

***Hungarian  
FPV Drone Market  
Research Results***



***Made by:***



***2024.***



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## 1. Introduction

Our research aims to assess the prevalence and perception of FPV drones among the Hungarian population.

Despite its short history of just over 10 years, this technical sport has developed a significant fan base worldwide.

Therefore, our goal was to measure for the first time in Hungary how this international recognition is perceived by the Hungarian public.

Our survey includes the distribution of different types of FPV drones, the spread of rapidly evolving technologies, as well as the sales channels through which products reach users.

A particular reason for conducting this survey was the fact that drones, and specifically FPV drones, have gained considerable public attention as a combat tool in the past one or two years. Thus, another goal was to understand how this "popularity" affects the connections and perceptions of FPV enthusiasts who pursue this hobby for recreational, civilian, or business purposes.

We also examined the perception of the legal regulations governing drone flying in Hungary.

## 2. General information about FPV drones

**The FPV drone sport is a technical sport that falls under the category of aerial sports.** Its globally significant umbrella organization is the FAI (Fédération Aéronautique Internationale – International Aeronautical Federation), which is recognized by the International Olympic Committee.



The largest market-based organization in this field is the DRL (Drone Racing League).

The essence of FPV (First Person View) drones is that the player/pilot controls a camera-equipped multicopter using a handheld remote control, and the live camera feed is displayed in goggles worn on the pilot's head. This setup creates an immersive experience, making the pilot feel as if they are sitting inside the drone they are controlling.





With this configuration, and with sufficient practice, breathtaking flight maneuvers and extreme speeds can be achieved.

These attributes make FPV drone flying particularly fascinating in competitive sports, civilian life, and even in the defence industry.

In sports, freestyle events—where impressive maneuvers are evaluated—and speed racing competitions are primarily organized. Moreover, drone soccer has recently emerged as a team sport.

In civilian and commercial use, FPV drones are primarily employed in the film industry. It has become increasingly difficult to imagine visual cinematic productions without the incorporation of FPV drone footage.

In the defence industry, FPV drones are often equipped with warheads and are used in kamikaze missions.

Regardless of the application, it's important to note that while autonomous and semi-autonomous drones equipped with sensors and automated systems make piloting easier but impose limitations through electronic control systems, traditional FPV drone piloting requires significant practice, skill, and expertise.

Beyond the ability to fly these machines, FPV drone users often gain proficiency in areas such as aerodynamics, microelectronics, radio technology, and mechanics.

### 3. Research methodology

To fully address the research objectives, we conducted two separate data collection.

The first data collection aimed to survey the opinions of the adult Hungarian population regarding the prevalence and perception of drones. This survey was conducted on a nationwide probability sample by Panelstory Közvéleménykutató Kft. in July 2024.

The final sample consisted of 1,004 participants, and data were collected through both online and face-to-face methods. This sample is representative of the adult Hungarian population in terms of gender, age groups, educational attainment, and settlements regions.

For the second data collection, we invited a professionals of over 1,000 individuals to complete an online questionnaire to support the investigation of specific research questions related to drones. Among the invitees, we observed a 25% participation rate, resulting in a sample size of 260



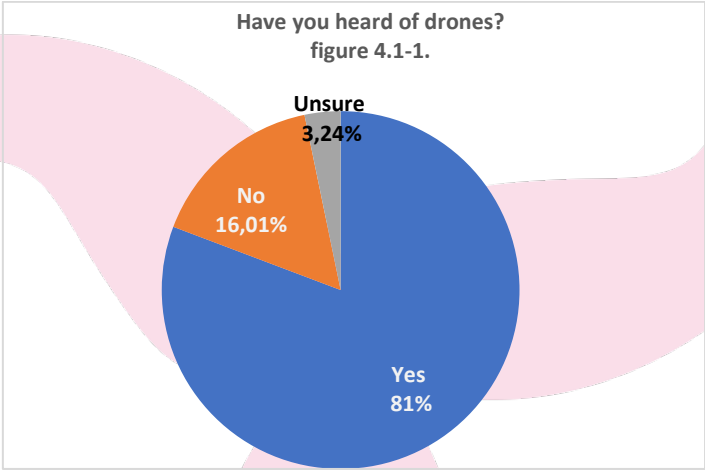


participants. This data collection involving the professional group was conducted entirely through online surveys.

## 4. Awareness of FPV drones in Hungary

### 4.1. Awareness of drones and FPV drones

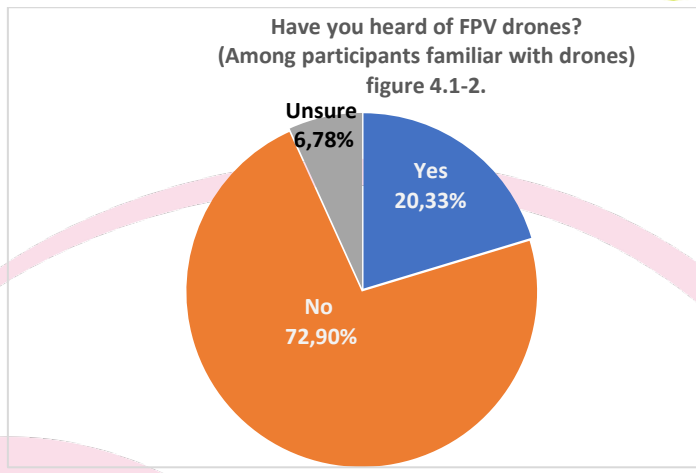
Let's start by examining how familiar the Hungarian population is with the concept of drones.



The chart clearly illustrates that with over 80% awareness among the Hungarian population, the concept of drones can be considered widely known.

If we delve deeper and look at how many people who are familiar with the concept of drones have heard of or can identify FPV drones, we can observe the following.





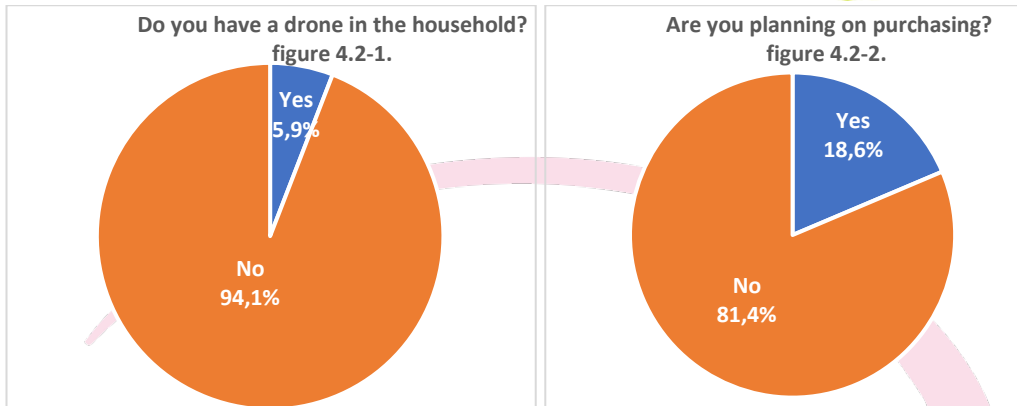
It is clear from this data that while drones are considered widely known, the awareness of FPV drones is much lower, even among those familiar with drones, with only about 20% being aware of them. This translates to just 16.4% awareness across the entire population. Over 78% of the total population have never heard of FPV drones. Additionally, there is a relatively high percentage of uncertainty, with around 5.5% of respondents being unsure. This likely indicates that they may have heard of FPV drones somewhere but cannot accurately identify or understand this relatively new concept

We do not have historical data available, so we cannot yet provide meaningful insights into the trends or dynamics of this awareness over time.

4.2. Drone ownership

Our nationwide survey examined what percentage of the population currently owns a drone and/or plans to purchase one in the future.





Adding another factor to these two statistics—assuming there is no overlap between the two "yes"/"have" groups—we find that nearly a quarter (24.5%) of the Hungarian population already owns or plans to acquire a drone.

Even when accounting for margins of error, this still represents at least 2 to 2.4 million people in Hungary.

Considering the topic that will be discussed later, which delves into the motivations of FPV pilots, it doesn't seem unrealistic to state that—given that the second most common reason for becoming an FPV pilot is boredom with autonomous drones or the desire for a more dynamic alternative—this substantial growth in the FPV drone sector will likely result in a significant number of new pilots.

Based on this relationship, even if the ownership ratios of drones and FPV drones remain static, the growth rate, according to the respondents' plans, will exceed three times the current number of drones. This could mean an increase in the current number of FPV drone pilots in Hungary from over 1,000 to as many as 3,000–3,500. Of course, this number could be significantly influenced by various factors, such as economic and regulatory changes.

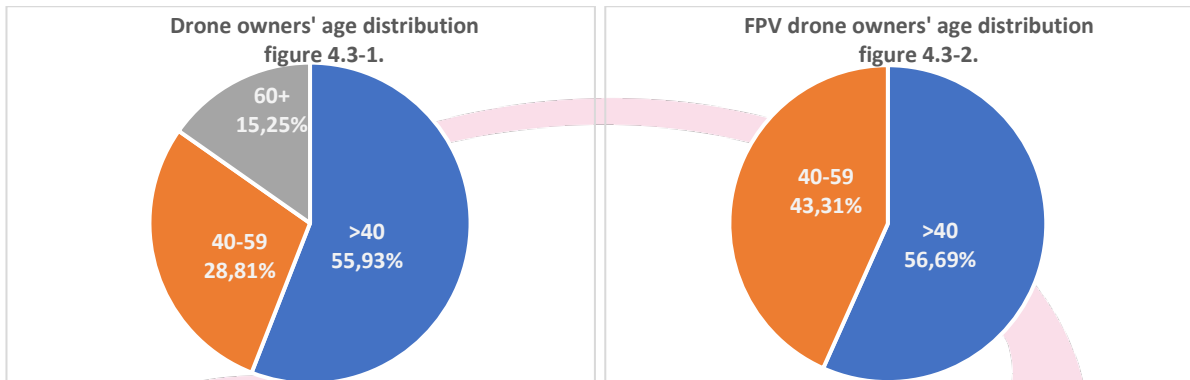
### 4.3. The Social Positioning of Drone and FPV Drone Owners

In this part of our research, we sought to answer the question of which groups or segments of Hungarian society are the most open to drones, and within that, FPV drones.



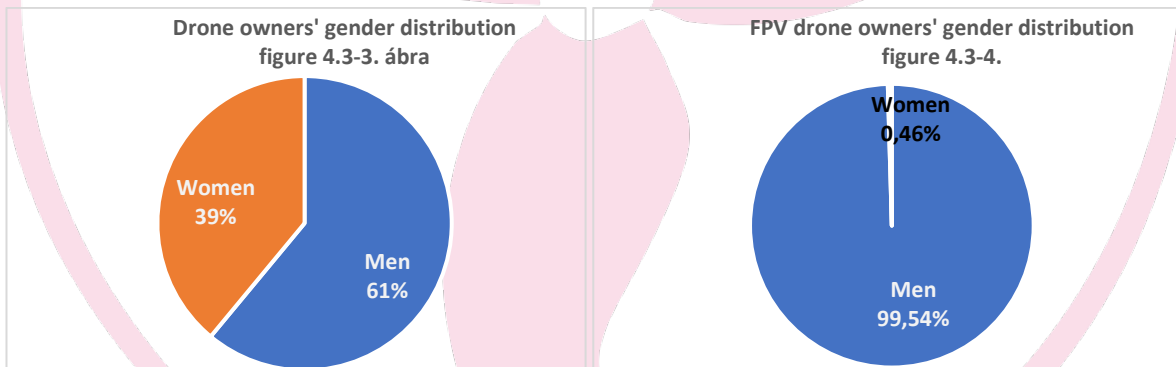


First, let's consider the age distribution:



Among the younger age group, up to 40 years old, the two groups (drone and FPV drone owners) are nearly identical within the margin of error. In other words, around 55-56% of this age group is represented in both the drone and FPV drone markets. However, in the older age groups, particularly among FPV drone owners, those over 60 are absent. This is most likely due to the specific characteristics of FPV drones, as this fast-paced, highly technical field is not attractive to the older generation.

