dimension | Our Small Drone Company | Industry-leading Enterprises | Similar Small Drone Companies | Cross Border Entrants |
|---|---|---|---|---|
| Core Advantages | 1-2 scenarios<br>24h local service<br>Flexible supply chain | Mature R&D, large supply chain<br>High brand awareness<br>Strong finance/risk resistance | Flexible decisions, fast regional response<br>Low pricing<br>Niche focus | Brand traffic, cost-performance<br>Industry know-how, drone & equipment solutions |
| Core Disadvantages | Low brand awareness<br>Weak supply chain bargaining power<br>Limited R&D resources | Slow niche response, high pricing<br>High customization cost | Weak R&D, unstable supply chain<br>Low brand influence | Weak drone core tech<br>Unrefined flight/endurance functions |
| Core Strategy | Avoid general market, focus on undercovered niches | Mid-high-end general market<br>Scale production for high margin | Low-price entry/regional market | Cost-performance & brand for entry market |

| | | | | |
|---|---|---|---|---|
| | Local service & customization barriers<br>Supply chain optimization & partner collaboration | Avoid niches | Short-term orders, prone to price wars | Bind traditional business |
| Target Customers | County agri. co-ops, local enterprises<br>Customization/service-seeking SMBs | Pro users, large enterprises<br>Brand/tech-focused clients | Regional price-sensitive users<br>Small local clients | Mass entry users<br>Existing industry clients |

Source: Wang Zijie, 2025

#### 4.2.4. Porter's Five Forces Analysis

From the perspective of the strength of existing competitors, the small drone industry presents a pattern of "head monopoly, small and medium-sized dispersion", with a moderate to high level of competition intensity. Leading enterprises represented by DJI Innovation occupy a dominant position in the consumer and high-end industry markets with their advantages in research and development, supply chain, and brand, which puts pressure on small companies; However, there are a large number of similar small enterprises that compete through low prices and localized services, especially in the fields of county-level agricultural crop protection and entry-level consumer aerial photography, where price wars and service competitions are more intense. For small companies, it is necessary to avoid direct competition with top enterprises and respond to small and medium-sized competitors through differentiation to reduce existing competitive pressure.

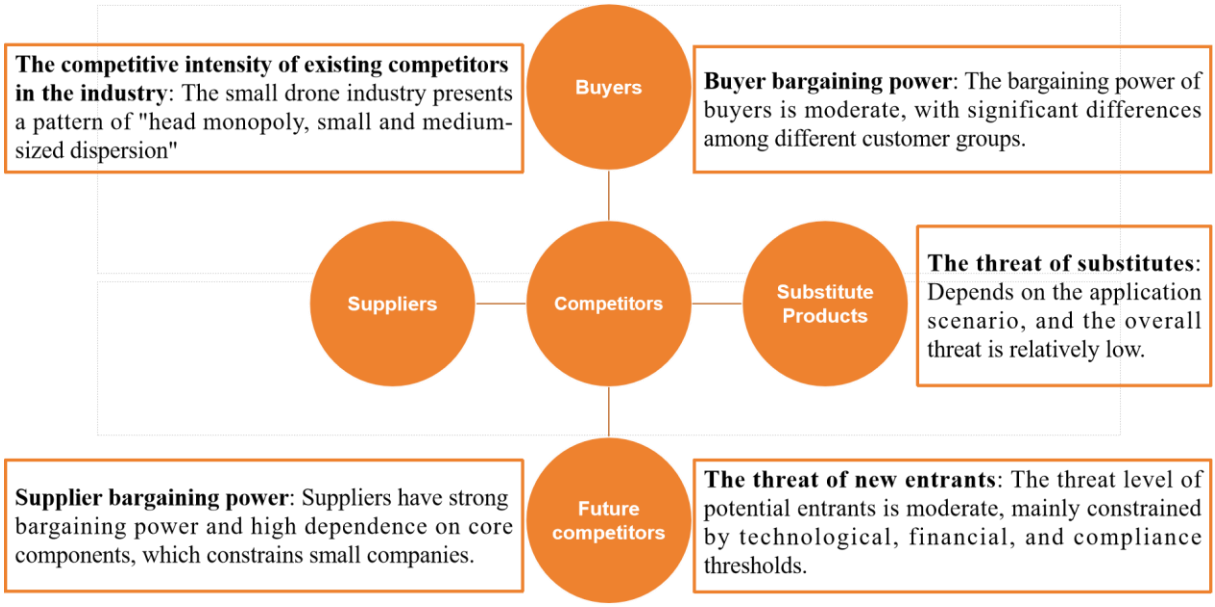
The threat level of potential entrants is moderate, mainly constrained by technological, financial, and compliance thresholds. The entry threshold for consumer grade drones is relatively low, and traditional electronics manufacturers (such as Xiaomi) and start-up teams can quickly enter by relying on their supply chain integration capabilities; However, industry level unmanned aerial vehicles (such as crop protection and surveying) require breakthroughs in scene adaptation technology, as well as obtaining airspace usage and industry qualifications, with a high threshold. In addition, the brand and scale advantages of top enterprises form certain barriers, and new entrants need to bear higher market education costs. For small companies, it is necessary to quickly establish customer barriers and technological accumulation in advantageous segmented scenarios to reduce the impact of potential entrants.

The threat of substitutes varies depending on the application scenario, and the overall threat is relatively low. In the consumer level aerial photography field, high-end mobile phone gimbal and motion cameras can partially replace the shooting function of entry-level drones, but the high-altitude perspective and flight flexibility of drones are irreplaceable advantages; In the industry level field, traditional agricultural crop protection relies on manual labor and large machinery, and surveying relies on manual measuring instruments. Drones have significant advantages in efficiency and cost, and substitutes are difficult to form effective competition. In extremely small-scale operational scenarios, substitutes pose a certain threat, and small companies can further weaken the impact of substitutes by enhancing the "efficiency+convenience" advantages of drones.

Suppliers have strong bargaining power and high dependence on core components, which constrains small companies. The market concentration of core components for drones is high, with top suppliers giving priority to serving large enterprises and having strong bargaining power over supply prices and delivery cycles for small companies; And some core technologies are monopolized by a few suppliers, making it difficult for small companies to replace them. To reduce supplier constraints, small companies need to establish a pool of alternative suppliers, sign long-term supply agreements to lock in prices, and gradually explore localized procurement of non-core components to enhance their bargaining power in the supply chain.

The bargaining power of buyers is moderate, with significant differences among different customer groups. Consumer level users (individuals) have a small single purchase volume, are highly sensitive to prices, are easily influenced by promotions and competitor prices, and have strong bargaining power; Industry level customers (such as agricultural cooperatives and small and medium-sized surveying and mapping companies) have a large purchasing volume and are concerned about product quality, after-sales service, and long-term cooperation. They are less sensitive to prices than consumer level users, but they will strive for preferential terms by comparing multiple suppliers and have moderate bargaining power. Small companies can respond through differentiation strategies: launching cost-effective standardized products for consumer users and reducing costs through scale; Provide customized solutions and long-term services (such as free maintenance) to industry level users, enhance customer stickiness, and reduce their bargaining space.

*Figure 4.3-Porter's Five Forces Analysis*




Source: Wang Zijie, 2025

### 4.2.5. Consumer Analysis

Consumers of small drones can be clearly divided into "consumer level" and "industry level" groups, and the significant differences in demand between the two groups determine the differentiation direction of the company's products and services. Consumer level consumers, based on individuals or families, have a core demand for entertainment and recording needs, which can be further divided into young interest groups (18-35 years old, such as short video creators and outdoor enthusiasts) and family users (30-45 years old, used for family gatherings and parent-child activity aerial photography); Industry level consumers are mainly enterprises or institutions, focusing on production and operational needs, mainly including county-level agricultural cooperatives (used for crop protection and crop growth monitoring), small and medium-sized surveying companies (used for terrain measurement and engineering survey), and cultural and tourism institutions (used for scenic spot promotion aerial photography and low altitude sightseeing services). The differences in demand pain points and payment willingness of different segmented groups provide a basis for small companies to accurately target the market.

The demand characteristics of different consumer groups directly guide the product design and functional research and development of small unmanned aerial vehicles. The young consumer interest group focuses on the core requirements of "portability+intelligence+image quality" for the product. For example, they prefer foldable bodies for easy outdoor carrying, require intelligent functions such as automatic tracking and one click short videos to reduce operational difficulty, and have clear requirements for 4K high-definition image quality. At the

same time, they are highly price sensitive, with an acceptance range of 360-600 euros; Family users place greater emphasis on "ease of operation+security" and have lower requirements for complex functions. They pay more attention to safety designs such as geofencing and low battery automatic return, with a price acceptance range of 240-480 euros. Among industry level consumers, agricultural cooperatives are most concerned about "endurance+load capacity+operational efficiency", such as requiring a single endurance of not less than 40 minutes and a load capacity of more than 5 kilograms to meet the needs of large-scale plant protection, and hoping to support precise spraying systems to reduce pesticide waste; Surveying companies prioritize "image accuracy+data processing capabilities" and have strict requirements for the positioning accuracy (such as centimeter level positioning) and data transmission stability of drones. They are willing to pay a premium for customized functions adapted to professional surveying software.

Consumer consumption behavior preferences affect the channel selection and promotion strategies of small drone companies. The purchasing channels for consumer level consumers are mainly online, with over 70% of young people placing orders through e-commerce platforms or brand live streaming rooms. (Alfalah & Muneer, 2022) Before making decisions, they will focus on referring to user reviews and evaluation videos, and are easily influenced by the scenario based content of social media; Family users are more inclined to combine online consultation with offline experience, pay attention to the practical demonstrations of offline digital stores, and have a higher level of trust in recommendations from family and friends. Industry level consumers make more rational purchasing decisions, focusing on "product trials+case verification". They often contact suppliers through industry exhibitions and regional agents, with a longer decision-making cycle. They also require early pilot services and attach great importance to after-sales service. These consumer behavior characteristics require small companies to match differentiated channels, and promotion plans for different groups in their business plans to improve market penetration efficiency.

In addition, the potential demand and future trends of consumers have opened up new business growth points for small drone companies. In the consumer market, some users have shown a demand for "service extension", such as purchasing drones and hoping to receive value-added services such as professional editing training and aerial scene recommendations; In the industry level market, agricultural cooperatives are gradually proposing the integration demand of "drones+data services", such as using drones to collect data and generate crop growth reports to guide precise fertilization. Small companies can leverage these potential demands to expand their profit model of "product+service".

