

# Firefly

DRONE SHOW

## Executive summary

**Jesús Espinosa Ruiz**

GRUPO I

Antolín Alejandro de Oña

Roberto Alzaga Jimeno

Javier Jimenez Campos

Alejandro Pascual Oliver

Irene Vazquez Trujillo

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# THE TEAM

Firefly team visionaries



Antolín Alejandro de Oña



Roberto Alzaga Gimeno



Javier Jiménez Campos



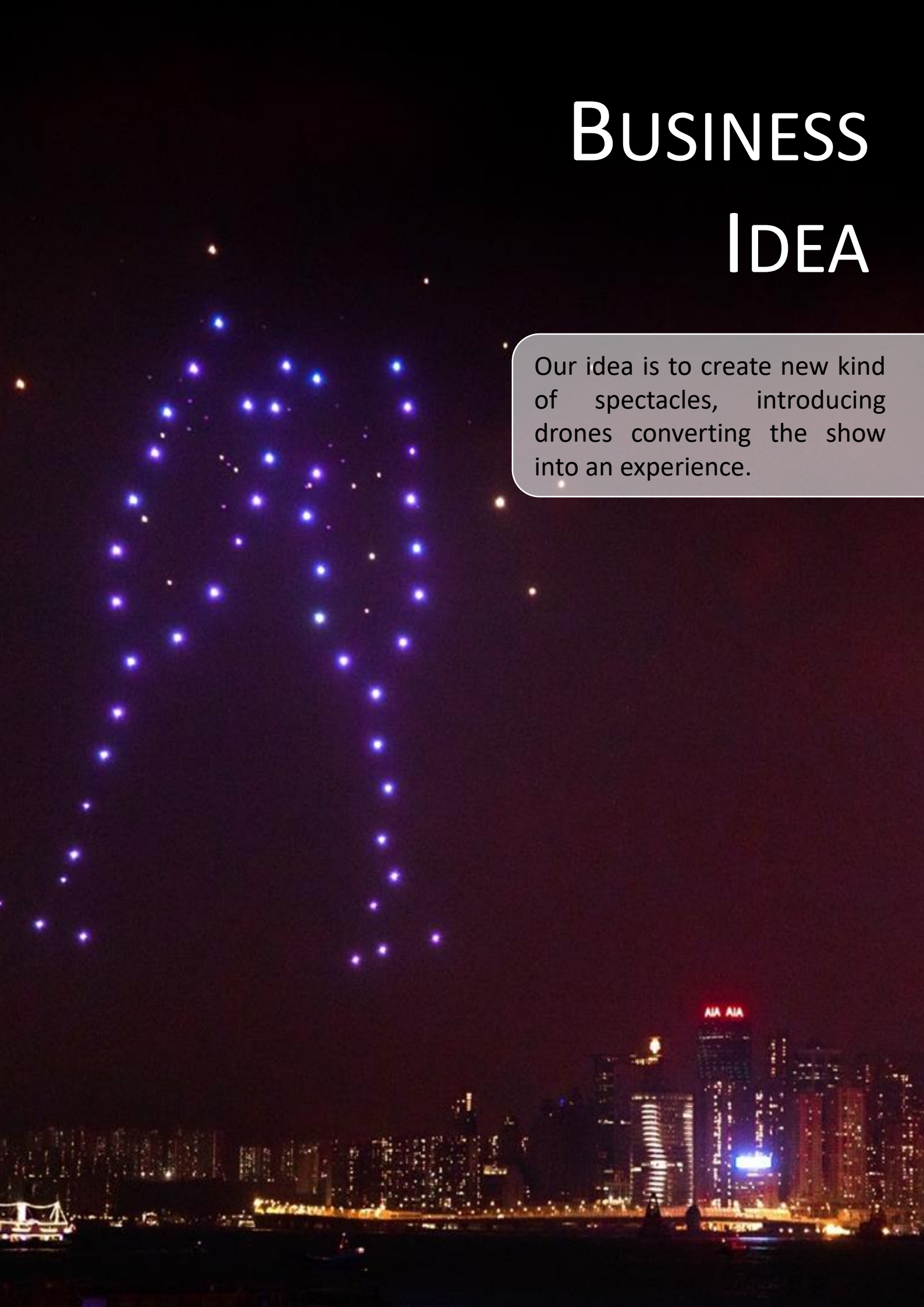
Alejandro Pascual Oliver



Irene Matilde Vázquez Trujillos

# BUSINESS IDEA

Our idea is to create new kind of spectacles, introducing drones converting the show into an experience.