Now, let's look at the gender distribution:



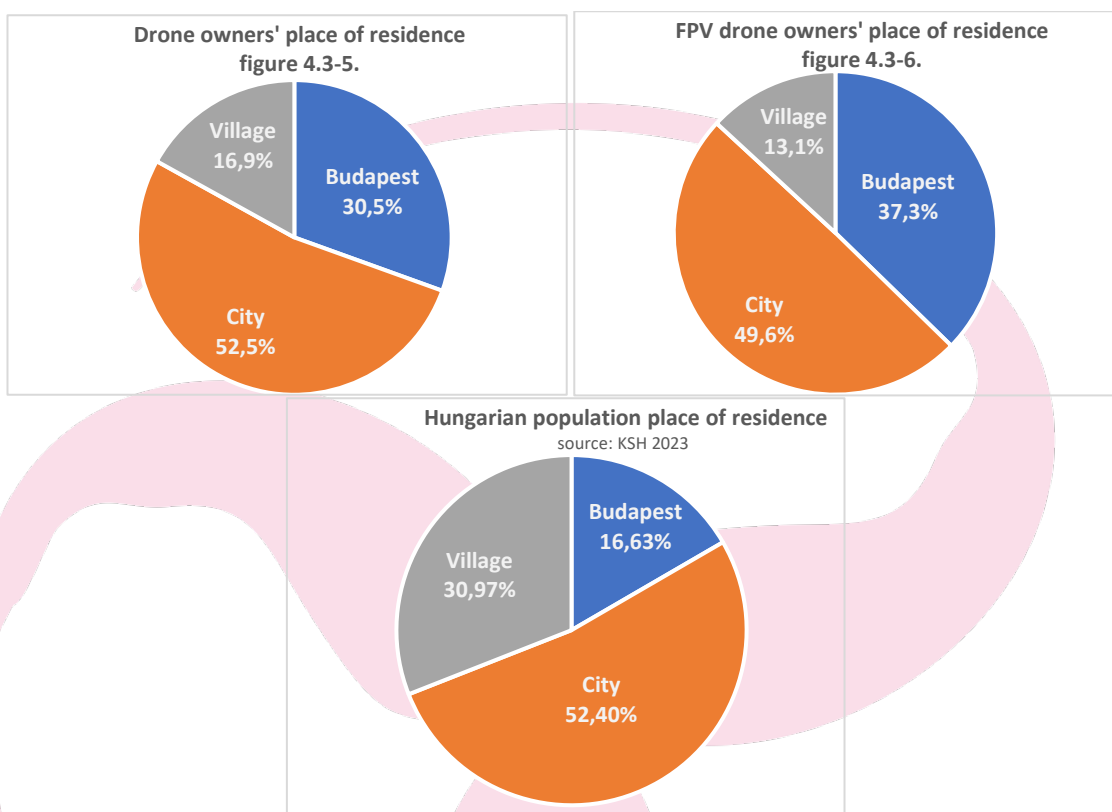
**FPV drone owners are almost exclusively male.** While there is also a noticeable shift toward men in general drone ownership, it is not nearly as extreme as it is among FPV pilots.







Distribution by place of residence:



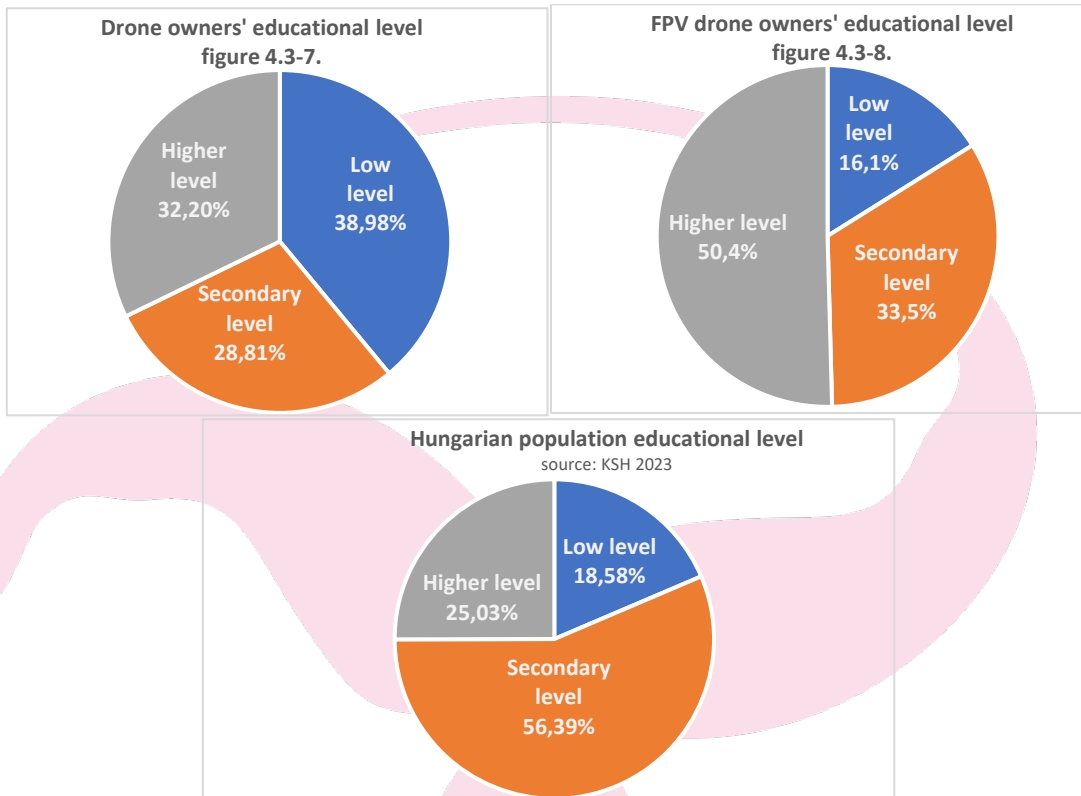
The geographical distribution of drone owners does not significantly differ between drone and FPV drone owners. However, the proportion of FPV drone owners from Budapest is a few percentage points higher than that of general drone owners.

According to the 2023 Hungarian Central Statistical Office (KSH) data, both FPV drone owners and general drone owners are closely aligned with the national urban population rate of 52.4%. However, participation from small settlements, which account for 30.97% of the national population, is significantly lower in the "drone world," at about half that rate. Meanwhile, residents of Budapest are overrepresented, with nearly double their national share of 16.6% in the drone communities.





Let's also take a look at the educational attainment levels.



This data is truly surprising. It can be generally stated that within the drone community, individuals with higher education are overrepresented compared to the Hungarian population.

However, FPV drone owners significantly alter this picture. The proportion of those with low education levels is a few percentage points lower than the national average. Those with secondary education are also underrepresented compared to the national average, by a substantial margin of about 40%. In contrast, individuals with higher education make up nearly twice the national average in this group.

This means that more than half of the FPV drone owners have higher education.

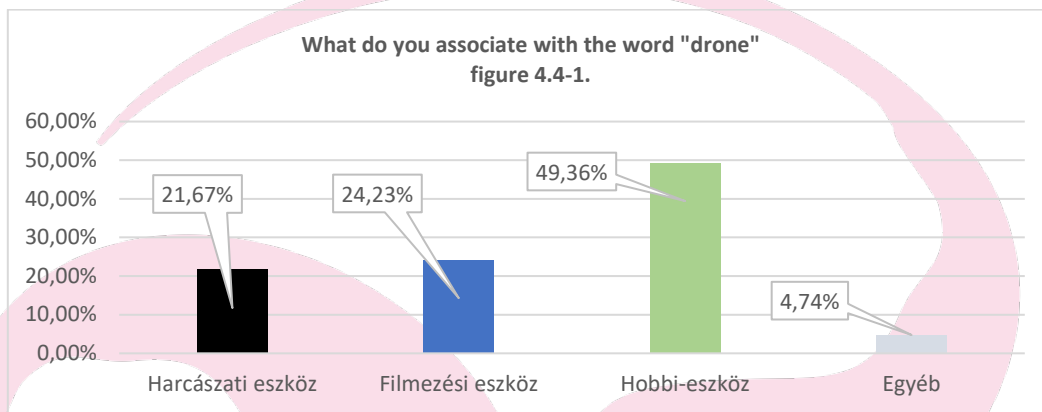
Therefore, we can conclude that FPV drone users are significantly more educated than the Hungarian average.





#### 4.4. The public perception of drone usage

The following chart provides answers to the question posed to the public about what is the first thing that comes to mind when they hear the word "drone"?

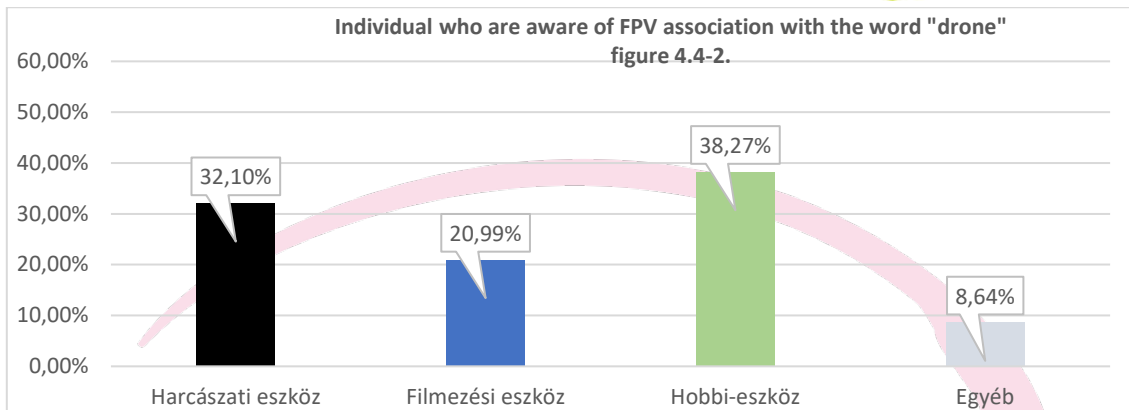


Since this is the first study focused on Hungarian perceptions of this topic, we do not have data from previous years, meaning we cannot assess how recent war-related news has influenced these perceptions. However, today, over 20% of respondents associate drones with military equipment. Surprisingly, opinions linking drones to filmmaking are only 3-4 percentage points higher than those associating them with combat use. This is notable, given that **retailers often promote drones as action cameras** offering a unique family-friendly perspective.

It is reassuring to see that nearly **50% of the population still consider drones primarily as recreational, hobby devices.**

Let's now break this down further by looking at how these perceptions change among those familiar with FPV drones.

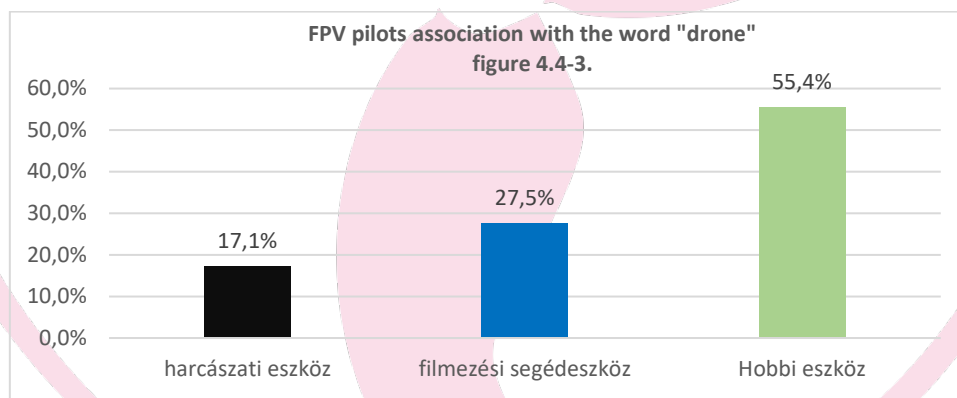




Compared to the previous chart, the biggest difference is that the perception of military use is about one and a half times greater, which slightly reduces the association with filmmaking and more significantly diminishes the view of drones as recreational tools.

This likely indicates that **much of the population has learned about FPV drones primarily through war reports**. While drones in general are only somewhat associated with military use, FPV drones are much more strongly linked to combat equipment.

This assumption is further supported by the following data.



This shows that among **active FPV pilots, the perception of FPV drones as military equipment is lower** than in the general public and significantly lower, nearly half the rate compared to those in the public familiar with FPV drones.