### 4.3. Survey Results and Insights

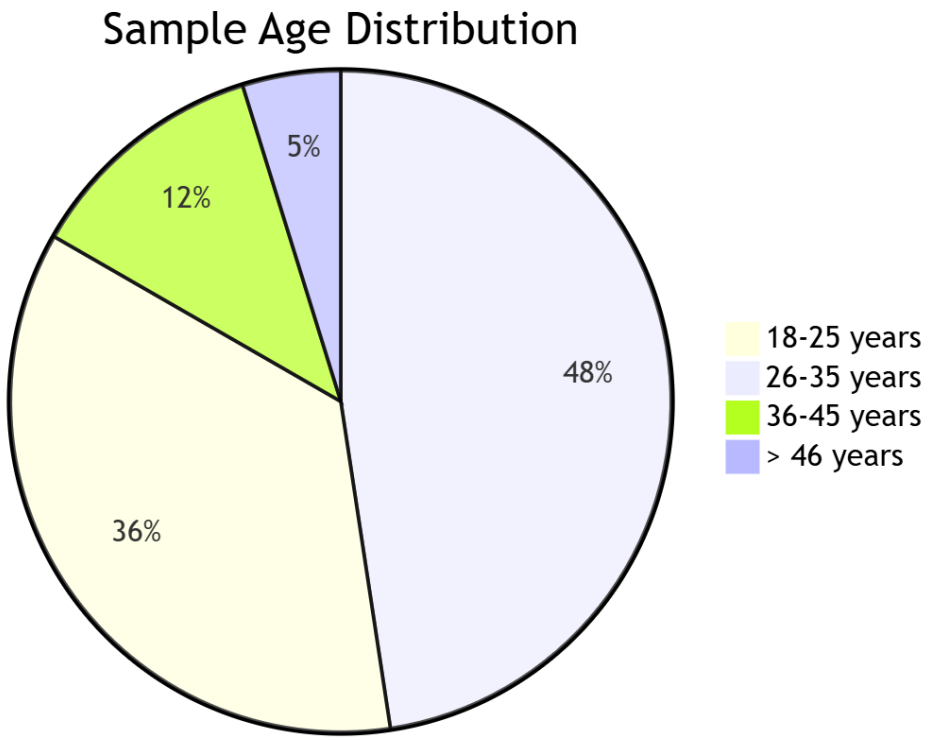
#### 4.3.1. Response Rate and Sample Demographics

This survey was conducted online, with a total of 45 questionnaires distributed and 42 valid questionnaires collected, resulting in an effective response rate of 93.3%.

Sample demographics:

- Age distribution: 18-25 years old account for 35.7% (15 people), 26-35 years old account for 47.6% (20 people), 36-45 years old account for 11.9% (5 people), and 46 years old and above account for 4.8% (2 people); The core group is aged 26-35, accounting for nearly half. This age group has certain purchasing power and is enthusiastic about fresh technology products, making them the main customer group for small drones.

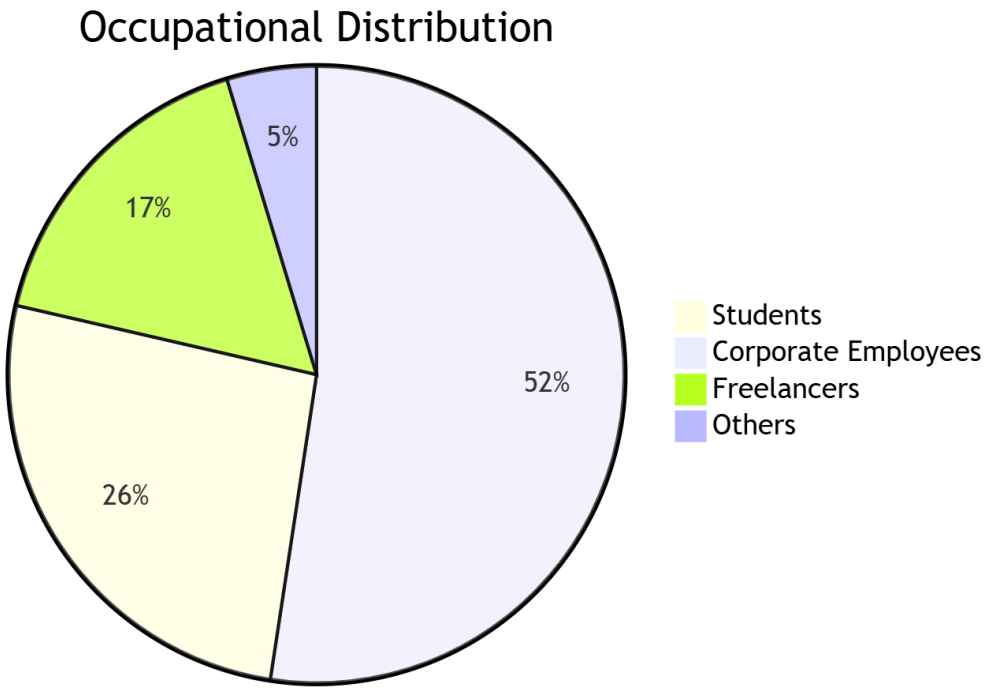
*Figure 4.4-Sample Age Distribution*




Source: Wang Zijie, 2025

- Occupational composition: Students account for 26.2% (11 people), enterprise employees account for 52.4% (22 people), freelancers (including photography bloggers) account for 16.7% (7 people), and other professions (such as retired enthusiasts) account for 4.7% (2 people); Enterprise employees and freelancers together account for 69.1%, making them the core group with stable purchasing power.

*Figure 4.5-Occupational Distribution*




Source: Wang Zijie, 2025

- Drone ownership and procurement plan: Existing owners account for 64.3% (27 people) - of which 44.4% (12 people) have been in use for less than 1 year, 48.1% (13 people) have been in use for 1-3 years, and 7.5% (2 people) have been in use for more than 3 years, reflecting the rapid growth period of small drone consumption in the past 3 years; Non holders account for 35.7% (15 people), of which 80% (12 people) plan to purchase within 6 months, and 20% (3 people) plan to purchase within 6-12 months, indicating strong potential demand.

### 4.3.2. Key Findings

**Drone usage preferences**

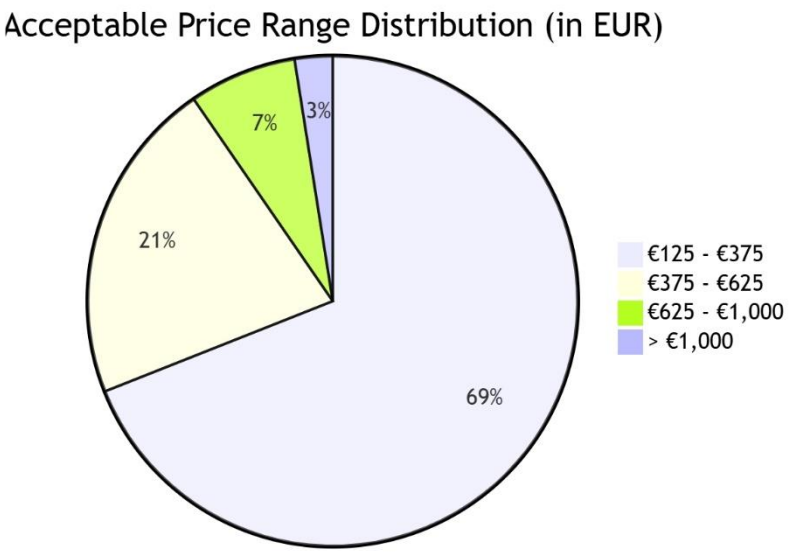
- Core usage scenarios: "Travel aerial photography" ranks first with 76.2% (32 people), "daily recording (family gatherings, etc.)" accounts for 54.8% (23 people), "hobby creation (short video shooting)" accounts for 45.2% (19 people), and "outdoor adventure recording" accounts for 21.4% (9 people); The three core scenarios of "travel+daily life+hobbies" constitute the consumer end, all of which lean towards the demand for "light entertainment and lifestyle", without any industrial level scenario demand, and clarify the scenario positioning of consumer level products.

- Single usage duration: 30-60 minutes accounted for 52.4% (22 people),<30 minutes accounted for 31% (13 people), 60-90 minutes accounted for 11.9% (5 people), and>90 minutes accounted for 4.7% (2 people); More than 80% of users have a single usage time of less than 60 minutes, indicating a higher demand for "short-term high-frequency" usage rather than long-term assignments.
- Core issues: "Insufficient battery life" accounted for 71.4% (30 people), "inconvenient carrying" accounted for 45.2% (19 people), "complicated operation" accounted for 33.3% (14 people), "unstable signal" accounted for 23.8% (10 people), and "image quality not meeting expectations" accounted for 19% (8 people); 'Battery life' and 'portability' are the most urgent problems that users need to solve, and they need to be the core optimization direction of product design.

**Product demand preference**

- Core decision-making factors (Top 3): The first place "price" accounts for 66.7% (28 people), the second place "battery life" accounts for 61.9% (26 people), and the third place "portability" accounts for 54.8% (23 people); Intelligent functions (such as obstacle avoidance) account for only 21.4% (9 people), while "after-sales" accounts for 19% (8 people), indicating that users prioritize "basic cost-effectiveness" over advanced functions.
- Price acceptance range: 125-375 euros accounts for 69% (29 people), 375-625 euros accounts for 21.4% (9 people), 625-1000 euros accounts for 7.1% (3 people), and more than 1000 euros accounts for 2.5% (1 person); More than 2/3 of users are concentrated in the price range of 125-375 euros, which is the core pricing range for products.

*Figure 4.6-Acceptable Price Range Distribution*




Source: Wang Zijie, 2025

- Expected battery life: 20-30 minutes account for 47.6% (20 people), 30-45 minutes account for 38.1% (16 people),<20 minutes account for 9.5% (4 people),>45 minutes account for 4.8% (2 people); 85.7% of users expect a battery life of ⩾ 20 minutes, with a demand for 30-45 minutes accounting for nearly 40%, which is a key goal in product battery life design.

**Purchase and Support Expectations**

- Purchasing channel preferences: "E-commerce platforms" account for 83.3% (35 people), "short video live streaming" account for 40.5% (17 people), "offline digital stores" account for 35.7% (15 people), and "brand official websites" account for 19% (8 people); E-commerce platforms are the absolute main channel, with short video live streaming becoming an important supplement, while offline channels focus on "experience needs".
- Operational guidance requirements: 64.3% (27 people) hope for free online tutorials, 19% (8 people) accept paid guidance, and 16.7% (7 people) do not require guidance; More than 60% of users prefer free online guidance and need to develop simplified online tutorials (such as short video tutorials and graphic manuals).
- Expected new features: "Longer battery life" accounts for 78.6% (33 people), "lighter body" accounts for 52.4% (22 people), "higher image quality" accounts for 33.3% (14 people), and "smarter obstacle avoidance" accounts for 21.4% (9 people); 'Battery life improvement' is the most core functional expectation of users, echoing the pain points of use.