# BUSINESS IDEA

Opportunity and Business core

## IDEA

To generate new experiences through a revolutionary change in spectacles, where drones create a new atmosphere.

Through the extraordinary evolution of drone technology during last years, spectacles and public events will turn from services to experiences, introducing these, as each show can be easily personalized to the type of activity and the space available.

We want to create customizable drones, which will wear costumes, like additional pieces or lights, while they coordinated to act as a flock, flying autonomously and not crashing among them, generating a competitive advantage due to the difficulty to copy them.

## VISION

“To be able to bring your imagination in the sky”

## MISSION

“To create personalized forms in the sky using drones to perform unique shows”

## VALUES

- Customer oriented: dedication and commitment to customer to reach our full potential.
- Innovation & teamwork: cohesive and welcoming work environment that recognizes the value of teamwork and inspires innovation and cooperation.
- Understanding uniqueness: each employee is unique and expects to be respected and treated fairly.
- Integrity: build lasting relationships on honesty and trust.
- Nurture & respect environment: We respect the nature through our actions and attitude in the workplace.



# BUSINESS IDEA

## Company's Competitive Positioning

### SWOT ANALYSIS



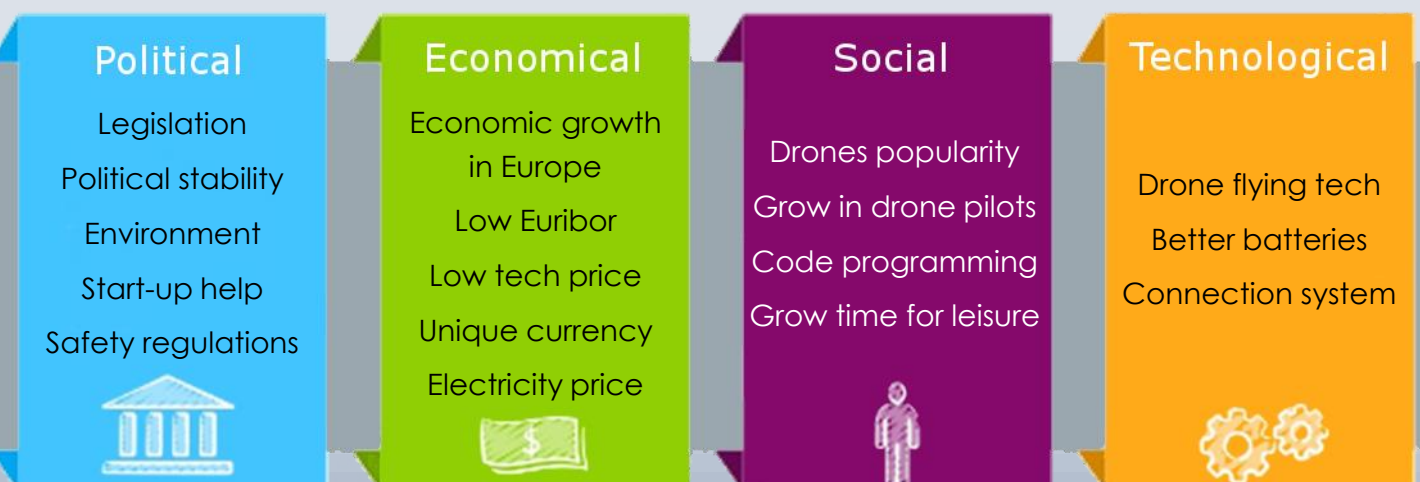
Main advantages are related to the concurrency and technology evolution. Through this current stability in Europe would allow the company to enter the penetrate the market with a good economical outcomes. The company is the unique settled in the location, while it creates a new need which is accepted after the market validation done.

### RISK ANALYSIS

The main one is the climate conditions, mitigated by the location and the interior and exterior offer in the portfolio.

Additionally, it must be a very customer oriented company, as public opinion will affect heavily to the business. That complies the safety of the spectators too, with a software able to identify malfunction and mitigating it.

Rest of risks, are linked to the lack of capital or capacity in order to reach the maximum amount of customer, with a very detailed plan to avoid it happen.



**Firefly**  
drone SHOW

**Firefly**  
drone SHOW

Define your dreams

# MARKETING PLAN

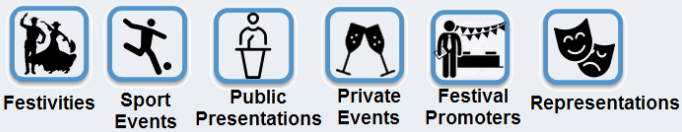
We have the idea, but we need to validate it. To do it, we are going to study the market and we are going to validate it.