According to our evaluation, around 21% of the general public views drones as military equipment. Among those who have learned about FPV drones from the media, this figure is one and a half times higher (32%). Meanwhile, those who are more familiar with FPV drones firsthand, beyond just media



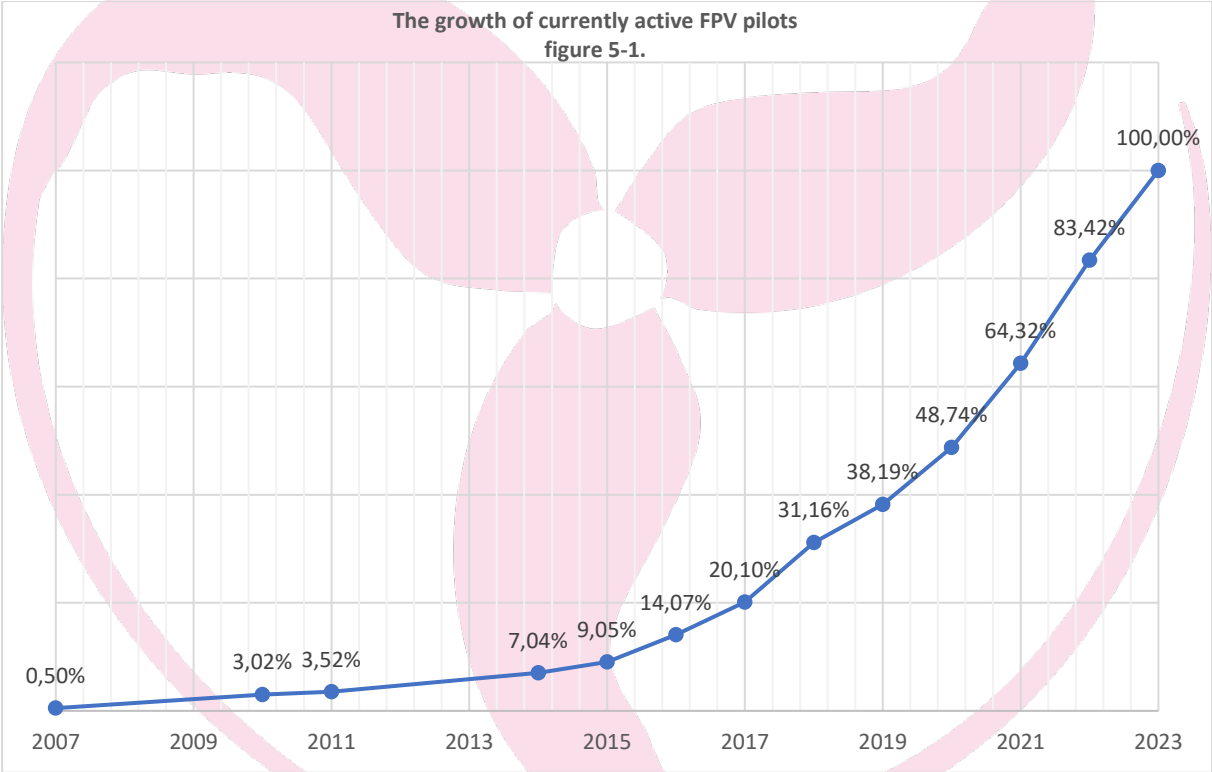


exposure, associate them with military use at only about 17%, which is nearly half the rate of the public gaining familiarity from the media.

### 5. The growth of FPV drone users in Hungary

Based on the questions asked in the research conducted among FPV drone pilots, we can effectively model how the number of FPV pilots has changed over time.

First, let's look at a chart that shows the change in the number of pilots, calculated from the time since their entry into the field.



The chart considers the number of pilots who started flying by the end of 2023 and are still actively flying today as 100%. (We excluded those who started in 2024 from this statistical series, as 2024 is still a partial year, which would distort the results.)

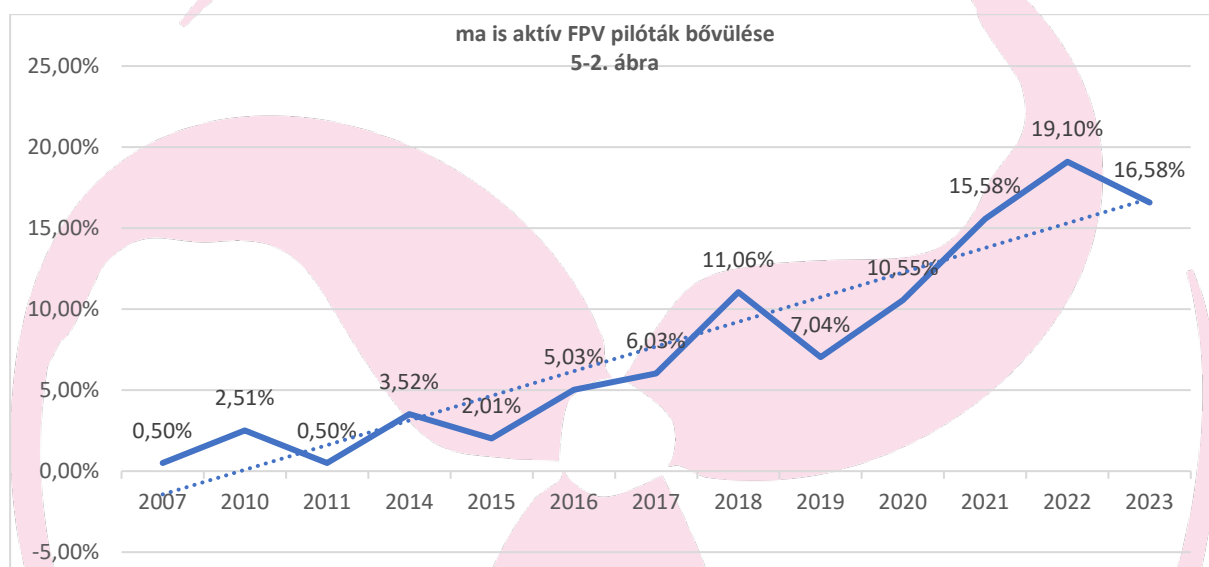




It is clear that the appearance of FPV pilots can be tracked starting in 2007. However, **it wasn't until 2014 that the number exceeded a statistically significant 5%, reaching 7.04%**. This is not surprising, as it was in 2014 that the first major FPV drone race took place in Los Angeles, United States of America.

From the above data, we can reasonably conclude that **the development of the Hungarian FPV market roughly coincides with international market trends.**

In the next chart, we can see the number of new entrants each year over the recent period.



The statistics clearly show that **after the initial exploratory years, the FPV market's growth was largely steady until 2018, expanding by 1.5 to 2 times annually.** In 2019, the expansion slowed significantly, likely due to consumer behavior in response to economic downturns. However, by the following year, much of this decline was recovered. Afterward, the growth dynamic continued unabated. **In 2023, however, this dynamic shifted, and the rate of growth slowed compared to previous years, although the number of active pilots still increased by 16%.** While this represents a slowdown, it is still a surprisingly good figure, especially considering that during this period in Hungary, high inflation and other economic factors caused general consumer spending to stagnate at best, not increase.

The obvious conclusion that can be drawn from these numbers is that while the **Hungarian FPV market is influenced by the economy and domestic consumption, this impact is mostly felt in the growth dynamics.**

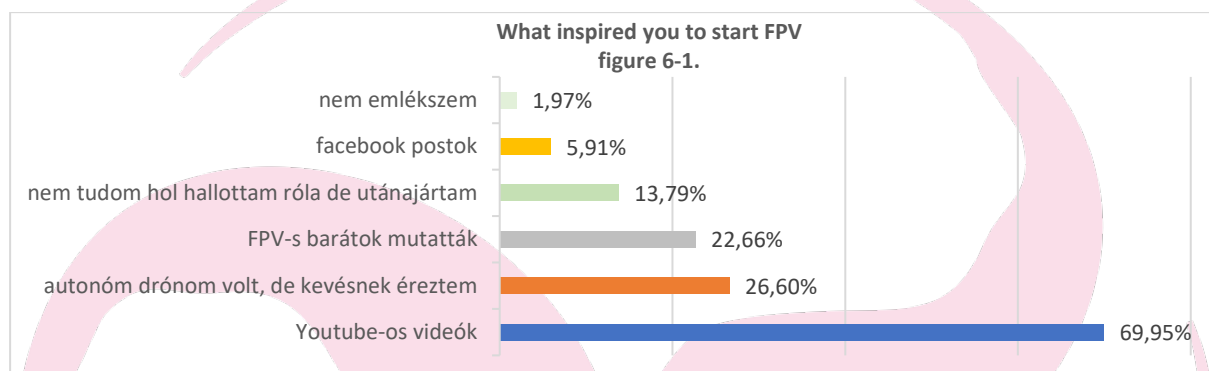




## 6. Information source of FPV drone users

The goal of this chapter is to show where and how FPV pilots obtain their information.

First, let's explore the most obvious area: where the information came from that led them to enter the FPV world.



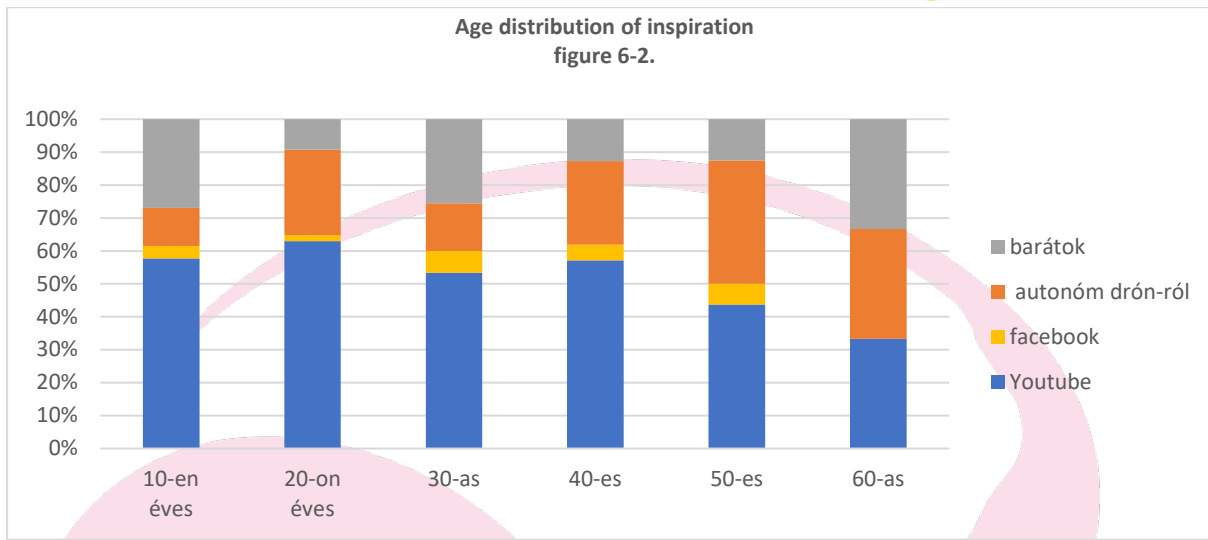
As discussed earlier (Chapter 4.3), the highly qualified social group from which most FPV pilots "emerge" **predominantly consumes digital media**. Among these, **YouTube stands out with a 69.95% share, as the platform where most FPV pilots recall first seeing the content that inspired them to get into FPV flying**. Interestingly, **social media ranks only fifth**, with a modest 5.9% mention.

Another noteworthy finding is that **26.6% of new FPV pilots were interested in the hobby after getting bored with autonomous drones or seeking a more dynamic alternative**.

Close behind, at **22.66%**, is the **influence of friends and social circles**. We will explore this social aspect in more detail later.

The distribution is further nuanced when broken down by age group.

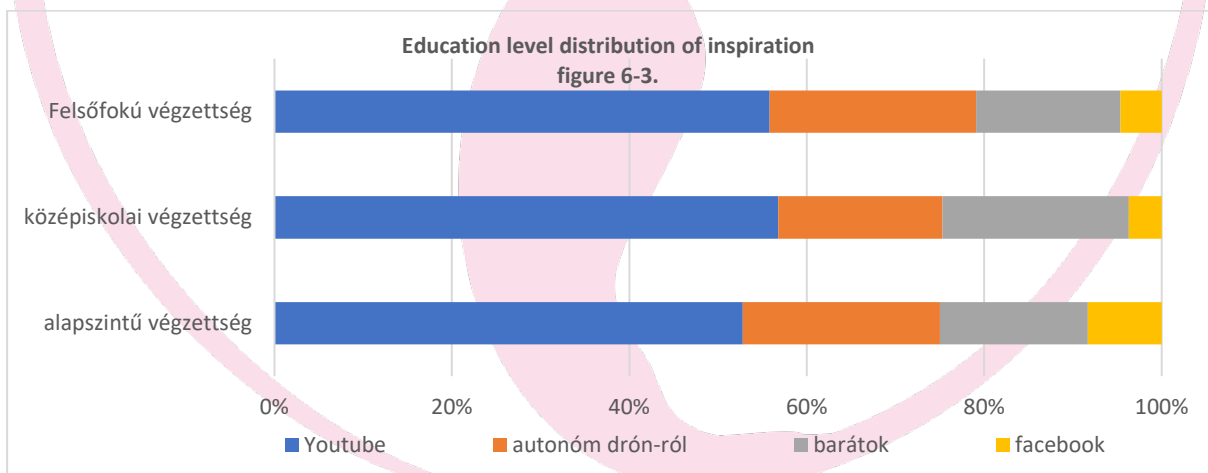




This distribution shows that the role of digital media—primarily Facebook—shows a gradually decreasing trend among older age groups.

While more than half of the inspiration for those up to their forties comes from digital media, for the older age groups, this influence steadily shifts toward personal experiences and recommendations from social circles.

Another perspective is the approach based on educational attainment.



The distribution is quite even in this breakdown, meaning that **FPV drone pilots obtain their inspiration from nearly the same channels, regardless of their level of education.**







## 7. Hungarian FPV equipments

### 7.1. FPV drones

In the world of FPV drones, the location to be flown, the purpose of the operation, and the flight style determine the ideal type of FPV drone to use.

Based on these factors, FPV drones are divided into the following categories:

- **whoop**

Whoops, or Tiny Whoops, are small, four-motor quadcopters equipped with propeller guards. The tiny whoops typically have 31 or 40 mm propellers, while their larger variants use 2- or even 2.5-inch propellers. Due to their tiny, palm-sized design and weight of just a few dozen grams, these drones are suitable for indoor use, even at home, and in close proximity to people. Despite their small size, they are agile, durable, and capable of acrobatic flight. A significant competitive sport has emerged around this category, both nationally and internationally.