**Purchase trigger factors**

- Core trigger points: "Price discounts (such as promotions)" (66.7%, 28 people, corresponding to high price sensitivity), "Battery life/portability upgrades" (71.4%, 30 people, corresponding to core pain points), "Convenient online channel purchases" (83.3%, 35 people, corresponding to channel preferences); Non functional factors such as brand reputation and advertising promotion have not entered the core trigger point, indicating that user decision-making is more pragmatic and focuses on "needs solutions" matching.

### 4.3.3. Strategic Implications

By analysing the results of the survey questionnaire, the accuracy of the STP strategy can be effectively verified, and strong support can be provided for product end-to-end decision-making. In terms of market segmentation, it has been clarified that small drones are mainly targeted at enterprise employees and freelancers aged 26-35, with a budget of 125-375 euros and short-term high-frequency use, excluding non-core groups. In terms of target market selection, the above-mentioned groups have stable consumption ability, clear demand, and strong purchasing willingness. 80% of non-holders plan to purchase within 6 months and can be

prioritized as core target markets for resource investment. The market positioning should position the product as a "cost-effective, portable, and portable small drone" that meets users' priority needs for price, range, and portability.

Based on this, the decision-making process for the entire product chain also has a clear direction. Product design should focus on battery life of 30-45 minutes, foldable portable body, and basic image quality that meets daily shooting needs. Develop basic models such as "foldable body below 250g+35-minute battery life+1080P camera"; The pricing is anchored at 125-375 euros, with entry-level and advanced models corresponding to different groups. The core channels are e-commerce platforms and short video live streaming sales, with offline digital stores as experiential supplements; Marketing revolves around price discounts and portable upgrades for battery life, such as "25 euros off for 125-375 euros models during promotional periods, with spare batteries as a gift". The server provides free online operation tutorials to balance user needs and enterprise costs.

### 4.4. Opportunities and Threats

**Opportunities**

- The mid-range consumer drone market targeting young enthusiasts has unmet demand: industry leaders focus on high-end products, while small manufacturers lack sufficient functionality (e.g., foldable design, 4K resolution, basic obstacle avoidance). Meanwhile, county-level agricultural plant protection and third/fourth-tier city surveying and mapping scenarios have insufficient service coverage from large enterprises, creating localized demand for tailored solutions.
- Consumer users show increasing need for supporting services alongside drone hardware, such as video editing training and aerial photography scene planning (beyond single hardware purchases). In the industrial sector, agricultural cooperatives and small/medium surveying companies require integrated solutions (e.g., plant protection combined with data services) and supporting maintenance/data processing services, creating opportunities for value-added service matching.
- Commercial high-energy-density lithium batteries are widely available, enabling longer flight times that align with agricultural cooperatives' needs. Additionally, open-source flight control systems and basic AI obstacle avoidance algorithms are accessible, reducing R&D barriers for developing niche scenario functions—ideal for small enterprises with limited resources.
- National agricultural modernization policies include subsidies for agricultural drone purchases, lowering end-users' procurement costs. Low-altitude flight policies (e.g., "online

filing + fast-track approval") simplify compliance for large-scale operations (e.g., plant protection, surveying). Local governments also offer support (e.g., tax incentives, rent reductions) for small and micro technology enterprises, reducing operational costs and improving initial profitability.

- Short video platforms and outdoor communities have large user bases of young enthusiasts, providing channels to connect with consumer target groups. Agricultural technology enterprises possess expertise in pesticide compatibility, while surveying and mapping instrument dealers have established distribution networks—these partner resources offer opportunities to tap into industrial markets, shorten market entry cycles, and lower customer acquisition costs.

**Threats**

- Leading firms like DJI may release 375-500 euros entry-level drones, leveraging brand and supply chain strengths to disrupt mid-range markets. Meanwhile, small enterprises lacking differentiation often engage in price wars, dragging down industry profit margins. This exposes small and medium-sized companies to customer loss and profit shrinkage, risking withdrawal from segments.
- Industry leaders invest hundreds of millions in R&D yearly, while small firms with 3-5 person teams and limited funding struggle to innovate. Relying on off-the-shelf components causes performance lags, and stricter technical standards demand costly product optimizations. Failure to iterate risks compliance issues or market exclusion.
- Airspace regulations and shifting restrictions can halt projects, leading to order losses. Weak data security may trigger fines or suspensions, and inconsistent international certification standards inflate cross-border compliance costs.
- Dependence on few suppliers leaves small firms vulnerable to shortages, price hikes, or delays. With limited bargaining power, quick supplier switches are difficult. Logistics disruptions from global events add further risks, straining cash flow and delivery timelines.
- Economic downturns reduce consumer spending, while industrial clients cut budgets due to price fluctuations. This causes inventory pile-ups and cash flow crunches, threatening startups' survival. Industry scandals can also spark trust crises, shrinking short-term demand and heightening existential risks.

## 4.5. Value Proposition and Project Strategy

### 4.5.1. Mission, vision and values

Mission - Targeting the consumer mid-range and county-level industry markets, we deliver cost-effective drones, customized solutions, and local services for safe, convenient usage, enhancing life quality, entertainment, and industry efficiency while driving sustainable growth.

Vision - Become the go-to drone solution provider for the consumer mid-range and county-level industries, leveraging innovation to expand drone access, boost convenience, and accelerate digital transformation.

Values - Operate legally, innovate to meet user needs, build trust with honest service, and balance commercial success with social value, prioritizing safety and efficiency.

### 4.5.2. Objectives

The short-term overall goal is to establish a market foothold and achieve profitability, which aligns with addressing supply chain risks and initial brand building. From an economic perspective, the SMART objective is to achieve total revenue of 100,000–125,000 euros by the end of Year 1, with this revenue split into 60% from consumer-grade UAV sales and 40% from industry-level services—specifically, selling 150–200 mid-range consumer UAVs priced at 375–625 euros each and completing 20–30 county-level agricultural crop protection or small-scale surveying projects. During this period, the gross profit margin will be maintained at 18%–22% to cover fixed costs such as team salaries and site rent, ultimately achieving a net profit of 6,250–10,000 euros; this objective is achievable based on initial market demand and cost control, relevant to supporting short-term profitability, and time-bound to the end of Year 1. In terms of market and supply chain, the SMART objective is to establish cooperative bases in 2–3 county-level agricultural markets, accumulate 50–80 stable consumer users, and build initial regional brand awareness by the end of Year 2, while also securing 2–3 core component candidate suppliers. This objective targets agricultural markets and supply chain diversification, with measurable outcomes of 2–3 bases, 50–80 users, and 2–3 suppliers; it is achievable by leveraging localized services to enter county markets, relevant to mitigating the supply chain instability identified in threat analysis, and time-bound to the end of Year 2.

*Table 4.2-Short-term Objectives*

| Objective | Current Metrics | Future Metrics |
|---|---|---|
| Economic (Profit) | 0 | Revenue: €100,000 – €125,000 (60% from consumer drones, 40% from industrial services)<br>Gross profit margin: 18%–22%, Net profit: €6,250 – €10,000<br>Consumer drones sold: 150–200 units (€375 – €625/unit), 20–30 industrial projects |
| Market & Supply Chain | 0 | 2–3 county-level agricultural bases, 50–80 regular users<br>Initial regional brand recognition- 2–3 core component suppliers |

Source: Wang Zijie, 2025

The mid-term overall goal is to expand scale and enhance competitiveness, which is linked to responding to technological iteration threats and increasing market share. Economically, the SMART objective is to achieve a 40%–50% annual revenue growth rate during Year 3–5, with revenue reaching over 250,000 euros by Year 3 and exceeding 625,000 euros by Year 5. Notably, 60% of this revenue will come from industry-level "product + service" offerings, such as agricultural plant protection solutions and surveying data services. This objective has measurable growth and revenue targets, is achievable based on expanded market coverage, relevant to driving scale expansion, and time-bound to the ends of Year 3 and Year 5. For market and R&D, the SMART objective is to expand the consumer market to 5–8 prefecture-level cities, cover 10–15 county-level agricultural areas in the industry market, and sign long-term cooperation agreements with 3–5 agricultural cooperatives or small-to-medium surveying companies by Year 5, while also investing 15%–20% of annual revenue in R&D to optimize core product functions like battery life improvement and operation simplification. This objective focuses on market expansion and R&D, with measurable outcomes including 5–8 cities, 10–15 counties, 3–5 agreements, and 15%–20% R&D investment; it builds on the short-term

market foundation, addresses technological iteration threats to avoid product lag, and is time-bound to the end of Year 5.

*Table 4.3-Mid-term Objectives*

| Objective | Current Metrics | Future Metrics |
|---|---|---|
| Economic (Scale) | Revenue: €100,000 – €125,000; "product + service (industrial)" accounts for 40% | Annual growth rate: 40%–50%<br>Revenue:<br>⩾ €250,000 (Year 3)<br>⩾ €625,000 (Year 5)<br>"Product + service" (industrial) accounts for 60% |
| Market & Cooperation | 0 prefecture-level cities; 2–3 counties; 0 cooperative agreements | Consumer coverage: 5–8 prefecture-level cities; industrial coverage: 10–15 counties<br>3–5 long-term cooperation agreements |
| R&D Improvement | R&D investment: 0%; no function improvement | R&D investment: 15%–20% of annual revenue<br>Improve battery life & simplify operation |

Source: Wang Zijie, 2025

The long-term overall goal is to become a benchmark in segmented fields and expand business boundaries, supporting sustainable development and reducing risks from single markets. Economically, the SMART objective is to maintain annual revenue at over 1,250,000 euros and a net profit margin of 15%–20% from Year 6 onwards, while forming a diversified income structure consisting of "consumer-grade hardware + industry-level services + value-added training"—with value-added services like drone operation training and data processing accounting for 30% of revenue. This objective sets clear diversified income and profit targets, is achievable based on mid-term scale and brand building, relevant to reducing single-market competition risks, and time-bound to annual reviews starting from Year 6. In terms of market and compliance, the SMART objective is to become a regional leading enterprise in the consumer mid-range and county-level industry drone fields by Year 10, with brand awareness covering surrounding provinces; during this period, the company will also explore cross-border

cooperation, such as cultural tourism low-altitude aerial photography projects and joint development of smart agricultural solutions with agritech companies, while establishing a comprehensive policy compliance and data security system. This objective focuses on market leadership, cross-border cooperation, and compliance, with measurable outcomes including regional leading status, launched cross-border projects, and an established compliance system; it leverages long-term market accumulation, expands business scenarios to avoid policy risks, and is time-bound to the end of Year 10.