# MARKETING PLAN

## Customer & Competitors

### CUSTOMER

In order to define our customer we have taken into account which are the events that can benefit more from our service, as well as their reaction within consuming it. Having regard to events with similar characteristics, affluence and frequency we can group them in the 6 groups:

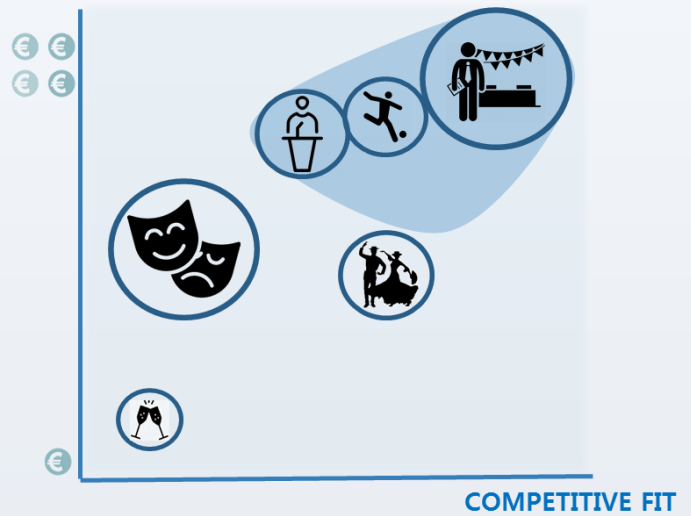


The market segment in which firefly will be most successful has been chosen according to the prioritization matrix.

**Festival Promoters**

Most profitable

### PROFITABILITY



- Two criteria have been taken into account:
- Profitability: related to market volume of each segment.
  - Competitive fit: a porter analysis has been done to see which firefly segment was more competitive.

### COMPETITORS

Firefly's competition will focus primarily on companies that engage in drone entertainment. Due to Firefly is at a higher level than traditional means of entertainment such as fireworks.

Most of the companies are dedicated to big shows. This leaves us an open market niche: shows not known worldwide that can bring us periodic incomes in Spain (far away from these companies).

	SHOW MAGNITUDE	SHOW CUSTOMIZATION	FLEET SIZE (NUMBER OF DRONES)	ACCESIBLE DATA	EXPERIENCE (YEARS)
PIXIEL	<div style="width: 80%;"></div>	<div style="width: 60%;"></div>	30	<div style="width: 70%;"></div>	7
COLLMOT	<div style="width: 90%;"></div>	<div style="width: 80%;"></div>	50	<div style="width: 85%;"></div>	9
SKYMAGIC	<div style="width: 70%;"></div>	<div style="width: 70%;"></div>	100	<div style="width: 60%;"></div>	3
<b>No1</b> overity	<div style="width: 95%;"></div>	<div style="width: 95%;"></div>	≥100	<div style="width: 90%;"></div>	4
EHANG	<div style="width: 85%;"></div>	<div style="width: 85%;"></div>	1000	<div style="width: 75%;"></div>	4
<b>Firefly</b> DRONE SHOW	<div style="width: 60%;"></div>	<div style="width: 80%;"></div>	100	<div style="width: 85%;"></div>	1



Thanks to this study that the key to success is not in the number of drones used or years of experience, but in the customization and design of shows, and the ability to adapt to different customer proposal.

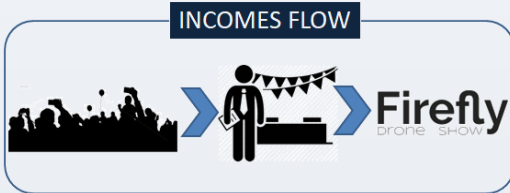


# MARKETING PLAN

## Market Size

### MARKET ASSESTMENT

We have developed a complete market analysis focused on our first destination: Spain. In order to do this, we have studied the two parts that make up our revenue flow:



- Spectators: the density of the population and of the tourists by autonomous community has been analyzed. We have also studied the average expenditure of the tourists/Spaniards in the activities of the entertainment sector to which firefly offers its service.
- Companies dedicated to the organization of events: the number of companies in Spain by autonomous community and their profits at the national level have been analysed.

### AN EMERGING MARKET



Spanish companies allocate 18% of their marketing budgets to the organization of events: 2.600 M€.