- **toothpick**

These ultra-lightweight drones prioritize weight reduction. As a result, the frames are designed with extremely thin arms and other components, which gives them their "toothpick" name. The four motors are chosen for being small, lightweight, and fast.



The design emphasizes the weight-to-performance ratio, resulting in highly fast and manoeuvrable machines, although they are not particularly durable.

These drones typically lack any protection between the propellers and surrounding objects.

- **cinewhoop**

Cinewhoops are designed primarily for capturing stable film footage. The key design goal is to support an action camera, ensure stable flight, and minimize risks to people and the environment around the drone.



Like whoops, cinewhoops are equipped with propeller guards, sometimes even with foam padding. They generally feature propellers ranging from 2 to 3.5 inches in size and are not particularly dynamic, nor do they have long flight times.





- **longrange**

For these drones, the primary focus is on maximizing flight time and, if necessary, covering long distances. Instead of powerful, explosive motors, they use lower-consumption motors that deliver less sudden power. Rather than Lithium-Polymer batteries, which can handle high, sudden power demands, they use Lithium-Ion batteries, which have greater energy storage capacity but are less suited for rapid discharge. These drones are ideal for those who prefer smooth, balanced flights rather than extreme speed and dynamism. Typically larger and more fragile, these drones can achieve long flight times, often exceeding half an hour.



- **freestyle**

These drones are designed for general use, with an emphasis on being able to easily carry an action camera, fly dynamically, and have a robust build to withstand occasional collisions with obstacles. They do not have propeller guards or anything that would hinder action-packed, free, and dynamic flight. Their standard propeller size is 5 to 5.5 inches.



Flight time is not the primary focus for freestyle drones, but their agility is. As a result, a freestyle drone typically has a flight time of 4-8 minutes.

- **racer**

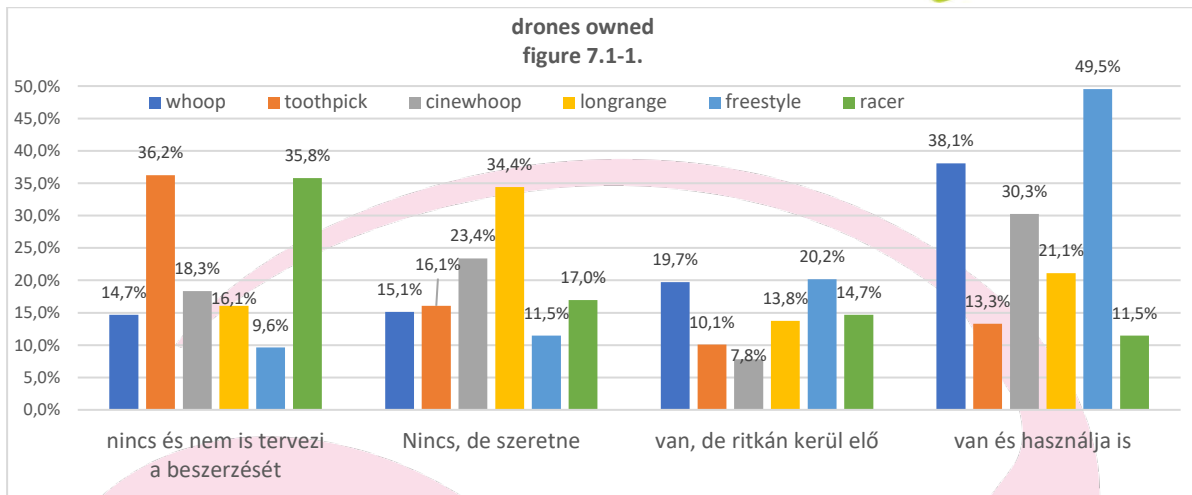
The design of racing drones focuses primarily on meeting competition rules, as well as maximizing speed and agility. Durability is also considered, as it is important in races for the drone to be able to continue flying after minor collisions. These drones typically use 5-inch propellers. Due to their design, there is no option to mount an external action camera.



Considering the classification of FPV drones, we can easily draw conclusions about what and how FPV drone pilots primarily use their drones.

In the chart below, we have summarized the fleet of drones owned by the pilots as a proportion of all respondents.





What immediately stands out from the chart is that **freestyle drones are the most commonly used** among the respondents. Only 10% fewer respondents own whoops. The lowest ownership is seen with racing drones, followed closely by toothpicks.

Another striking observation is the **significant future demand for long-range drones.**

Additionally, **there is a notable reluctance toward racing and toothpick drones**, which also represents a significant proportion.

## 7.2. FPV systems

In this chapter, we will examine the video transmission solutions that provide the vision for FPV drones, which give the "First Person View" its name

Let's first review the currently used FPV systems:

- **analog system**
- **digital system**
  - o **DJI**
  - o **Walksnail**
  - o **HDZero**

A few words about the items on this list:





- **analog system**

Analog video transmission systems were essentially the standard for FPV systems. The key feature is that the signal from the camera is transmitted directly to the receiver without any processing. This type of transmission is quite fast, allowing the pilot to see the camera's view with only a few milliseconds of delay. However, its downside is that atmospheric radio noise can interfere with the signal, either adding or subtracting from it. These interferences directly affect the image quality.

The open, unencrypted nature of radio communication in analog systems allows a wide range of manufacturers to produce compatible analog video transmission systems, meaning all such systems work with one another.

- **digital system**

In digital systems, only 0s and 1s (digital signals) are transmitted over the radio frequency. It is easy to see that up to a certain level of interference, these signals are more error-tolerant than their analog counterparts. However, once interference exceeds a certain threshold, the result changes substantially. Another issue with digital transmission is that it communicates detailed signals much more slowly, as only one yes/no piece of information can be transmitted per unit of time, compared to the full spectrum carried by analog signals. This results in a potentially larger delay between what is captured and what is seen by the pilot in digital systems. Manufacturers try to reduce this delay with various encoding techniques.

However, these encoding methods are proprietary, meaning different manufacturers' devices are closed systems and only work with their own transmitters and receivers.

- o **DJI**

DJI is perhaps the world's largest manufacturer in the consumer drone market.



In 2019, DJI launched the Digital FPV Ecosystem, which was the first digital FPV solution available on the market. This marked the introduction of digital FPV solutions to the market by DJI. However, it is important to note that DJI's digital solution involves interactive communication between the video transmitter and the FPV goggles, meaning a drone can transmit its signal to only one pair of goggles by default.

- o **Walksnail**

In 2022, the manufacturer Caddx introduced a new digital video system under the Walksnail brand. Its structure and solutions are quite similar to DJI's system.



The key distinguishing feature of Walksnail compared to DJI's digital system is that it offers a much





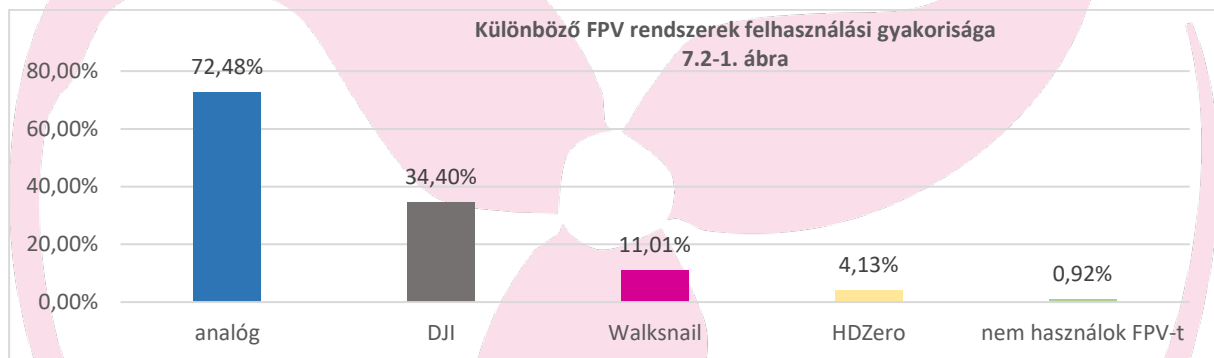
broader range of video transmitters. This allows for options to be used in smaller drones like whoops, as well as in long-range drones.

- **HDZero**



The digital system from the manufacturer Divimath is fundamentally different from the previous two. The key concept of the HDZero system is to follow the quasi-standards established in the FPV world, and its development reflects this. For its data transmission, HDZero primarily uses a broadcast-style solution similar to analog systems, meaning that the video signal transmitted by the drone can be received by any FPV goggles using the HDZero system, and multiple goggles can receive the signal simultaneously. It does not use multiple radio channels at the same time.

After reviewing the FPV systems, let's now take a look at Hungarian FPV pilots and what FPV technologies they use.



(Percentage of respondents who use each type of FPV system.)

It is clear from this data that the **classic analog systems still dominate the market to a significant extent.**

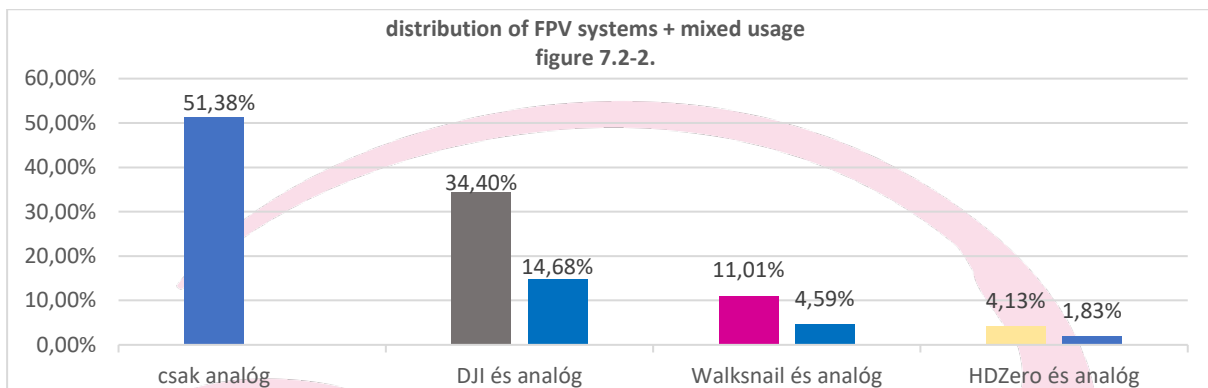
**The second most common is DJI's digital system, with nearly half the market presence of analog systems.** The popularity of DJI's system among digital options is not surprising, as it has been on the market the longest around 5-6 years.

What is surprising, however, is that **Walksnail, despite only being on the market for 1-2 years, has already captured one-third of the established DJI market.**

Another interesting point is that **HDZero is also approaching the 5% threshold**, which could signal the start of its upward trajectory in the market.

First, let's take a look at how the different FPV systems are mixed among users.

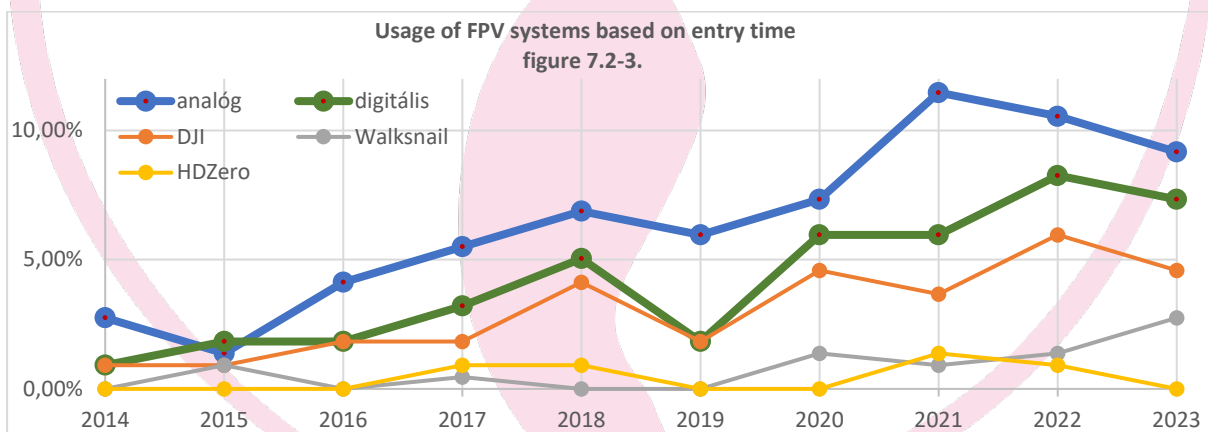




It is quite clear that **40-45% of users who adopt digital technologies have not completely abandoned analog systems.**

The shared ownership of different digital systems is so low that it falls below the statistical minimum. This means we can conclude that **there is no significant overlap in ownership among the various digital systems.**

Now, let's examine the proportion of new entrants to the FPV field who use different FPV technologies.



The thick lines represent analog and digital systems, while the thin lines break down the various digital technologies.