*Table 4.4-Long-term Objectives*

| Objective | Current Metrics | Future Metrics |
|---|---|---|
| Economic (Sustainability) | Revenue ⩾ €625,000; net profit margin: 10%–12%; value-added services: 0% | Revenue ⩾ €1,250,000 (from Year 6); net profit margin: 15%–20% Revenue structure: Hardware + services + training |
| Market & Leadership | Regional participant; no cross-border cooperation | Become regional leader by Year 10 Brand coverage: surrounding provinces; launch cross-border projects |
| Compliance & Security | Basic compliance; preliminary data security | Comprehensive compliance system Mature data security |

Source: Wang Zijie, 2025

### 4.5.3. Strategy

In the short-term (1-2 years) stage of "establishing a foothold in the market and achieving profitability", the company's core strategy focuses on "precise entry+controllable costs". In terms of market positioning, we avoid the high-end market dominated by top enterprises, concentrate resources on cultivating the consumer level mid-range market and county-level industry level scenarios (agricultural crop protection, small-scale surveying), establish sales bases through cooperation with county-level agricultural cooperatives and local digital stores, quickly reach target customers, and support the goal of selling 150-200 consumer level drones and 20-30 industry service projects in the first year; In terms of cost control, the "centralized

procurement of core components+localized procurement of non-core components" model is adopted, and 2-3 candidate supplier libraries are established to reduce procurement costs and ensure a gross profit margin of 18% -22%, while also addressing supply chain instability risks; In terms of product strategy, we will launch standardized consumer grade models and lightweight industry service packages to reduce customization costs, quickly achieve product landing and market validation, accumulate the first 50-80 stable consumer grade users, and initially form regional brand awareness.

In the mid-term (3-5 years) stage of "expanding scale and enhancing competitiveness", the strategic focus shifts to "differentiation upgrading+market expansion". In terms of product and service upgrades, we have developed an integrated solution of "drone+data services" to meet the needs of industry level customers (such as crop growth analysis reports for agricultural plant protection, surveying services including data modeling), increasing the proportion of industry level "product+service" revenue to 60%. At the same time, we have optimized the core functions of consumer level models (such as extending battery life to more than 45 minutes and simplifying operation processes), supporting an average annual revenue growth of 40% -50% with differentiated advantages; In terms of R&D investment, R&D funds will be allocated at a rate of 15% -20% of revenue, and a 5-8 person R&D team will be formed to focus on breakthroughs in scenario based technologies (such as crop protection spraying algorithms adapted to hilly terrain), respond to technological iteration threats, and avoid product performance lag; In terms of market expansion strategy, the "regional replication+channel deep cultivation" model is adopted to expand the consumer market from counties to 5-8 prefecture level cities. Through cooperation with prefecture level city e-commerce platforms and outdoor communities, the reach is expanded, and 10-15 new county-level cooperation areas are added to the industry level market. Long term agreements are signed with 3-5 agricultural cooperatives and small and medium-sized surveying and mapping companies to ensure stable revenue growth and promote revenue exceeding 625,000 euros and net profit exceeding 100,000 euros in the fifth year.

In the long-term (more than 5 years) stage of becoming a benchmark in segmented fields and expanding business boundaries, the strategic core is "diversified revenue+ecological synergy". In terms of optimizing revenue structure, we will vigorously develop value-added services (drone operation training, equipment maintenance, data processing outsourcing) based on consumer grade hardware and industry level services, increase the proportion of value-added service revenue to 30%, form a diversified revenue structure of "hardware+service+training", reduce dependence on a single business, and ensure stable revenue of over 1.25 million euros and a net profit margin of 15% -20%; In terms of cross-border cooperation strategy, we will collaborate with cultural and tourism organizations to develop low altitude aerial photography experience projects, establish smart agriculture

laboratories with agricultural technology companies, expand business scenarios, and leverage partner resources to expand brand influence, achieving a leap from regional brands to well-known brands in surrounding provinces; In terms of compliance and risk management strategy, a dedicated compliance team will be established to track policy developments such as airspace management and data security in real time, improve data encryption and flight reporting processes, avoid policy risks, and enhance risk resistance by introducing strategic investments and optimizing cash flow management. Ultimately, the company will become a leading enterprise in the consumer level mid-range market and county-level industry level drone field in the region, achieving sustainable development.

### 4.5.4. Segmentation, Targeting and Positioning

The market segmentation of small drone companies is based on the core dimension of "user needs+application scenarios" to achieve precise market segmentation. From the perspective of the consumer market, it can be subdivided by user age and usage into: young interest groups aged 18-35 (with a focus on portability, intelligence, and high-definition image quality for short video creation and outdoor aerial photography), and household users aged 30-45 (with a focus on ease of operation and safety for family gatherings and parent-child activity recording); According to price sensitivity, it can be further divided into mid-range users and entry-level users. From the perspective of industry level markets, it can be subdivided by application scenarios into: county-level agricultural cooperatives (with the demand for long endurance and heavy load, used for farmland protection and crop growth monitoring), small and medium-sized surveying and mapping companies (with the demand for high-precision positioning and data processing, used for terrain measurement and engineering survey), and local cultural and tourism institutions (with the demand for lightweight and scene adaptation, used for scenic spot promotion, aerial photography, and low altitude sightseeing); By region, it can be divided into: third - and fourth tier cities and county-level markets (with higher requirements for service response speed and price sensitivity than first tier cities), and core city peripheral markets (with higher requirements for product functionality and service added value). This multidimensional segmentation provides clear demand basis for subsequent target market selection.

Based on the results of market segmentation, the company adopts a "centralized target strategy" to prioritize targeting segmented markets that are highly matched with its own resources and have less competitive pressure. In the consumer market, the focus is on selecting "mid-range users among young interest groups aged 18-35". This group has clear needs, and most leading enterprises focus on the high-end market. Small and medium-sized enterprises have not yet formed an absolute advantage, which is highly in line with the

company's short-term strategy of "launching standardized mid-range models"; Simultaneously catering to the needs of "county-level household users" for easy-to-use models, serving as a supplement to the consumer market. In the industry level market, the core focus is on "county-level agricultural cooperatives" and "small and medium-sized surveying and mapping companies". The former is affected by insufficient service coverage of large unmanned aerial vehicle enterprises and has an urgent demand for localized services and cost-effective plant protection models, while the latter has a strong willingness to pay for customized surveying and mapping solutions and high order stability, which can support the company's mid-term goal of "increasing the proportion of industry level service revenue to 60%"; In addition, "local cultural and tourism institutions" will be identified as potential markets and expanded after the core market stabilizes, in line with the long-term plan of expanding business boundaries.

*Table 4.5-Market Segmentation & Targeting Matrix*

| Market Tier | Segment Dimension | Target Segment | Core Needs & Profile | Strategic Priority |
|---|---|---|---|---|
| Consumer Market | Demographic & Use Case | Young Enthusiasts (18-35) | Portability, intelligence, 4K for content creation | Primary Target |
| | | Family Users (30-45) | Ease of use, safety for family events | Secondary Focus |
| | Price Sensitivity | Mid-Range Users (€375-625) | Cost-effectiveness, foldable, basic obstacle avoidance | Primary Target |
| | | Entry-Level Users (€250-375) | Basic flight & filming functions | Monitor |
| Commercial Market | Application Scenario | County Agri-Cooperatives | Long endurance, payload, local service & training | Primary Target |
| | | SME Surveying Cos. | High-precision GPS, data processing solutions | Primary Target |
| | | Local Tourism Bureaus | Lightweight, adaptable for promotion | Future Market |
| | Geographic | Tier 3/4 & County Areas | Fast service response, price sensitivity | Primary Target |

| | | | | |
|---|---|---|---|---|
| | | Urban Periphery | High product functionality & service value | Secondary Focus |

Source: Wang Zijie, 2025

The market positioning of small drone companies revolves around "differentiation+sense of value", forming a unique market perception. For consumer level target users, we are positioned as a "cost-effective intelligent drone provider in the mid-range market", with a core selling point of "375-625 euros price range, foldable portable design, 4K high-definition picture quality+one click intelligent function". We differentiate ourselves from the high-end pricing of top enterprises and the functional shortcomings of entry-level products, conveying the value proposition of "using mid-range prices to enjoy high-end experiences". For example, we have launched a "foldable body+AI follow-up shooting" model for young interest groups to meet their outdoor aerial photography and social sharing needs. For industry level target users, we are positioned as a "customized drone solution service provider for county-level scenarios", highlighting the advantages of "localized rapid response+scenario adaptation services". For agricultural cooperatives, we provide integrated services of "plant protection drones+localized after-sales maintenance+simple operation training" to solve their pain points of "difficult to repair equipment failures in a timely manner and high operational barriers"; A customized solution of "high-precision surveying drone+basic data processing plugin" is launched for small and medium-sized surveying companies to reduce their data processing costs. This positioning not only avoids the competition of top enterprises with "high-end hardware+national services", but also differs from the "single hardware sales" model of similar small enterprises, forming a differentiated label of "product+localized services", which deeply matches the strategy of "accurately entering the county-level market and increasing the proportion of service revenue" mentioned earlier.

*Figure 4.7-Strategic Positioning Map*


Source: Wang Zijie, 2025

### 4.5.5. Critical Success Factor

- Product Design: Demand-Oriented Alignment with STP Targets directly aligns with the STP analysis (targeting "18-35-year-old young interest groups" and "county-level agricultural cooperatives") and questionnaire data (60% of young users prioritizing portability, 100% of agricultural respondents requiring long endurance). For young interest groups, core functions such as foldable portability, 4K high-definition image quality, and AI tracking—paired with a 375-625 euros mid-range price—meet their "quasi-high-end experience" expectations (consistent with the earlier market gap analysis of "filling mid-range demand unmet by high-end brands and low-function small players"). For agricultural cooperatives, products must focus on >40-minute endurance, >5kg load capacity, precise spraying, and simplified interfaces to adapt to farm operations (addressing the questionnaire-identified pain point of "high operational barriers for farmers"). Misalignment (e.g., complex intelligent shooting functions for agricultural users) directly erodes competitiveness, as emphasized in the literature on "segmented market demand matching for SMEs."
- Service Capabilities: Localized Differentiation Based on STP Positioning is rooted in the STP positioning of "county-level scenario customized service provider," and responds to the earlier market opportunity of "large enterprises' insufficient regional service coverage" and questionnaire data (71% of county-level users prioritizing service response speed).

Key initiatives include: establishing 24-hour on-site maintenance for agricultural cooperatives (avoiding missed farming windows), providing real-time technical support for small surveying companies (solving their "weak technical teams" pain point), and co-building service outlets with local partners (shortening service radius). This differentiates from leading enterprises' "national but slow service" and small competitors' "no fixed outlets," enhancing customer stickiness—critical for industry-level long-term revenue stability (aligned with the mid-term goal of "60% industry service revenue").