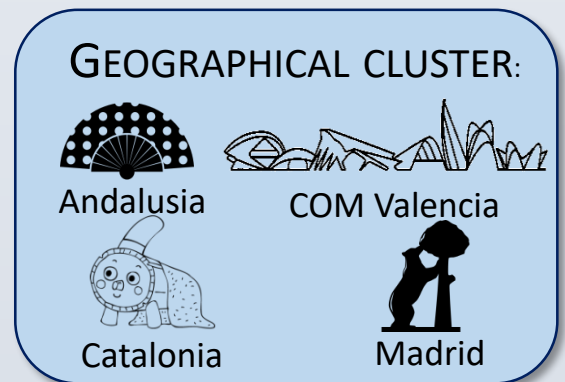
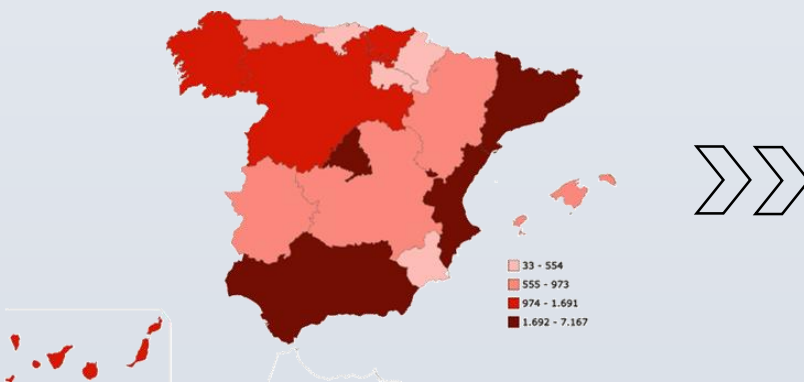


60% of companies confirm the subcontracting of the most important events to qualified companies.

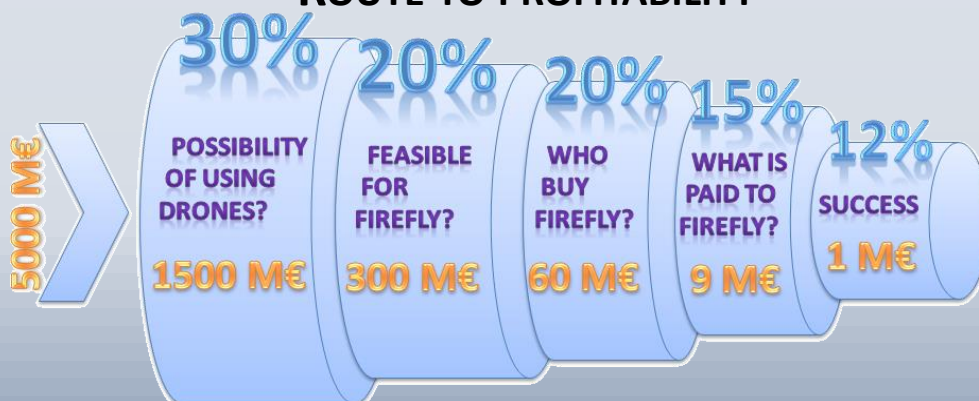


Creativity, as a way of surprising and impacting, is the most booming element for professionals.