It is important to note when interpreting the chart that it does not directly indicate the time of purchase, but rather the technologies currently in the pilot's possession. There is only an indirect



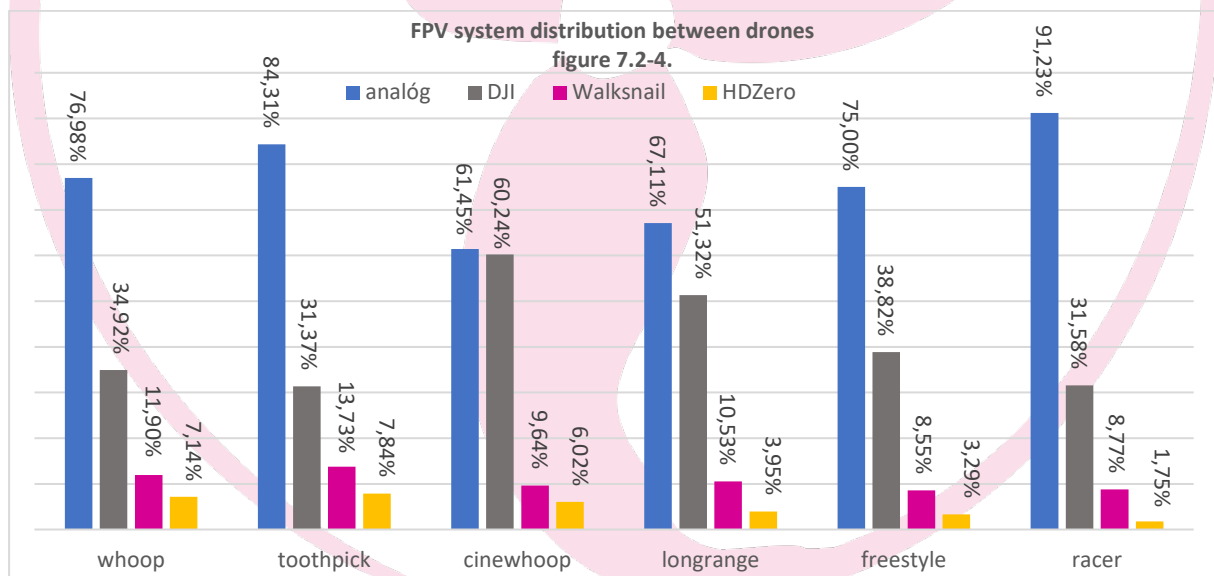


relationship between when a pilot entered the FPV world and when they began owning certain technologies. For those who entered after the introduction of digital technologies, we can assume that they initially gravitated toward the technologies they now own.

Thus, it can be concluded that the market roles of the two families (analog and digital) have evolved together in line with pilots' choices. The only noticeable deviation occurred in 2022, where, despite the market still developing with strong momentum, the share of analog technology declined compared to digital technology from the previous year. This is most likely due to the **increasing availability and improving reputation of digital technologies. As economic growth surged, leading to an exponential rise in the FPV world, new entrants increasingly chose digital systems as their primary solution.**

It is also evident that new entrants in 2023 are quite close to reaching a point where digital technology becomes the first choice for video transmission solutions—7.34% choosing digital compared to 9.17% for analog. This shift would most likely occur if the price difference between digital and analog technologies becomes more affordable for buyers. However, this does not currently seem to be the case. Data from the first five months of 2024 (not included in the chart to avoid confusion with an incomplete year) shows that the entry rate difference, which was **25% in favor of analog by the end of 2023, grew to 50%.** This likely indicates that consumers are becoming increasingly price-sensitive.

Let's take a look at the proportion of FPV system usage among drone owners.



In the table above, it may seem odd at first that the percentages exceed 100% for each type of drone. This is because respondents may own multiple categories of drones and have more than one FPV setup.



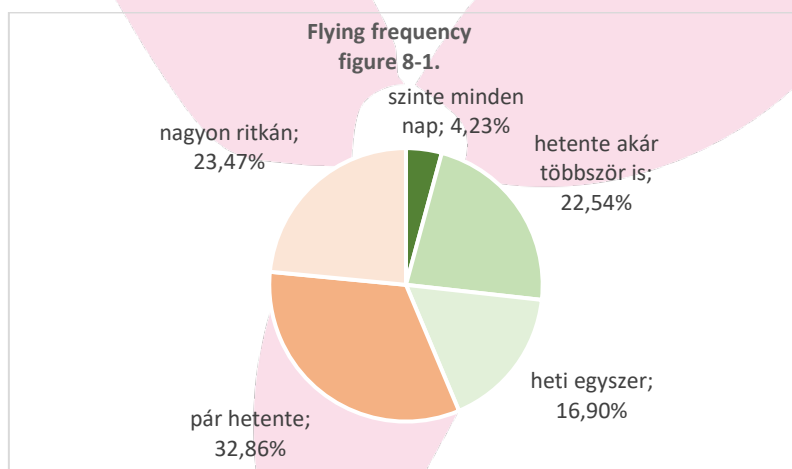


Therefore, it is most useful to focus on the proportions. From these, it is clear that **racers predominantly use analog technology**. They are followed by toothpicks, whoops, and freestyle drones, with differences within the margin of error. Cinewhoop and long-range drone owners trail behind by 10-15%, but these two categories have the highest proportion of DJI FPV system users relative to the number of drones.

Walksnail's distribution is consistent across drone types, while HDZero's distribution remains within the margin of error.

## 8. Activity

The aim of this chapter is to show how often and in what social environments FPV pilots fly.

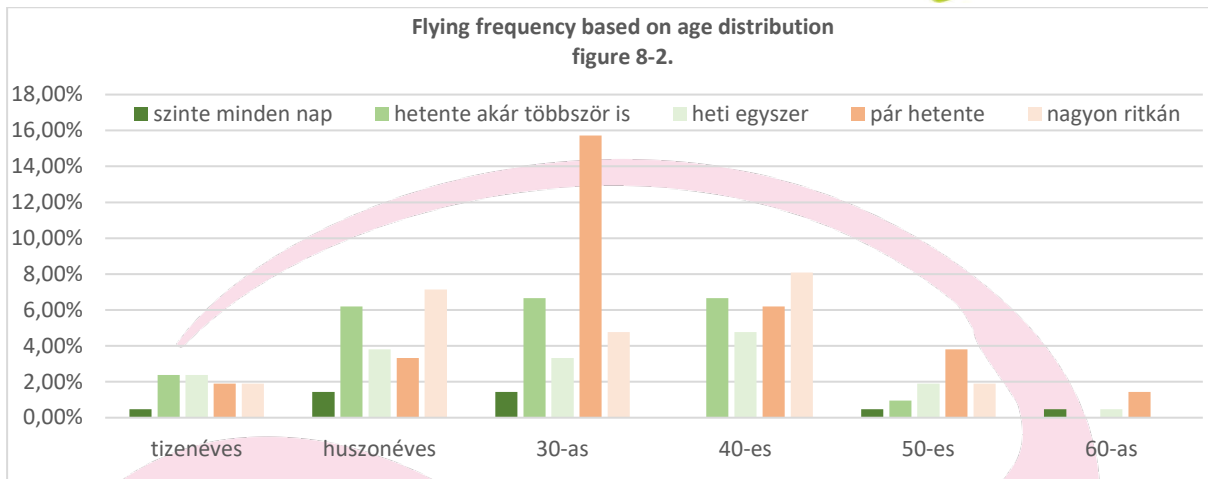


The chart indicates that less than half (**43.66%**) of active FPV pilots fly at least on a weekly basis.

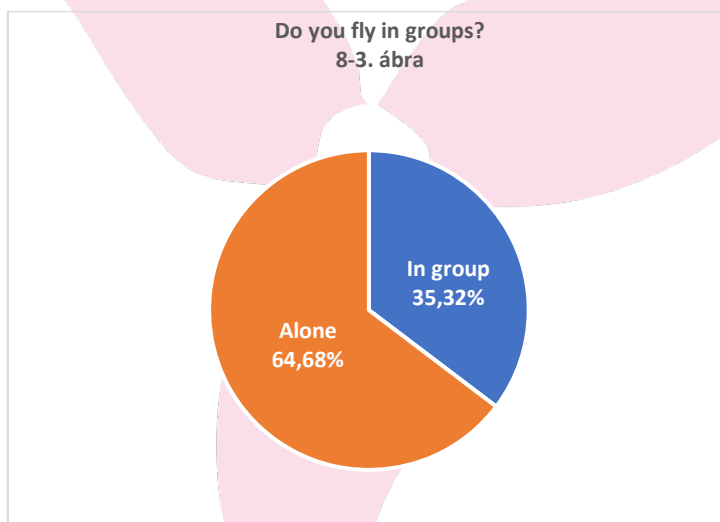
The same question, broken down by age groups:







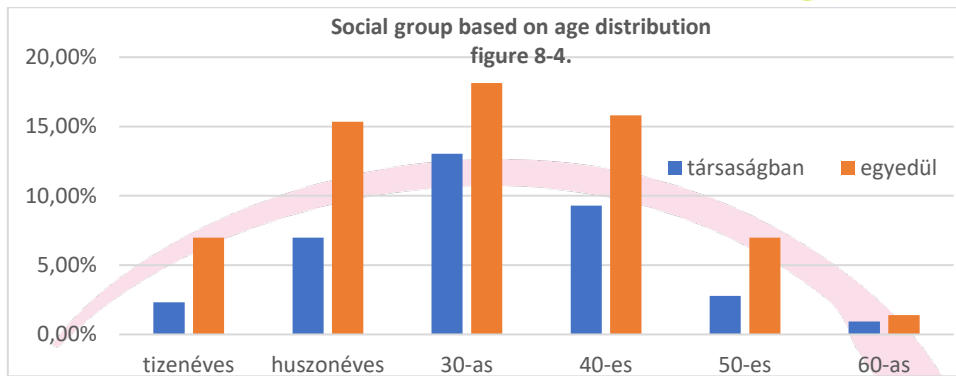
In the green segment (those who fly frequently), the number is highest among pilots in their twenties and thirties. Now, let's take a look at whether pilots fly alone or in groups.



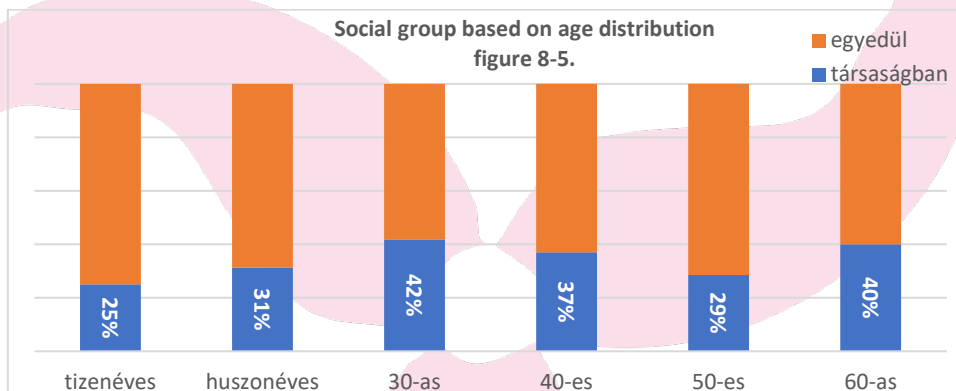
Thus, only a little more than a third of pilots (35.32%) have a social group from the FPV community.

Now, let's look at this by age group:





The same chart, now showing the age group distribution percentages:

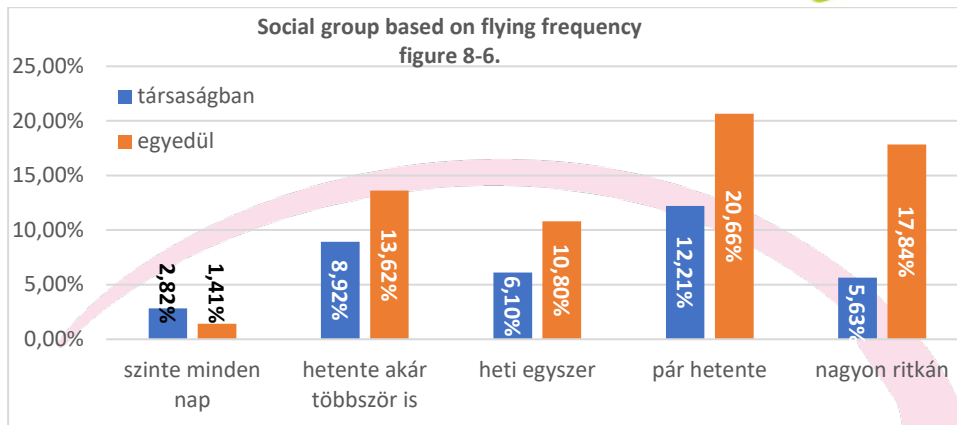


This chart shows that, **regardless of age group, a smaller proportion of people have social connections within the FPV community compared to those who do not.**

It's surprising to see that in **the teenage age group, the typical one-third/two-thirds ratio worsens to about one-quarter/three-quarters.** Since this age group is influenced not only by their own decisions, it is likely that the lack of school opportunities and/or the absence of cooperative support from families prevents them from forming teams. It's important to note that where there is no school support, the formation of social groups also depends on the involvement of all parents.