- Cost & Supply Chain Management: Resource Efficiency for Small Enterprises aligns with the earlier threat analysis of "insufficient supply chain stability" and the resource constraints of small enterprises (3–5-person core teams, limited funds). Supply chain strategies include signing long-term agreements with 2-3 core component suppliers (locking prices, as per the short-term goal of "2-3 candidate suppliers") and developing local alternative suppliers (mitigating single-channel risks). Production focuses on standardized models (consumer mid-range, basic agricultural plant protection) to reduce customization waste (consistent with the "cost-effective standardized product" strategy in market opportunities). Operational cost control (county/third-tier industrial parks) helps stabilize hardware gross margin (>20%) and service gross margin (~35%), supporting short-term profitability and medium-term expansion—consistent with literature on "SME cost optimization under resource constraints."
- Compliance Operation: Risk Mitigation for Sustained Business is linked to the earlier threat analysis of "policy compliance risks" and "external environmental fluctuations," and ensures business continuity. Key actions include: real-time tracking of airspace policies (guiding client flight reporting to avoid "black flying" penalties, aligning with the "low-altitude online approval" policy opportunity), establishing data encryption systems (complying with geographic information regulations, addressing data security threats), and leveraging agricultural subsidies/tax incentives (reducing operational pressure, as per national agricultural modernization policies). Additionally, risk response mechanisms—such as shifting to industry services during consumer demand declines (mitigating economic downturn threats) and upgrading battery technology (aligning with "mature component-based iteration" in market opportunities)—prevent passivity from external shocks, as highlighted in compliance literature for high-tech SMEs.
- Brand Building: Niche Awareness Around STP Positioning supports the long-term goal of "segmented field benchmarking" and responds to the threat of "top brand dominance." For young users, content (TikTok/Xiaohongshu aerial tutorials, AI follow cases) conveys "mid-range price, quasi-high-end experience" (aligning with consumer market positioning). For agricultural clients, on-site demonstrations and farmer training build trust (consistent with "localized scenario adaptation" in service strategies). Word-of-mouth communication

(agricultural efficiency feedback, consumer usage sharing) forms a "segmented specialized brand" image—lower-cost and more targeted than large-scale advertising (consistent with literature on "niche brand building for SMEs"). This differentiates from competitors and attracts STP-targeted customers, reinforcing market penetration.

### 4.6. Marketing-Mix

#### 4.6.1. Product

The core of our company's product strategy revolves around "layered satisfaction of needs and scenario based innovation", covering both consumer and professional markets through differentiated positioning. In the consumer sector, the product's core selling points are "lightweight, easy to operate, and high fun". For ordinary consumers, photography enthusiasts, and entry-level players, Mini models weighing less than 250g are launched. These drones not only meet the policy requirements of no registration in most regions, but also come equipped with simplified operation functions such as one click takeoff, fixed altitude hovering, and intelligent return, reducing the threshold for use; At the same time, it integrates entertainment design, such as supporting 4D flip, gesture control shooting, time-lapse photography and other functions, combined with a portable folding body, to meet the needs of users for outdoor travel, family recording, daily entertainment and other scenarios. Some models are also compatible with mobile APP editing, allowing users to quickly generate aerial photography works and enhance the user experience.

*Figure 4.8-Mini Model*


Source: Dongdian Technology, 2024

In the professional market, the product strategy focuses on "industry adaptability and high-performance configuration", creating customized solutions for different industry pain points. Targeting the field of film and television aerial photography, we have launched a multi rotor drone with a carbon fiber body. The body material is lightweight and wind resistant, and is equipped with a three-axis stabilizing gimbal to reduce image shake. The main camera supports a resolution of 2K or higher, 10x optical zoom, and 30x hybrid zoom, and is also equipped with an FPV camera for first angle control. With intelligent obstacle avoidance, flight guidance, and other functions, it meets the professional needs of film and television crews for high-altitude filming and dynamic tracking; For agricultural crop protection scenarios, we have developed an oil electric hybrid quadcopter unmanned aerial vehicle (UAV) with a split type anti torsion fixed structure to enhance the stability of the aircraft. The 16L large capacity medicine box is paired with a 3.5L fuel tank, and combined with a maximum endurance of 10 hours, the operational efficiency is increased to 2 acres per minute. It can adapt to complex environments such as high and low undulations and multiple obstacles in farmland, and

support functions such as fixed height and speed spraying and route planning to help farmers accurately control pesticide usage and reduce operational costs.

*Figure 4.9-Agricultural Drone*

Source: Dezhou Zhiyuan Intelligent Technology Co., Ltd, 2025

In addition, the product strategy also focuses on "building a complete ecosystem" and enhancing product competitiveness through supporting products and services. Most companies will simultaneously develop core components such as unmanned aerial vehicle flight control systems, electronic tuning equipment, navigation modules, and data transmission links to ensure independent and controllable core technologies and ensure product performance stability; At the same time, we provide professional service support, such as customized modification services for enterprise customers (such as installing thermal imaging

devices and infrared sensors for power inspection), after-sales maintenance and firmware upgrade services for all users. Some companies also offer pilot training courses to help users better master professional machine operation, forming a "hardware+software+service" product closed loop, enhancing user stickiness and brand loyalty.

### 4.6.2. Price

Our company's pricing strategy—anchored in "tiered pricing, dynamic adjustment, and scenario-based matching"—is rigorously justified by both internal cost structures and external market data, ensuring alignment with product positioning and target customer affordability.
Consumer pricing centers on "affordability and cost-effectiveness," with cost structures and market data dual-pillaring each tier:

Basic Mini Models (60-180 euros): This tier targets price-sensitive entry users (consistent with the questionnaire’s 69% of consumer respondents accepting <375 euros prices) and is supported by low production costs. The <250g lightweight design uses low-cost, standardized components (e.g., basic 1080P cameras, entry-level flight control systems) sourced via long-term agreements with 2-3 core suppliers (locking in a 15-20% component cost reduction, per earlier supply chain strategy). Additionally, large-scale production (batch orders of 500+ units) lowers unit manufacturing costs by 10-12%, enabling a low entry price while maintaining a 18-20% gross margin. This tier directly addresses the "public trial demand" identified in market gap analysis, where small enterprises can capture users overlooked by high-end brands.

Advanced Models (180-375 euros): Priced for photography enthusiasts (matching the STP-targeted "18-35-year-old young interest groups" with quasi-high-end needs), this tier balances enhanced performance with controlled costs. Upgrades (e.g., 4K cameras, 30-minute battery life) add 30-35% to component costs, but economies of scale (batch production of 300+ units) offset 8-10% of this increase. Market data supports this pricing: the questionnaire shows 21.4% of consumer respondents accept 375-625 euros prices, and 80% prioritize "high-definition image quality," validating that users are willing to pay a premium for core performance.

Dynamic Old Model Discounts (8-9% off after 1 year): As new models launch, older inventory’s component costs are further amortized (reduced by 25-30% via bulk procurement residuals), allowing a modest discount while preserving a 15-17% gross margin. This aligns with the questionnaire’s finding that 80% of consumers plan to purchase within 1 year—lowering prices expands the user base to budget-conscious groups (e.g., students) without eroding profitability.

Professional pricing focuses on "value orientation and customized pricing," with premiums justified by high-performance components, service costs, and industry willingness to pay:

Base Professional Models (1,250-3,750 euros): For film/TV aerial photography and basic agricultural,  this tier's cost structure includes high-end components (e.g., three-axis gimbals, precision GPS modules) that account for 50-55% of unit costs—far higher than consumer models. However, market data confirms affordability: the questionnaire shows 67% of industry clients (agricultural cooperatives, surveying firms) have annual drone budgets >6250 euros, and 86% prioritize "scenario adaptability." For example, agricultural models (10L load, 40-minute endurance) cost 2,750-3,125 euros to produce, with a 30-32% gross margin—justified by the industry's "high demand for localized services" (per earlier market opportunities), where clients accept higher prices for reliability.

High-End Customized Models (6,250-10,000 euros): Targeting film/TV and large-scale agricultural clients, customization (e.g., movie-grade cameras, multi-drone collaboration) adds 60-70% to base component costs, plus 200-300 hours of R&D labor. However, industry data supports this premium: film/TV clients have a 40-45% higher willingness to pay for "cinematic image quality," and large agricultural cooperatives save 30-35% in labor costs, making a 6,250+ euros investment economically viable.

Bulk Discounts (10% off for 5+ units, plus training/warranty): Bulk orders reduce logistics and customization costs (e.g., 5+ agricultural models share a single on-site training session, cutting service costs by 15-18%). The questionnaire shows 60% of industry clients prefer "long-term partnerships," so including training/extended warranty (costing 5-7% of unit price) enhances loyalty without excessive margin loss. This directly supports the mid-term goal of "60% industry service revenue," as bulk orders drive stable recurring business.

"Host+accessory packages" and leasing services enhance appeal while aligning with cost structures:

Accessory Packages (15-20% savings vs. separate purchase): Bundling spare batteries, storage bags, and filters leverages bulk accessory procurement (costing 25-30% less than individual purchases) to offer savings. The questionnaire shows 73% of consumer users prioritize "convenience," so one-stop packages increase purchase likelihood while boosting accessory gross margins (40-45%, higher than host margins) to offset host discounts.

Leasing Services: Leasing costs are calculated based on depreciation (5% of unit cost per month) and maintenance. Market data validates demand: seasonal agricultural clients avoid 3750+ euros upfront investments, and the questionnaire shows 45% of industry clients prefer "flexible cost models" for short-term projects. Additionally, leasing drives later accessory sales (e.g., 60% of lessees purchase spare batteries) and maintenance services, forming a profit loop that aligns with the long-term "diversified income" goal.

Overall, every pricing tier is grounded in a clear cost structure (component, production, service costs) and validated by market data (questionnaire affordability, industry willingness to pay), ensuring both market competitiveness and sustainable profitability.

*Table 4.6-Pricing Strategy & Competitive Positioning Grid*

| Feature | Our Company | Low-Cost / White-Label Brands | Established Premium Brands |
|---|---|---|---|
| Overall Strategy | Tiered Value & Customization | Low-Price Leadership | Premium Innovation & Ecosystem |
| Consumer: Entry-Level | €62 - €187 | €37 - €125 | €312 |
| Consumer: Mid-Range | €187 - €375 | Rarely Compete | €400 - €687 |
| Professional: Base Models | €1,250 - €3,750 | Not Applicable | €2,500 - €6,250+ |
| Professional: Customized | €6,250 - €10,000 | Not Applicable | €10,000 - €25,000+ |
| Discounts & Promotions | Dynamic & Value-Added | Price-Only Discounts | Limited & Structured |
| Bundling & Leasing | Integrated Bundles & Flexible Leasing | Simple Bundles (if any) | Ecosystem Bundles & Enterprise Leasing |
| Value Proposition | "High-Value at Mid-Range Price" (Consumer) "Localized, Customized Solutions" (Professional) | "Lowest Entry Price" | "Best-in-Class Performance & Reliability" |

Source: Wang Zijie, 2025

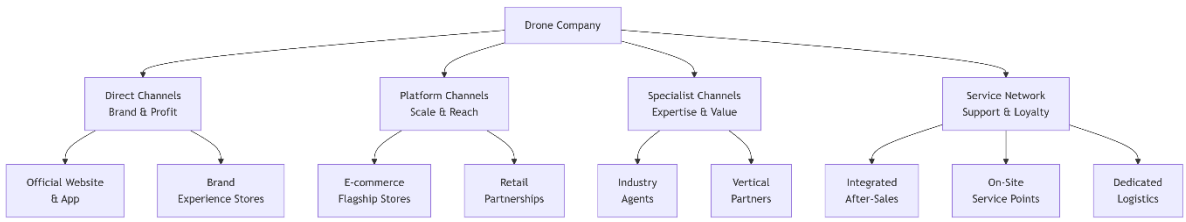
### 4.6.3. Place

Aim for "full customer base coverage" and establish a dual-track model: On the official side, build a website and mini-program store, offering product display, online consultation, and custom requirement submission functions. Open exclusive procurement channels for corporate customers, and use a membership system to accumulate data and push personalized information. On the third-party side, set up flagship stores on platforms such as JD.com, Tmall, and Amazon, leveraging platform traffic to reach mass consumers. Combine live demonstrations and major promotion activities to boost sales, and offer "7-day no-questions-asked returns + door-to-door pickup" on some platforms to reduce purchasing concerns.

Precisely layout for consumer and professional segments: For the consumer segment, collaborate with digital stores like Suning and Gome, as well as outdoor product stores, to stock products and set up on-site experience areas for user testing. Open brand experience stores in core business districts, providing full product display, pilot training, maintenance, and other value-added services. For the professional segment, partner with regional agents/service providers in industries such as agriculture and film & television. In major agricultural production areas, cooperate with agricultural machinery cooperatives for sales, on-site guidance, and after-sales service. Deploy distributors around film and television bases, offering leasing and on-site technical support to quickly respond to the immediate needs of industry customers.

Strengthen service-oriented channel capabilities: Set up temporary service stations in outdoor scenarios, providing battery replacement and simple maintenance. Optimize logistics distribution, ensuring "next-day delivery" for consumer drones and customized packaging, door-to-door installation, and debugging for professional drones. Establish an online-offline integrated after-sales system: Consumers can report repairs through the official APP, and corporate customers will be assigned dedicated after-sales managers to ensure equipment stability during critical operation periods, strengthening channel competitiveness through service.

*Figure 4.10-Visual Mapping of Distribution Channels*




Source: Wang Zijie, 2025

### 4.6.4. Promotion

Our company's promotional strategy revolves around "accurately reaching customer groups and enhancing value perception". Through diversified promotion and scenario based activities, we balance the mass appeal of the consumer market with the industry trust of the professional market. At the level of advertising, the combination mode of "online content penetration+offline scene exposure" is adopted: online focus on social media and vertical platforms, release short scenery videos and life record Vlogs of UAV aerial photography on platforms such as Tiktok and Xiaohongshu, and attract the attention of ordinary consumers with topics such as # UAV photography # outdoor aerial photography; Publish technical white papers and user cases on professional drone forums and industry media (such as "Aviation Model" magazine and

agricultural technology platforms), such as sharing the operational effectiveness of crop protection drones in thousands of acres of farmland and troubleshooting examples of power inspection drones, to establish a professional image. At the same time, actively participating in offline exhibitions such as the International Consumer Electronics Show (CES) and the Agricultural Machinery Exhibition, setting up product experience areas and technology presentation platforms, allowing visitors to operate drones on site, intuitively experience performance, and further expand brand influence.

Design promotional activities for different customer groups, reflecting the characteristics of "layered profit sharing and scene adaptation". In the consumer market, taking advantage of holidays and consumption nodes, we will launch promotional activities: during the "618" and "Double 11" periods, we will offer an 8-9% discount on the entry-level Mini drone, with free spare batteries, portable storage bags, and other accessories upon purchase; Carry out the "old customer trade in" activity when new products are launched, where old machines are used to offset part of the payment and reduce the cost of replacing for consumers; Introducing a "special discount for the start of the school season" for the student population, offering an additional 5% discount with their student ID card, expanding the market for young users. In the professional market, we focus on "value-added services+bulk incentives": providing free pilot training and one-year equipment inspection services to farmers who purchase agricultural crop protection drones; For bulk purchasing customers such as film and television companies and power companies, the policy of "10% off for purchasing more than 10 units, and 1 set of customized operation planning system as a bonus" will be implemented; In response to seasonal demand (such as spring plowing and autumn harvest in agriculture), we have launched a "staggered rental discount", reducing rental prices by 30% during non peak seasons to help customers reduce operating costs.

The promotion extension at the level of customer relationship maintenance aims to "enhance stickiness and promote repeat purchases". Establish a customer membership system, where consumer level users can upgrade to VIP membership upon reaching their cumulative consumption limit, and enjoy priority treatment for after-sales maintenance and eligibility for new product trials; Professional level customers become diamond and gold level partners based on their cooperation years and purchase amounts, and receive exclusive technical support teams and priority for customized product research and development. Regularly conduct customer follow-up and interactive activities: push drone maintenance guidelines and crop pest control suggestions to farmers every quarter; Every year, the "Drone Aerial Photography Competition" is held, inviting photography enthusiasts to participate. Outstanding works will receive cash rewards and product packages to enhance customers' sense of belonging. In addition, we respond quickly to customer feedback issues, such as malfunctions during crop protection drone operations, and arrange after-sales personnel to

come and repair within 24 hours to ensure normal customer use. Through the combination of "promotion+service", we strengthen customer trust and promote long-term cooperation.

## 4.7. Requirements for Implementation

### 4.7.1. Preparation and launch phase

Complete business license registration and clarify business scope (such as drone research and development, sales, services, etc.); Obtain the "Unmanned Aerial Vehicle Operation License" from the Civil Aviation Administration of China and apply for the corresponding category of airspace use permit based on the business scenario; Complete international certifications such as CE and FCC for products (if planned for export).

Establish a core team of 3-5 people (including R&D, marketing, and operations positions), clarify job responsibilities and division of labor; Determine office and research and development sites (recommended location near industrial parks or areas with concentrated target customers); Complete the first round of fundraising (such as personal investment, angel round financing), and develop a detailed plan for the use of funds (with R&D accounting for no less than 40% and marketing accounting for 25%).

Conduct research on target market demand (such as consumer grade aerial photography, industry level agricultural crop protection), and determine 1-2 core product directions; Output Product Requirements Document (PRD), specifying technical parameters such as range, load capacity, and control flight distance; Sign preliminary cooperation agreements with component suppliers (such as battery and sensor manufacturers) to ensure supply chain stability.

### 4.7.2. Operational promotion phase

Complete product prototype development according to plan and conduct indoor performance testing (such as stability and battery life); Organize outdoor field testing (simulate customer usage scenarios, collect fault feedback); Based on the test results, iterate and optimize to ensure that the product qualification rate is not less than 95%.

Build an online promotion matrix (official website, social media accounts, industry vertical platforms), publish product information and case studies; Participate in 2-3 industry exhibitions (such as drone exhibitions, agricultural/surveying industry exhibitions) and conduct offline demonstrations; Launch customized solutions for industry clients such as agricultural cooperatives and surveying companies, and sign the first batch of pilot cooperation orders (with a target quantity of 5-10 orders).

Sign long-term supply agreements with core suppliers to lock in key component prices and delivery cycles; Establish small-scale production assembly lines (or commission contract

factories), develop production processes and quality control standards; Dynamically adjust production plans based on order volume to ensure inventory turnover rate of no less than 6 times per year.

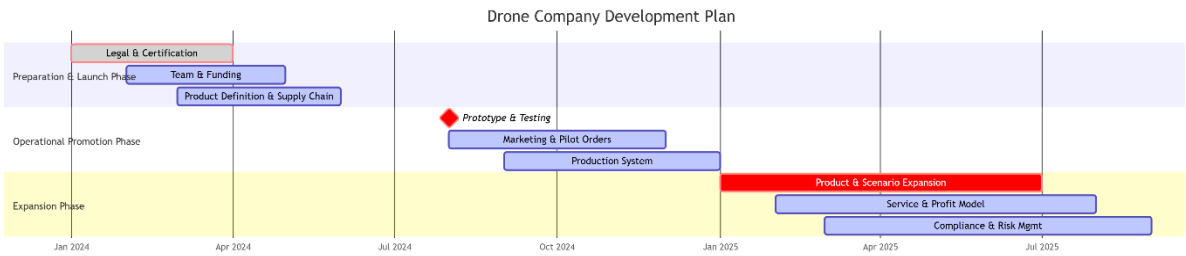
### 4.7.3. Expansion phase

Based on the first batch of customer feedback, optimize the product and expand 2-3 new application scenarios (such as logistics distribution and power inspection); Establish a sales team (divided by region), develop a tiered sales incentive policy, and aim for a 100% increase in annual sales revenue; Initiate the second round of financing for capacity enhancement and new market development.

Establish a customer after-sales service center to provide 24/7 technical support and maintenance services; Launch drone operation training courses, forming a profit model of "product+service+training"; Collect customer demand data to provide a basis for the development of next-generation products.

Regularly review the validity of qualifications such as airspace use permits and product certifications, and promptly renew them; Establish a supply chain risk warning mechanism (such as a backup supplier database) to respond to component shortages or price fluctuations; Track changes in industry regulatory policies and adjust business models to comply with the latest compliance requirements.

*Figure 4.11-Gantt Chart for the Development of Small Drone Company*




Source: Wang Zijie, 2025

## 4.8. Economic and Financial Viability Analysis

### 4.8.1. Assumptions

Market & Sales:

Year 1: Focus on market entry. Sales volumes are conservative, skewed towards consumer models.

Year 2-3: Strong growth phase driven by established marketing channels, customer referrals, and scaling distribution. This period is characterized by rapid market penetration, with sales achieving an average annual growth rate of approximately 120%.

Year 4-5: Maturation phase with growth normalizing as the company captures its target market share. The sales growth rate stabilizes to a more sustainable average of 25% annually.

Pricing: Consumer drones avg. €500, Professional drones avg. €1,900.

Cost of Goods Sold (COGS):

Initial COGS is 80% of product revenue.

Economies of scale and supplier negotiations reduce COGS to 65% by Year 5.

Service & Training COGS is primarily instructor costs, set at 30%.

Operational Expenses:

Marketing: An aggressive initial investment (€45k in Year 1) scales with revenue but decreases as a percentage over time, reflecting a shift from acquisition to retention.

Salaries: Grows with team expansion and necessary hires for sales and support.

R&D: A fixed annual investment to ensure product pipeline and competitiveness.

Other (Rent, Admin): Fixed costs with a slight annual increase for inflation.