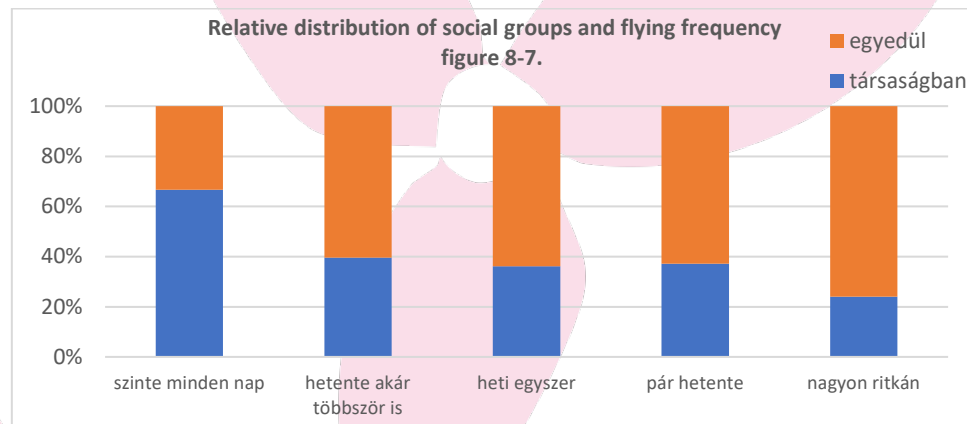
Now, let's examine the connection between solo/group flying and flight frequency:





It is also clear here that **those who fly almost every day tend to have an FPV social group.**

Now, let's look at the relative distribution within flight frequency categories.



**Twice as many pilots fly in groups on a daily basis compared to those who fly alone.**

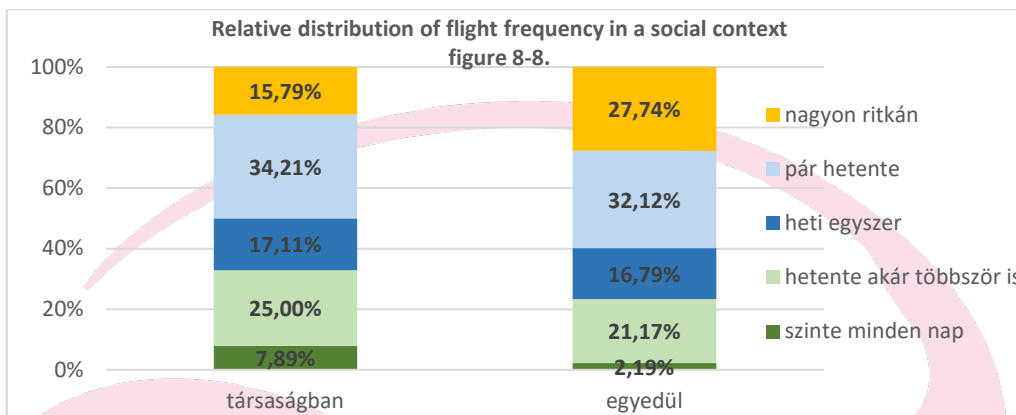
Among those who fly very rarely, only 24% do so with others.

**This analysis clearly shows that pilots tend to fly more frequently when they have a social group to fly with.**

Of course, this doesn't mean that every pilot with a social group flies with them every time, but it's clear that pilots with FPV social groups are more active.

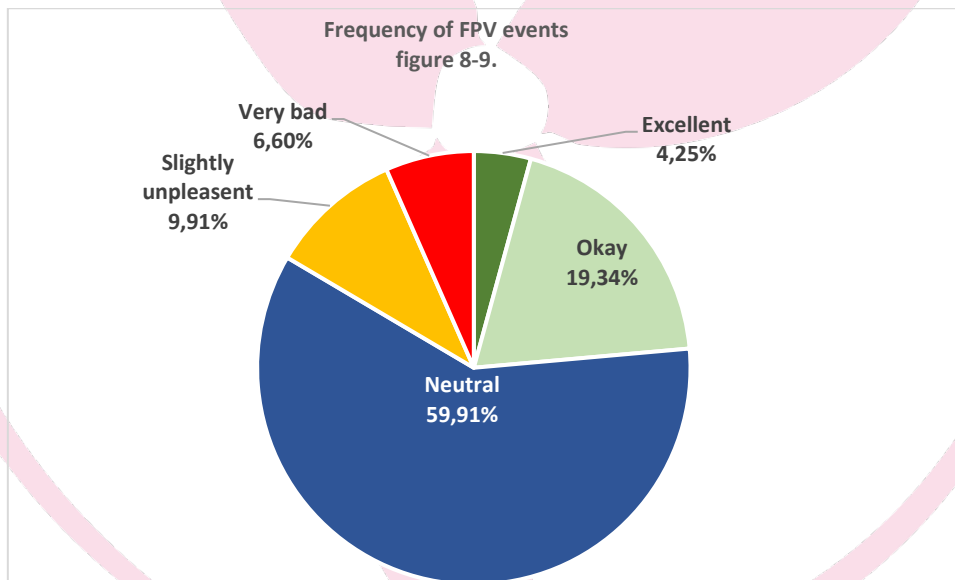
It could also be insightful to reverse this data, showing how often those with and without a social group fly.





Those who have an FPV social group fly on a weekly or bi-weekly basis 84.11% of the time, while those who fly alone do so 72.26% of the time. Therefore, the difference is approximately 12%.

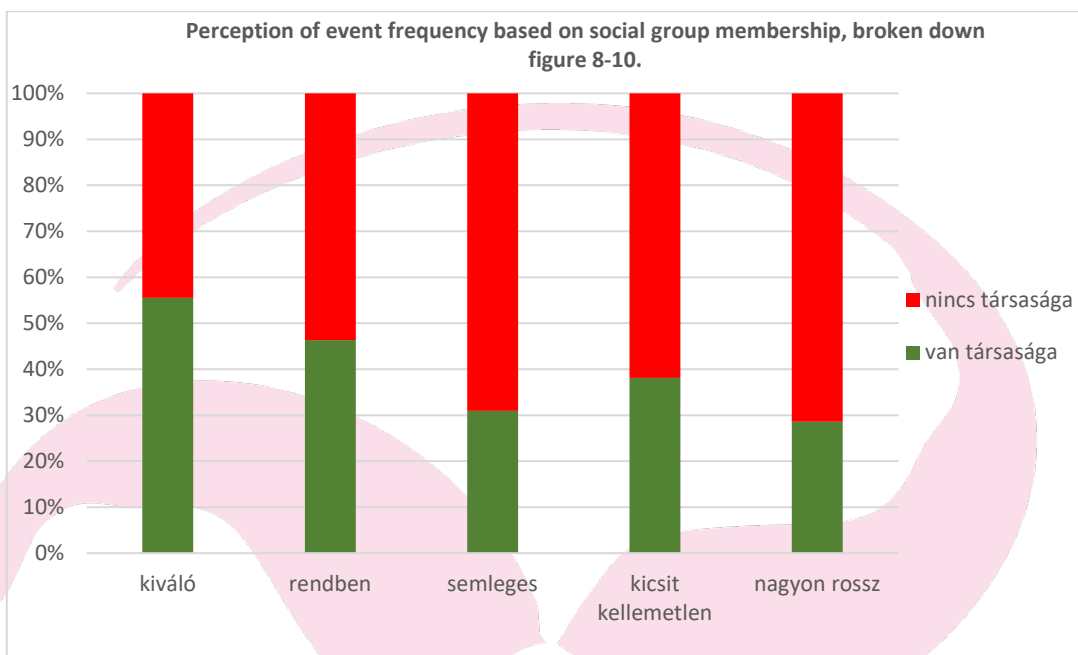
The following chart illustrates the perception of events organized by drone communities.



After reviewing the previously presented numbers on isolation, it's not surprising that **nearly 60% of FPV pilots are indifferent to events and competitions aimed at further building the FPV community.**

Let's break down the perception of FPV event frequency based on whether the pilots have an FPV social group or not.





It is clear that **those who are part of an FPV social group have a favorable opinion of FPV events, with over 50% expressing positive views.**

## 9. Drone Law

The use of unmanned aerial vehicles in the European Union has been regulated under the framework of the 2019 EU regulation, based on the 1995 Act XCVII on aviation, and implemented in Government Decree 38/2021 (II. 2.).

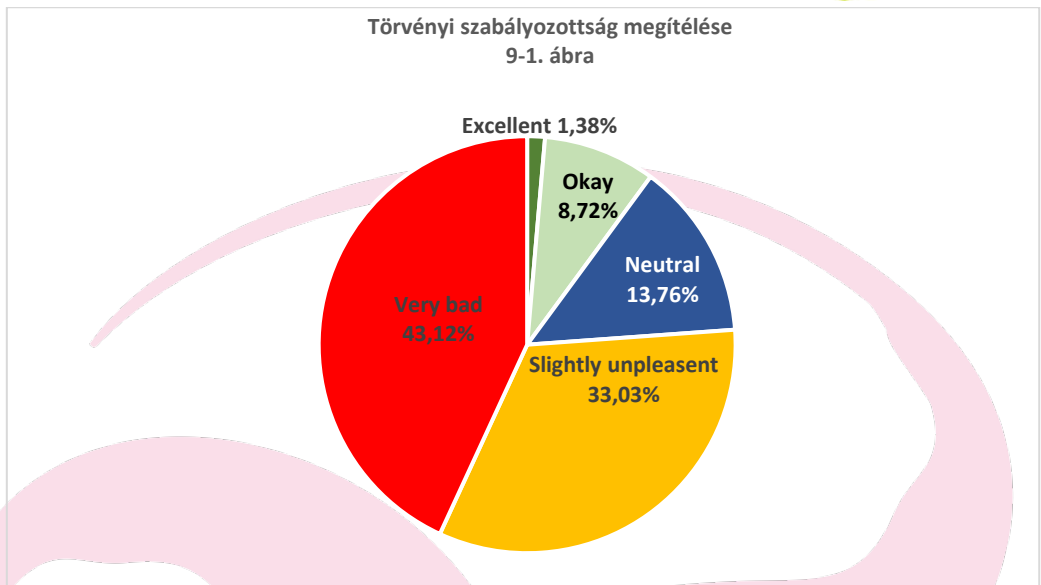
Some aspects of this regulation were amended as of January 1, 2024.

Under the new procedures, the following key rules generally apply to FPV flights.

In this regulation, **most recreational FPV drone flights (open category operations) are categorized as A1 for drones with a maximum take-off weight of up to 250g, while those above 250g fall under category A3.**

Our research does not aim to critique the current national regulatory environment or offer suggestions but rather presents the opinions of active FPV pilots on this topic.

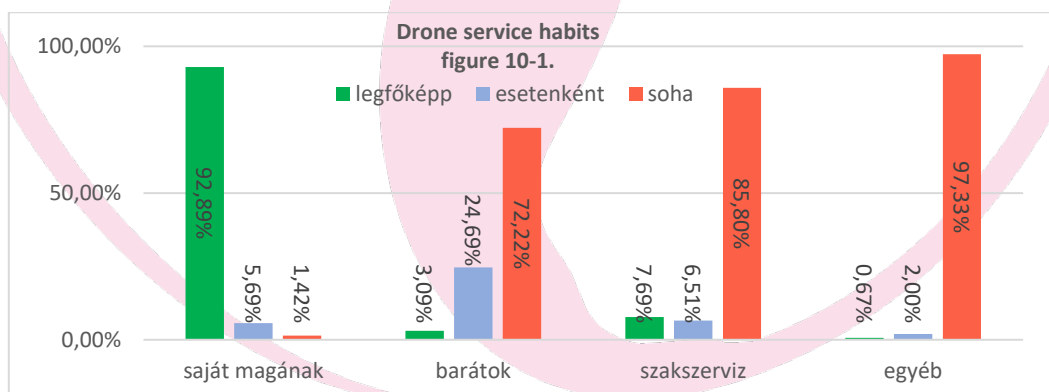




The data speaks for itself. **Only 1.38% of FPV pilots are satisfied with the current "drone law."**

**More than three-quarters of respondents expressed criticism, and of those critics, over three-quarters consider the state of the legal regulations to be seriously inadequate.**

## 10. Service and Support



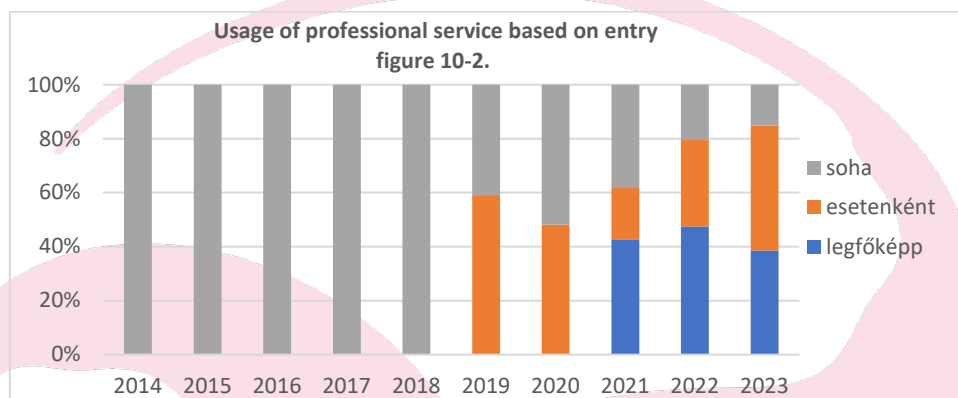
It is clear that **most pilots service their drones themselves**, only seeking other solutions when they encounter difficulties.





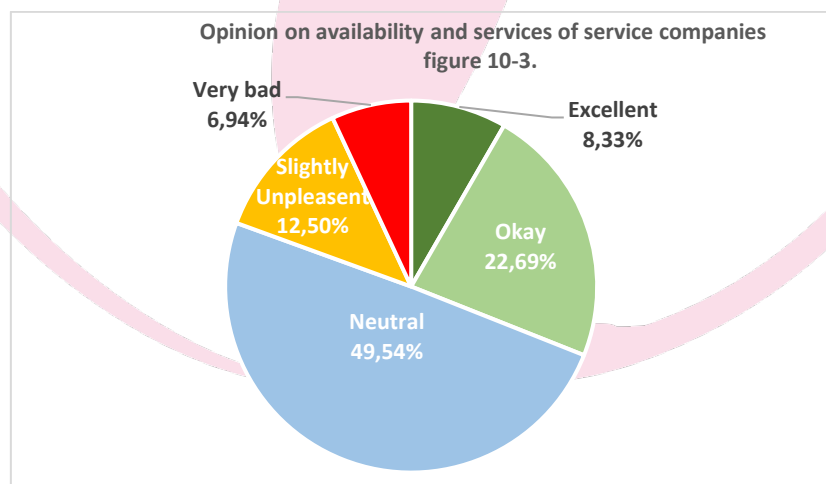
It's also evident that only a few (3%) regularly take their drones to friends for repairs, and rather prefer professional service. However, even this option is chosen by only about 8% of the FPV population.

The drones that do end up in professional service reflect the previous statistics, particularly when we look at when FPV pilots entered the hobby.



This data clearly shows that **pilots who have been flying for more than 5 years do not take their drones to professional service at all**, while those with 3-5 years of experience only do so when they encounter a problem. Regular customers of service centers are primarily those who started FPV drone flying from 2021 onward. This is likely because the **first domestic service centers appeared during this period**. Pilots who started earlier were forced to perform repairs themselves and therefore did not seek external help later on.

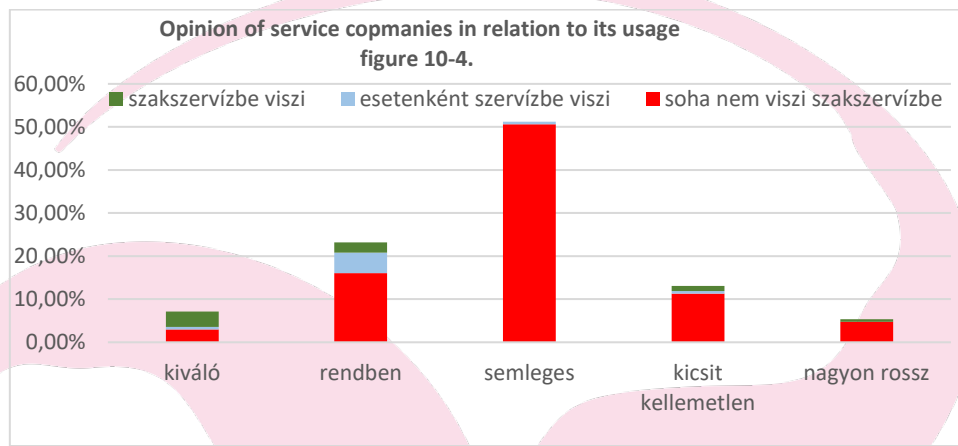
Now, let's take a look at an overview of general opinions on the availability and services of drone repair companies.





The picture clearly illustrates that half of the pilots are completely indifferent to service options, as they handle the technical tasks themselves.

Of the remaining roughly 50%, more than 60% are generally satisfied with the available service offerings.



The distribution clearly shows that **neutrality is primarily found among those who do not use the services of professional repair centers. On the negative side, it is also mainly those who do not use the services.** The survey does not clarify whether they avoid using the services because they tried them and were dissatisfied, or if their negative perception stems from a past experience.

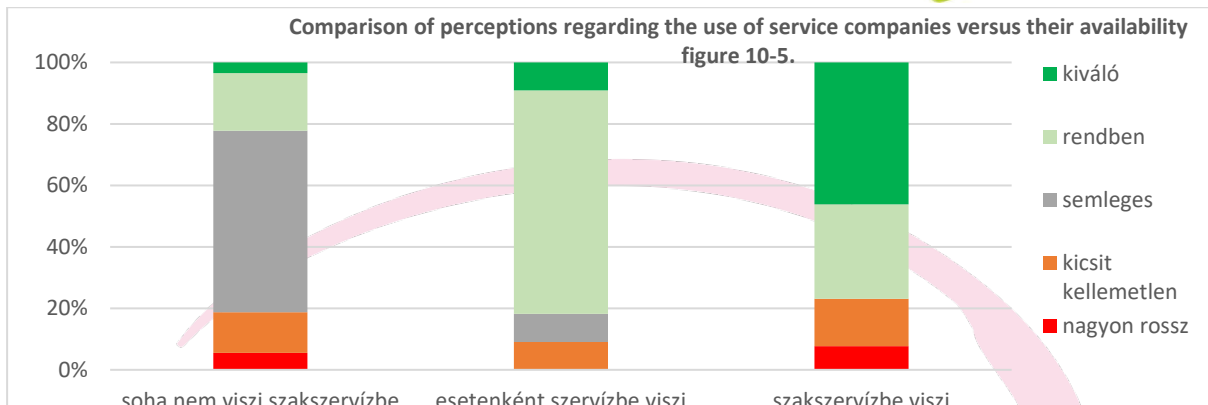
It is more meaningful to focus on the positive side, where, in contrast to the negative side, actual users of the services are represented.

**As satisfaction with the service increases, the number of users naturally grows as well.**

Let's now present this data with reversed axes for better clarity.



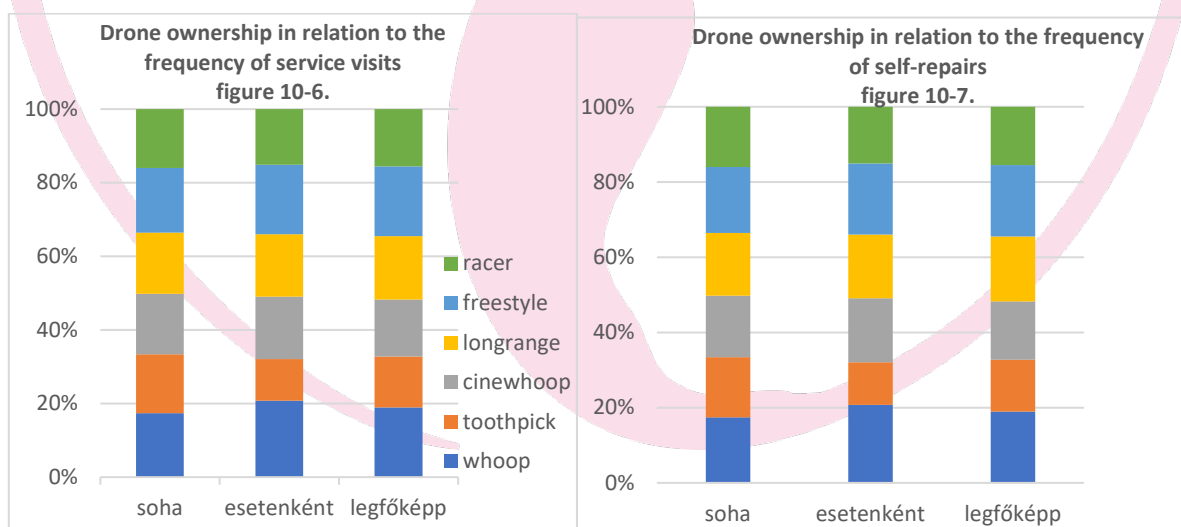




**Regular users of professional repair services naturally have strong opinions about the providers, with no neutral responses, and they generally view the services positively (around 80%).**

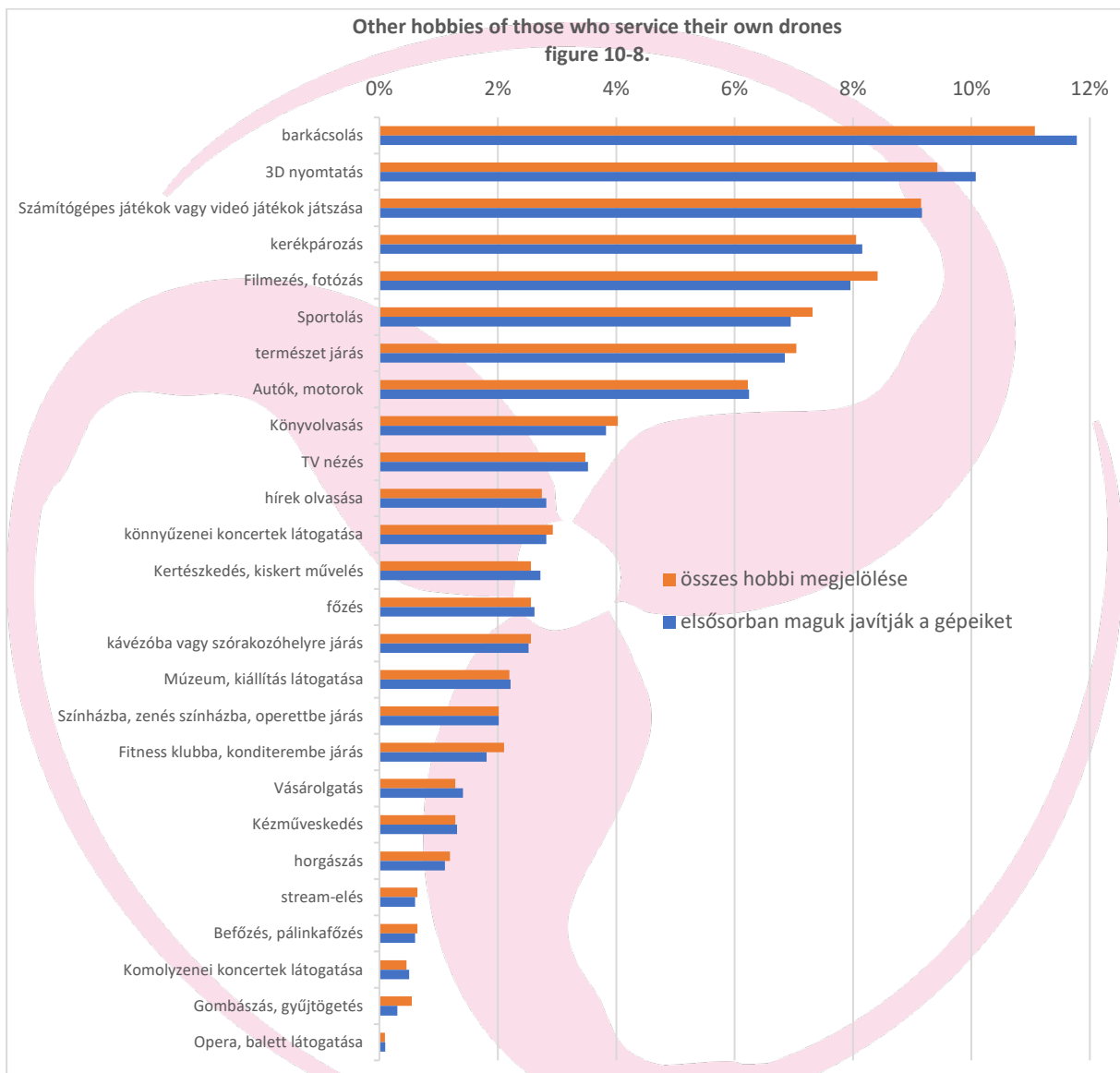
The true value of this survey would come from having historical data, which could help track the direction of change. In the absence of such data, based on the relatively short history of these service companies, we can assume that the positive experiences reported are the results of improvements over the past few years. So much so that even among users who don't utilize the services (~20% of the total community), it is widely known that there are high-quality service providers in this field.

What types of drones are brought to service by their owners? To explore this, we'll relate ownership data to service visit statistics.





Both charts reflect a natural distribution, leading to the conclusion that whether someone services their drone themselves or takes it to a professional service center is independent of the type of drone they own.