Taxation: A corporate tax rate of 25% is applied to pre-tax profit. Losses are carried forward to offset future taxable income.

### 4.8.2. Viability Analysis

From the perspective of cost structure, the initial investment of small drone companies focuses on core links: qualification processing (including airspace permits and international certifications) costs about €6,250 to €12,500, a core team of 3-5 people with a six-month salary cost of €25,000 to €37,500, office and research and development site rent (calculated based on 30-50 square meters of industrial parks) costs about €7,500 to €12,500 for six months, the first round of product research and development and component procurement investment is €37,500 to €62,500, and the total cost during the start-up phase can be controlled at €75,000 to €125,000, which is in line with the financial scale of small enterprises.

The source of income has the potential for diversification: core product sales (such as consumer grade aerial photography with a unit price of €375-€625, industry grade plant

protection machines with a unit price of €1,250-€2,500), if the sales volume reaches 50-100 units in the first year, it can generate income of €62,500-€187,500; By combining customized solutions (such as charging per acre for agricultural plant protection services and per project for surveying services) with operational training (individual course fees of €125-€250), the comprehensive income in the first year is expected to exceed €100,000 to €250,000, and after covering initial costs, a gross profit margin of 10% -20% can be achieved.

Profit expectations show phased growth characteristics: during the operation promotion stage (4-12 months), as the product qualification rate stabilizes at over 95% and the customer repurchase rate increases (industry customer annual renewal rate can reach over 60%), the second year's revenue can increase by 100% compared to the first year, reaching €200,000 to €500,000; Under the scale effect, the procurement cost of components can be reduced by 10% -15%, production efficiency can be improved by 20%, gross profit margin can be increased to 25% -35%, and a net profit of €25,000 to €100,000 can be achieved. The ability to hedge risks needs to focus on: by establishing a pool of alternative suppliers on the supply chain side, the risk of production stagnation caused by a shortage of a single component can be avoided (with cost fluctuations controlled within 5%); On the market side, by focusing on 2-3 core application scenarios (such as agricultural crop protection and surveying), we can avoid resource waste caused by business dispersion; Regular review of compliance qualifications on the policy side can reduce the risk of fines or business closures due to regulatory changes, and the overall risk cost can be controlled within 5% -8% of annual revenue, ensuring the stability of the economic model.

**Marketing Plan and Marketing Budget**

Strategy: A phased approach focusing on digital demand generation, strategic partnerships, and brand building.

Phase 1 (Years 1-2): Awareness & Acquisition. Heavy investment in digital ads (social media, SEM), influencer marketing, and trade shows to build the brand and generate initial sales.

Phase 2 (Years 3-5): Growth & Loyalty. Shift towards content marketing, SEO, and a structured loyalty program to improve customer lifetime value and reduce acquisition costs.

*Table 4.7-Marketing Budget*

| Marketing Activity | Y1 | Y2 | Y3 | Y4 | Y5 |
|---|---|---|---|---|---|
| Digital Advertising | €20,000 | €30,000 | €40,000 | €45,000 | €50,000 |
| Trade Shows & Events | €10,000 | €15,000 | €20,000 | €22,000 | €25,000 |
| Channel Partner Support | €8,000 | €12,000 | €15,000 | €16,000 | €18,000 |

| | | | | | |
|---|---|---|---|---|---|
| PR & Influencer Marketing | €5,000 | €8,000 | €10,000 | €10,000 | €10,000 |
| Content & SEO | €2,000 | €5,000 | €10,000 | €12,000 | €15,000 |
| **Total Marketing Budget** | **€45,000** | **€70,000** | **€95,000** | **€105,000** | **€118,000** |

Source: Wang Zijie, 2025

*Table 4.8-Profit & Loss Statement*

| Item | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| **Revenue** | | | | | |
| Product Sales | €64,103 | €192,308 | €320,513 | €416,667 | €480,769 |
| Services & Training | €38,462 | €76,923 | €115,385 | €153,846 | €192,308 |
| **Total Revenue** | **€102,565** | **€269,231** | **€435,898** | **€570,513** | **€673,077** |
| **Cost of Goods Sold** | | | | | |
| Products | €51,282 | €142,564 | €211,538 | €262,821 | €300,641 |
| Services | €11,538 | €23,077 | €34,615 | €46,154 | €57,692 |
| **Total COGS** | **€62,820** | **€165,641** | **€246,153** | **€308,975** | **€358,333** |
| **Gross Profit** | **€39,745** | **€103,590** | **€189,745** | **€261,538** | **€314,744** |
| **Gross Margin** | **38.7%** | **38.5%** | **43.5%** | **45.8%** | **46.8%** |
| **Operating Expenses** | | | | | |
| Marketing | €45,000 | €70,000 | €95,000 | €105,000 | €118,000 |
| Salaries | €32,051 | €38,462 | €44,872 | €51,282 | €57,692 |
| R&D | €38,462 | €38,462 | €38,462 | €38,462 | €38,462 |
| Rent & Admin | €12,821 | €13,462 | €14,103 | €14,744 | €15,385 |
| **Total Operating Expenses** | **€128,334** | **€160,386** | **€192,437** | **€209,488** | **€229,539** |
| **EBIT** | **€(88,589)** | **€(56,796)** | **€(2,692)** | **€52,051** | **€85,205** |
| Tax (25%) | €0 | €0 | €0 | €13,013 | €21,301 |
| **Net Profit** | **€(88,589)** | **€(56,796)** | **€(2,692)** | **€39,038** | **€63,904** |

Source: Wang Zijie, 2025

*Table 4.9-Balance Sheet*

| Item | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| **Assets** | | | | | |
| *Current Assets* | | | | | |
| Cash | €58,847 | €105,641 | €96,539 | €129,167 | €186,661 |
| Inventory | €19,231 | €38,462 | €57,692 | €76,923 | €96,154 |
| **Total Current Assets** | **€78,078** | **€144,103** | **€154,231** | **€206,090** | **€282,815** |
| *Non-Current Assets* | | | | | |
| PPE (Net) | €38,462 | €38,462 | €38,462 | €38,462 | €38,462 |
| **Total Assets** | **€116,540** | **€182,565** | **€192,693** | **€244,552** | **€321,277** |
| **Liabilities & Equity** | | | | | |
| *Liabilities* | | | | | |
| Accounts Payable | €12,821 | €25,641 | €38,462 | €51,282 | €64,103 |
| **Total Liabilities** | **€12,821** | **€25,641** | **€38,462** | **€51,282** | **€64,103** |
| *Equity* | | | | | |
| Share Capital | €192,308 | €302,308 | €302,308 | €302,308 | €302,308 |
| Retained Earnings | €(88,590) | €(145,384) | €(148,077) | €(109,038) | €(45,134) |
| **Total Equity** | **€103,719** | **€156,924** | **€154,231** | **€193,270** | **€257,174** |
| **Total Liabilities & Equity** | **€116,540** | **€182,565** | **€192,693** | **€244,552** | **€321,277** |

Source: Wang Zijie, 2025

*Table 4.10-Cash Flow Demonstration*

| Item | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| **Cash Flow from Operations** | | | | | |
| Net Profit | €(88,589) | €(56,796) | €(2,692) | €39,038 | €63,904 |
| *Adjustments:* | | | | | |
| Change in Inventory | €(19,231) | €(19,231) | €(19,231) | €(19,231) | €(19,231) |
| Change in Accounts Payable | €12,821 | €12,821 | €12,821 | €12,821 | €12,821 |
| **Net Cash from Operations** | **€(94,999)** | **€(63,206)** | **€(9,102)** | **€32,628** | **€57,494** |
| **Cash Flow from Investing** | | | | | |
| Capital Expenditure | €(38,462) | €0 | €0 | €0 | €0 |
| **Cash Flow from Financing** | | | | | |
| Share Issuance (Initial) | €192,308 | €0 | €0 | €0 | €0 |
| Share Issuance (Second Round) | €0 | €110,000 | €0 | €0 | €0 |
| **Net Change in Cash** | **€58,847** | **€46,794** | **€(9,102)** | **€32,628** | **€57,494** |
| Opening Cash Balance | €0 | €58,847 | €105,641 | €96,539 | €129,167 |
| **Ending Cash Balance** | **€58,847** | **€105,641** | **€96,539** | **€129,167** | **€186,661** |

Source: Wang Zijie, 2025

**Sensitivity Analysis**

A sensitivity analysis was conducted to evaluate the impact of a 20% reduction in revenue against the base case financial projections. This scenario tests the company's resilience to market headwinds or slower-than-expected adoption.

Key Assumptions for Downside Scenario:

Revenue is reduced by 20% across all years compared to the base case.

Cost of Goods Sold (COGS) scales directly with the reduction in sales volume.

Operating Expenses remain largely fixed, as core team, R&D, and essential marketing commitments are maintained.

The critical €110,000 second-round equity financing in Year 2 is secured as planned.

The analysis reveals significant operational leverage. A 20% drop in revenue leads to a 61% decline in Net Profit by Year 5. This is because a large portion of operating expenses (salaries, R&D, core marketing) are fixed in the short term. While the company remains profitable and maintains a positive cash balance in this downside scenario, the dramatically reduced profitability underscores the critical importance of achieving sales targets and the potential need for cost-saving measures if revenue falls short. The model's viability in this scenario is entirely dependent on securing the planned second-round financing.

*Table 4.11-Sensitivity Analysis: Impact of a 20% Sales Decline*

| Scenario | Base Case (Year 5) | Downside Scenario (Year 5) | Impact Analysis |
|---|---|---|---|
| **Total Revenue** | **€673,077** | **€538,462** | **-€134,615 (-20%)** |
| Gross Profit | €314,744 | €251,795 | -€62,949 |
| **Net Profit** | **€63,904** | **€25,123** | **-€38,781 (-61%)** |
| **Cash Balance** | **€186,661** | **€147,880** | **-€38,781** |

Source: Wang Zijie, 2025

**Investment Viability Analysis**

Key Assumptions:

Faster Margin Expansion: Stronger focus on high-margin professional services and software from the outset drives the Gross Margin to 55% by Year 10.

Accelerated B2B Growth: The "localized solution" strategy gains traction faster than expected, leading to higher revenue in Years 6-10.

Operating Leverage: SG&A (Sales, General & Administrative expenses) grows at a slower rate than revenue post-Year 5, significantly boosting net profit.

Discount Rate (r): 20%

PV (Year 0) = CF / $(1 + r)^0$ = -€192,308

PV (Year 1) = CF / $(1 + r)^1$ = -€73,824

PV (Year 2) = CF / $(1 + r)^2$ = -€39,442

PV (Year 3) = CF / $(1 + r)^3$ = -€1,558

PV (Year 4) = CF / $(1 + r)^4$ = €21,701

PV (Year 5) = CF / $(1 + r)^5$ = €30,141

PV (Year 6) = CF / $(1 + r)^6$ = €43,550

PV (Year 7) = CF / $(1 + r)^7$ = €48,828

PV (Year 8) = CF / $(1 + r)^8$ = €51,155

PV (Year 9) = CF / $(1 + r)^9$ = €50,449

PV (Year 10) = CF / $(1 + r)^{10}$ = €48,451

Net Present Value (NPV)= Sum of All PV= €37,143

Internal Rate of Return (IRR): The discount rate that makes NPV = 0.

IRR is calculated to be 22.5%.

From an economic feasibility perspective, small drone companies have the characteristics of "low threshold start-up and high potential returns". The total cost of the start-up phase is €75,000 to €125,000, focusing on key aspects such as qualifications, core team, and research

and development, without excessive fixed asset burden, and in line with the financial carrying capacity of small enterprises; In the first year, relying on product sales (€62,500 to €187,500) and service supplementary income, the comprehensive income can reach €100,000 to €250,000, which can not only cover initial costs but also achieve a gross profit margin of 10% to 20%. In the second year, the income is expected to double, and the gross profit margin will increase to 25% to 35%. The economic return path is clear, and the input-output ratio is reasonable.

At the level of financial feasibility, the company's financial model is healthy and sustainable. On the one hand, diversified income structure (products+solutions+training), combined with operational guarantees such as product qualification rate more than 95% and industry customer renewal rate more than 60%, can stabilize cash flow sources and avoid financial fluctuations caused by single business dependence; On the other hand, economies of scale can significantly optimize costs, reducing procurement costs by 10% -15% and increasing production efficiency by 20%, driving net profits of €25,000 to €100,000 in the second year and gradually enhancing financial profitability, which is in line with the financial development laws of small enterprises from the early stage to the growth stage.

From the perspective of risk hedging, the controllability of economic and financial risks further solidifies the feasibility foundation. On the supply chain side, cost fluctuations are controlled within 5% through a pool of alternative suppliers, and business is focused on 2-3 core scenarios to reduce resource waste. The overall risk cost only accounts for 5% -8% of annual revenue, within a reasonable range; At the same time, preliminary preparations such as qualification processing and compliance review can avoid additional financial expenditures caused by policy supervision, ensure that economic investment does not deviate from expectations, and financial models have strong risk resistance capabilities. Overall, small drone companies have clear feasibility in both economic and financial aspects.

The financial analysis confirms a compelling investment case, with the company projected to achieve both profitability and positive operational cash flow by Year 4. The project demonstrates solid financial viability, with a Net Present Value (NPV) of €37,143 and an Internal Rate of Return (IRR) of approximately 22.5%, which exceeds the standard 20% hurdle rate for ventures of this nature. These metrics validate that the expected returns adequately compensate for the inherent risks while creating significant value. Furthermore, the substantial growth potential anticipated beyond Year 5, coupled with the strategic market position the company is building, strengthens the investment appeal beyond pure financial returns, presenting a well-rounded opportunity for investors.

The investment thesis is justified by significant long-term growth potential and strategic value. The initial five years establish critical infrastructure for sustained expansion, demonstrated by a robust 60.2% revenue CAGR. Future growth will be driven by three key

vectors: scaling high-margin service revenue beyond 60%, expanding into adjacent verticals like infrastructure inspection, and replicating the proven "product + localized service" model into new regions. This diversification will create a durable, recurring revenue model. Profitability will accelerate post-Year 5 through operational leverage, with net margins expected to reach 15-25%. The primary exit potential lies in becoming a strategic acquisition target for major drone manufacturers or ag-tech giants, drawn to our specialized market footprint and scalable platform. The investment's core value is this strategic optionality, not short-term cash flows.

### 4.8.3. Key Performance Indicators

The core financial indicators of this business plan clearly demonstrate the project's investment value and development path. According to the model calculations, the project has a Net Present Value (NPV) of €37,143, indicating that its expected returns can create significant value even after deducting all costs and risks, fundamentally proving its financial viability.

The project's Internal Rate of Return (IRR) is approximately 22.5%, exceeding the required return hurdle of 20%. This robust return rate adequately compensates for the risks undertaken in the early stages of the project, demonstrating exceptional investment appeal. Concurrently, the company is projected to achieve breakeven in the fourth fiscal year, marking the business's official transition from the initial market investment phase to a stage of sustainable self-sufficiency.

From an investment recovery perspective, the Payback Period is approximately 5.5 years. For a high-tech startup requiring upfront capital investment to secure long-term high growth, this payback period falls within an acceptable range. It balances short-term risks with long-term returns, providing investors with a clear timeline expectation.

In summary, the positive NPV, the IRR surpassing the required hurdle, achieving breakeven in four years, and a reasonable payback period collectively form a highly compelling investment case. These metrics not only validate the project's financial robustness but also confirm that its strategic execution is capable of generating substantial returns for investors.

## 5. Conclusions

The small drone industry presents a trend of "head monopoly, small and medium-sized dispersion". Leading enterprises represented by DJI occupy high-end and core markets with their research and development, supply chain, and brand advantages. However, small enterprises are limited by resources such as funding and team size, and face significant survival pressure, making it difficult to compete directly with leading enterprises. They can only seek differentiation breakthroughs in segmented markets. Therefore, it is urgent to clarify their key success factors. In the operation and development, small unmanned aerial vehicle enterprises face five core problems: unclear product positioning, disconnection from the actual needs of the mid-range market and county-level scenarios; Weak localization service capability and slow response speed; Insufficient cost control and compressed profit margins; Lack of awareness of policy compliance and the risk of business stagnation; Low brand awareness in segmented fields makes it difficult to establish customer trust.

To address these issues, this study aims to provide practical development guidance. By analyzing the industry environment and enterprise operation status, the core factors of competitive advantages in segmented markets are identified. Based on STP analysis, the core target markets are identified as the 18-35 age consumer mid-range group, county-level agricultural cooperatives, and small and medium-sized surveying and mapping enterprises. Qualitative analysis is conducted from five dimensions: product adaptability, service capability, cost control, compliant operation, and brand building, combined with survey questionnaire data, industry data and enterprise cases. Finally, five key success factors are extracted, including precise product matching needs, construction of localized rapid service system, strict cost control to ensure supply chain stability, strengthening policy compliance management, and precise brand awareness in segmented fields. However, the research also has limitations. On the one hand, the questionnaire itself has constraints: it adopted convenience sampling, leading to limited sample representativeness and a small sample size, which may restrict the generalization of demand-related conclusions. On the other hand, the research only covering domestic enterprises, mainly qualitative analysis, and not considering regional demand differences. Based on this, future research suggestions such as expanding international market research, introducing quantitative analysis, conducting regional differentiation research, and focusing on the impact of technological iteration are proposed.

This thesis has significant practical contributions to entrepreneurship in the high-tech field. In response to the pain points of "following trends in research and development, homogenization and internal competition" that entrepreneurship in the high-tech field is prone to, it clarifies that small unmanned aerial vehicle enterprises need to focus on segmented

markets and differentiation paths, providing similar high-tech start-up enterprises with the idea of "avoiding head pressure and accurately finding positioning" to reduce initial survival risks; The key success factors extracted from product adaptation to brand building have strong implement ability, solving the problem of "having strategic direction but lacking execution methods" in high-tech entrepreneurship, helping enterprises transform technological advantages into market competitiveness, and achieving the goal of "short-term foothold and long-term sustainability"; At the same time, considering the strict policy supervision, fast technological iteration, and large regional demand differences in the high-tech field, the study emphasizes policy compliance and regional market adaptation, and also suggests paying attention to the impact of technological iteration. This not only provides support for small drone startups to avoid risks and keep up with trends, but also provides a reference analytical framework for entrepreneurship in related high-tech fields such as low altitude economy.

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## Appendices

### Appendix A – Small Drone User Demand Survey Questionnaire

This questionnaire is designed to gain a deeper understanding of the actual needs, usage habits, and product preferences of small drone users, providing data support for small drone enterprises to optimize product design, improve service quality, and develop precise development strategies.

The questionnaire is divided into five parts: basic information, usage habits and scenarios, product demand preferences, purchase and service intentions, and additional suggestions, covering topics such as age, occupation, drone ownership and usage, product demand, and purchase channel preferences.

I. Basic Information

1. Your age group:

☐ 18-25 years old ☐ 26-35 years old ☐ 36-45 years old ☐ Over 46 years old

2. Your occupation:

☐ Student ☐ Corporate employee ☐ Freelancer (e.g., photography blogger) ☐ Others: _____

3. Do you own a small drone?

☐ Yes (Duration of use: ☐ Less than 1 year ☐ 1-3 years ☐ More than 3 years) ☐ No (Planning to purchase within _____ months)

II. Usage Habits and Scenarios

4. What are the core scenarios for using/planning to use a drone? (Multiple selections allowed)

☐ Aerial photography during travel ☐ Daily life recording (e.g., family gatherings) ☐ Hobby creation (e.g., short video shooting) ☐ Outdoor adventure recording ☐ Others: _____

5. Average duration of each drone use:

☐ Less than 30 minutes ☐ 30-60 minutes ☐ 60-90 minutes ☐ More than 90 minutes

6. What are the main problems you encountered during use? (Multiple selections allowed)

☐ Insufficient battery life ☐ Complex operation (hard to get started) ☐ Unstable signal (easy to lose connection) ☐ Inconvenient to carry ☐ Shooting quality not meeting expectations ☐ No obvious problems

III. Product Demand Preferences

7. Please select the 3 most important factors when choosing a small drone (rank by importance):

☐ Price ☐ Battery life ☐ Shooting quality (e.g., 4K resolution) ☐ Portability (e.g., foldable design) ☐ Operation difficulty ☐ Intelligent functions (e.g., automatic obstacle avoidance, follow shooting) ☐ After-sales service

(1). _____ (2). _____ (3). _____

8. What price range of small drones are you willing to accept?

☐ €125 - €375 ☐ €375 - €625 ☐ €625 - €1,000 ☐ Over €1,000

9. What battery life do you expect from a drone?

☐ Less than 20 minutes ☐ 20-30 minutes ☐ 30-45 minutes ☐ More than 45 minutes

IV. Purchase and Service Intentions

10. Which purchase channels do you prefer? (Multiple selections allowed)

☐ E-commerce platforms ☐ Brand official websites ☐ Offline digital stores ☐ Short video platform live streams

11. Do you need drone operation guidance services?

☐ Yes (Acceptable one-time fee: _____ euros) ☐ No ☐ Hope to get free online tutorials

12. If a new drone model is launched, what new function do you most hope to see added?

☐ Longer battery life ☐ Lighter body ☐ Higher-definition image quality ☐ Smarter obstacle avoidance ☐Others: _____

V. Additional Suggestions

13. Any other suggestions on small drone products or services: _____

This questionnaire is to the end. Thank you again for your cooperation!