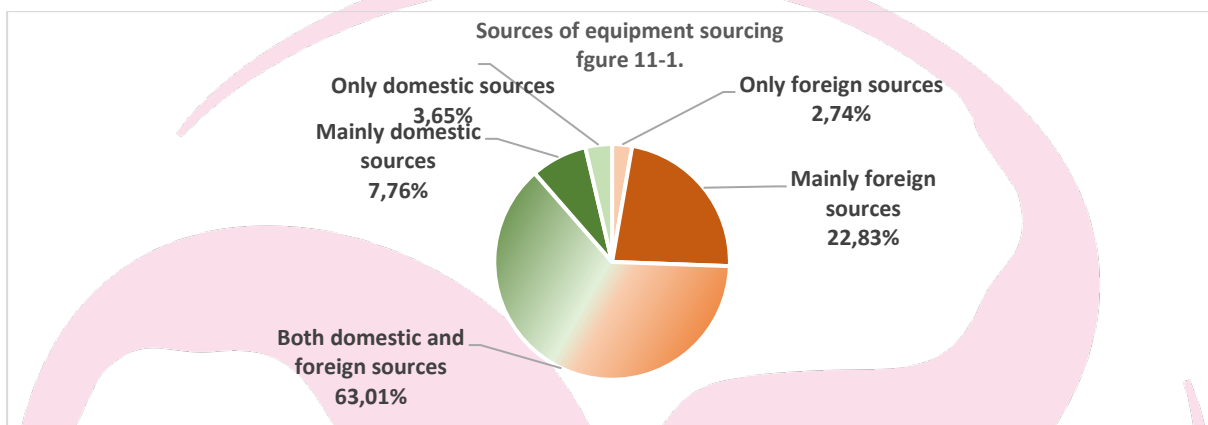
This report clearly shows that users' other hobbies and their tendency to service their own drones follow the same pattern. For example, **most FPV pilots who frequently repair their own FPV drones are also likely to be tinkering enthusiasts.** This is perhaps not surprising. However, the fact that pilots who list computer gaming as a hobby also frequently service their drones themselves is less obvious.





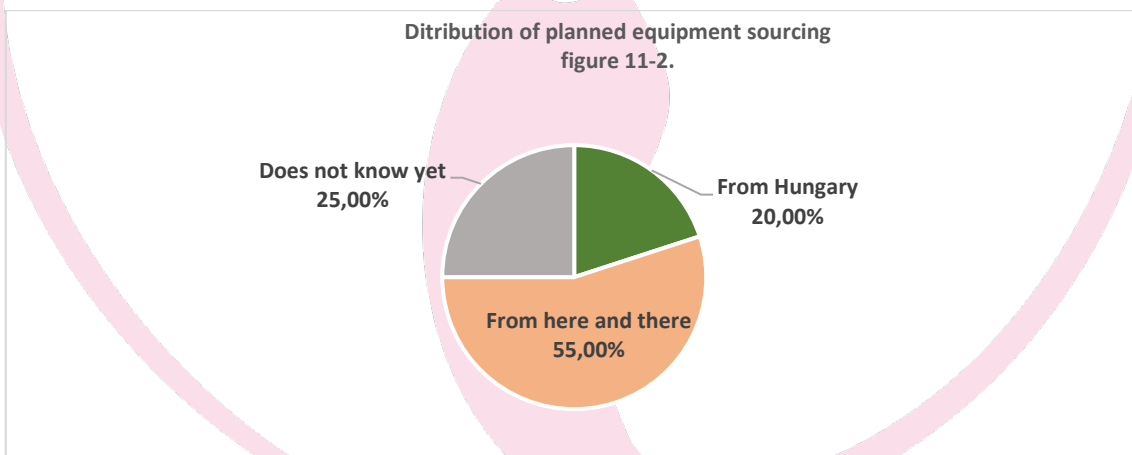
## 11. FPV equipment sources

The first and perhaps most striking statistic is the purchasing habits of FPV pilots, divided into five main groups.



The diagram shows that a **slightly larger portion of FPV equipment purchases still comes from foreign sources rather than domestic ones.**

This is further supported by the distribution of those currently planning new purchases.



If we compare only foreign purchases with only domestic purchases (Figure 11-1), we can see that domestic-only purchases are about one and a half times more common than foreign-only purchases. However, these two still only account for 6-7% of total purchases.





While in the past, due to a lack of other options, **everything had to be sourced from abroad, today domestic purchasing has become a viable alternative. In fact, 97% of pilots now buy to some extent from domestic FPV shops.** As a result, **only 53-58% of FPV equipment is now acquired through retail imports.**

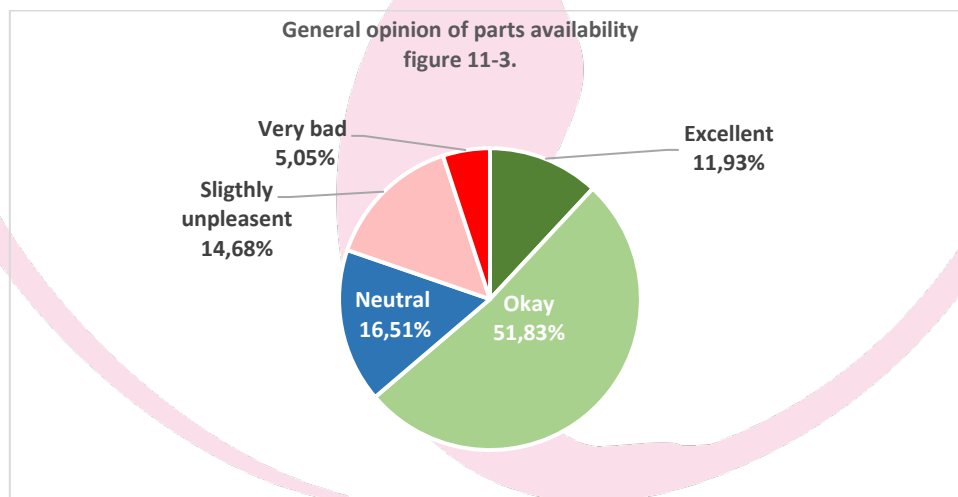
According to FPV pilots, the foundation of domestic purchases lies in the broad range of products offered and the new domestic market players who are competitive even with Chinese prices, along with much faster delivery compared to foreign orders.

There is also a user consensus in favor of domestic retailers due to the **available expert advice and the much more flexible warranty processes compared to any foreign site.**

Those **who still favor foreign purchases highlight the much wider selection available online globally.** They also frequently mention that the latest products are still released later in Hungary than they are available in the global online marketplace.

Supporters of foreign purchases often refer to Chinese webshops offering discounted prices. However, **based on price comparisons, this price advantage is no longer as clear-cut.** Those advocating for this likely base their opinions on outdated perceptions, and in many cases, they overlook additional costs. **There is now a general consensus that daily consumables—such as propellers—are best purchased from Hungary, as they are significantly cheaper than on any foreign (even Chinese) site.**

Here is the general view of FPV pilots regarding the availability of parts:

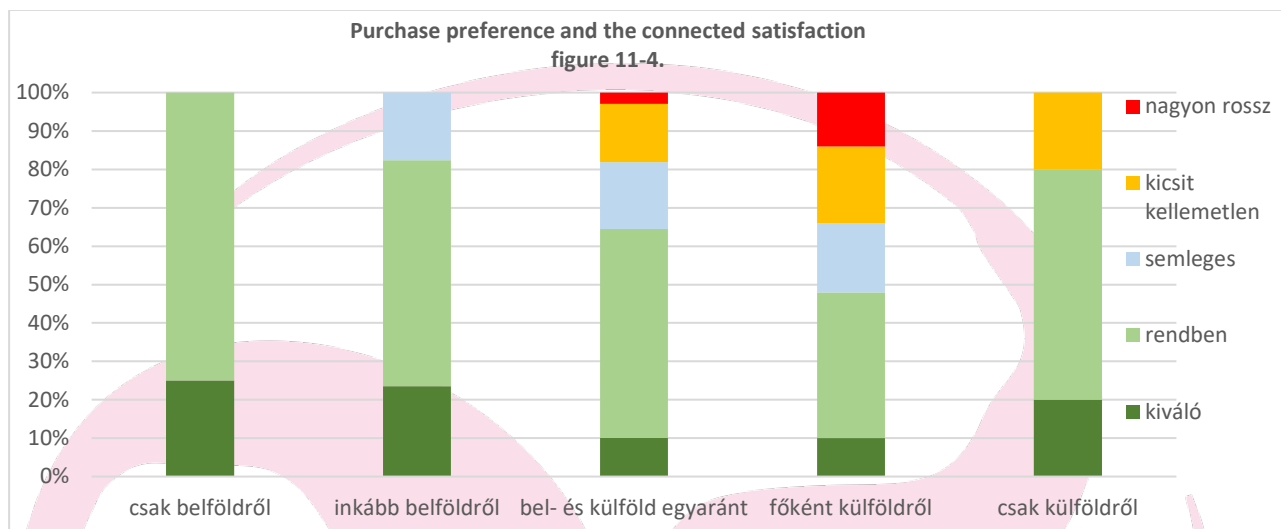


The majority of pilots are satisfied. **The proportion of those with negative feelings doesn't reach 20%, while those with clearly positive views exceed 63%.**





Now, let's compare where people make their purchases and how that correlates with their level of satisfaction.

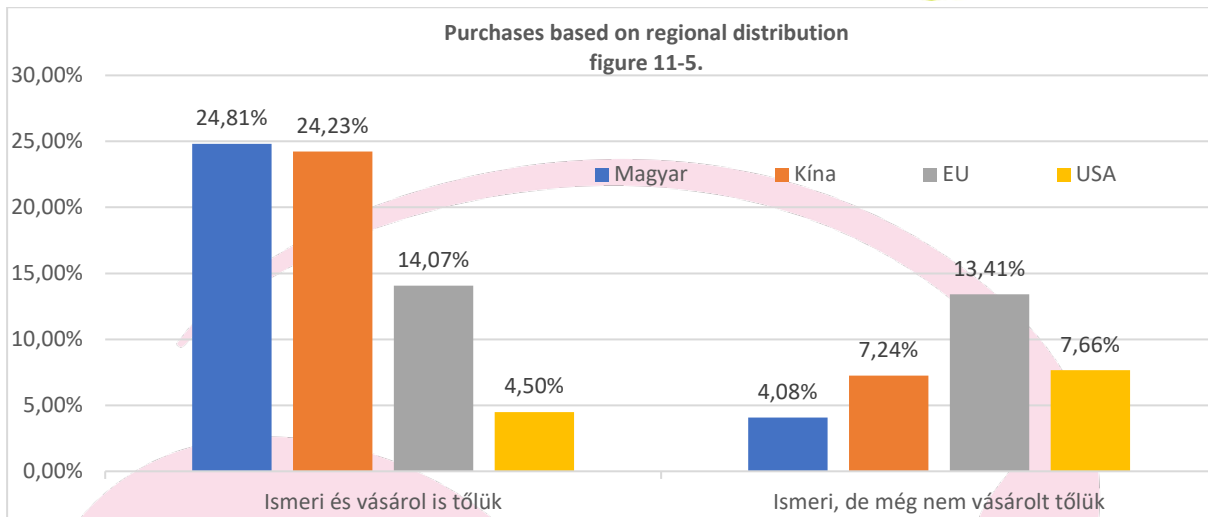


The data strikingly shows that **the more purchases are shifted toward domestic sourcing, the fewer negative experiences there are—in fact, there are none** (with "slightly unpleasant" or "very bad" feelings). These two negative sentiments only appear on the right side of the chart, where the dominance of foreign purchases increases.

This chart clearly illustrates that **domestic retailers provide high-quality service to their customers, significantly better than global market players.**

The regional distribution of purchases is as follows:





The diagram illustrates that in terms of purchasing activity, **domestic shops and Chinese webshops are neck and neck**. When considering familiarity as well, slightly more people know about Chinese stores without being customers compared to domestic stores. Overall, the awareness of Chinese shops (31.47%) is a few percentage points higher than that of domestic shops (28.89%), but the purchasing inclination is the same for both groups.

Another interesting finding is that the proportion of non-buyers relative to awareness is only around 14% for Hungarian shops, which is considered a low value. This **indicates high consumer confidence in Hungarian retailers**.

More surprising is that the lack of trust in Chinese webshops is 23%, more than one and a half times that of Hungarian shops.

Even more striking is that the distrust rate for European stores is almost 49%, more than 3.5 times that of Hungarian shops.

The survey did not explore the reasons behind this distrust, but we assume that Chinese companies—primarily Banggood and Aliexpress—are deeply rooted in experiences from outside the FPV sector. These stereotypes, such as unrealistically low prices in Chinese webshops, have likely carried over to the FPV world. For instance, the stereotype that even if an item doesn't arrive, the financial loss is minimal. Such ingrained perceptions are becoming less relevant today, as EU-based FPV retailers have caught up in pricing, and the new EU VAT law, which came into effect on July 1, 2021, has boosted EU-based commerce. It is likely that new EU import regulations will continue to strengthen this trend.