### LOCATION



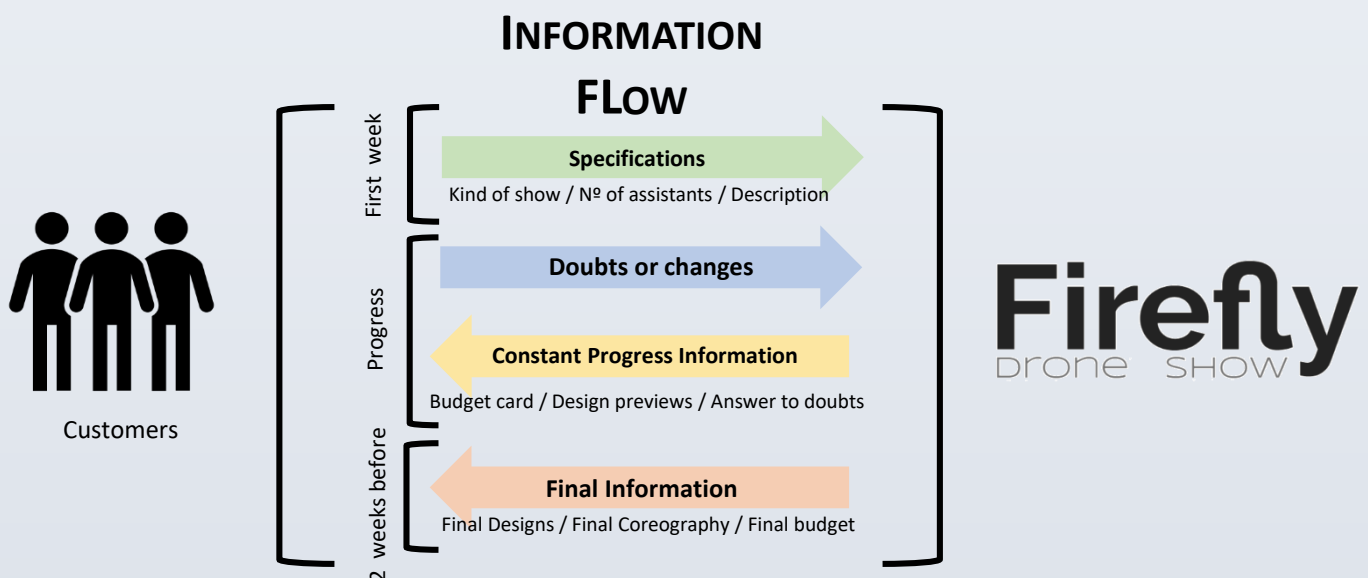
### ROUTE TO PROFITABILITY



# MARKETING PLAN

## Customer journey

1. **First contact:** requirements of the show that wants to create.
2. **Feasibility study:** first study depending on the client's requirements and it defines a preliminary budget.
3. **Presentation of the study and customer acceptance:** sales staff presents the preliminary proposal.
4. **Acceptance of the offer:** a computer simulation of the final result is sent, including the changes introduced throughout the progress of the project.
5. **Concretion:** the final budget is detailed according to the changes introduced.
6. **Final presentation:** the client lets Firefly work in the assembly and presentation of the show.



Working with this time progress the company expect to complete the entire process in less than 6 weeks in total, as maximum timing.

## Competitive advantages

- Development of new software and tools for flying drones at the same time.
- Concurrence engineering with new versions and retrofits, using el know-how of the company.
- Competitive prices comparing the market and our services.
- Flexibility of installation, start up, and industrialization.

# MARKETING PLAN

## Channels & Costs & Market Validation

### CHANNELS

The channel prioritization allows Firefly to determinate the channels that we should invest:



Call Center



Trade Fairs



Email



Web page

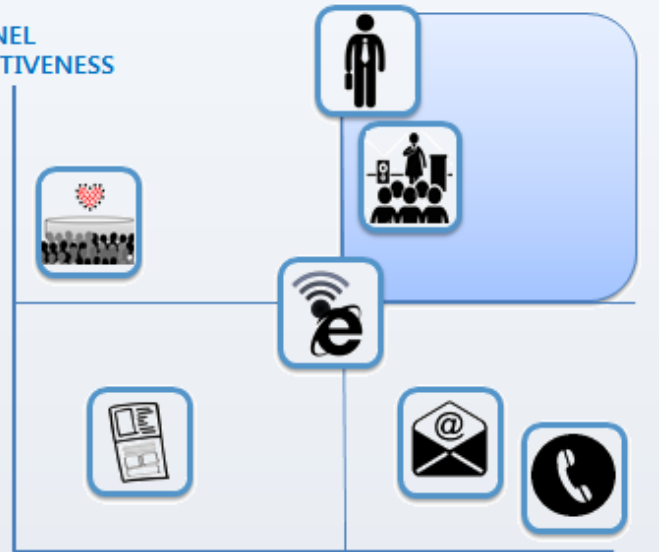


Brand Marketing



Show Demonstration

CHANNEL ATTRACTIVENESS



### COSTS PER YEAR



125000€

25000€/salesman  
5 SalesPeople



5000€

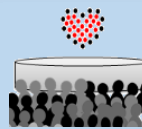
3000€ Creation  
2000€ Design



72710€

7271€/event  
10Tradefairs

### COST PER TRADEFAIR



3000€



3911€



300 €



60€

### MARKET VALIDATION

In order to validate our idea, the Firefly team contacted Spanish companies dedicated to the organization of shows via e-mail and telephone. Here are some emails we received:



*"Soy el responsable de nuevos proveedores para Bacus Eventos y estoy interesado en saber más sobre vuestros servicios"*



*"Nos parece muy interesante lo que nos cuentas y estaremos encantados en vernos"*



*"Muchas gracias! Os tendremos en cuenta para nuestros próximos espectáculos."*

### COLLABORATION WITH UNIVERSITY OF BARCELONA

*"Si nos envían la descripción del puesto de trabajo a cubrir, haríamos difusión de su oferta y les enviaríamos los C.V. de aquellos candidatos que estén interesados."*



# MARKETING PLAN

Channels: social media and fairs

## SOCIAL MEDIA

### Why Social Media and website?

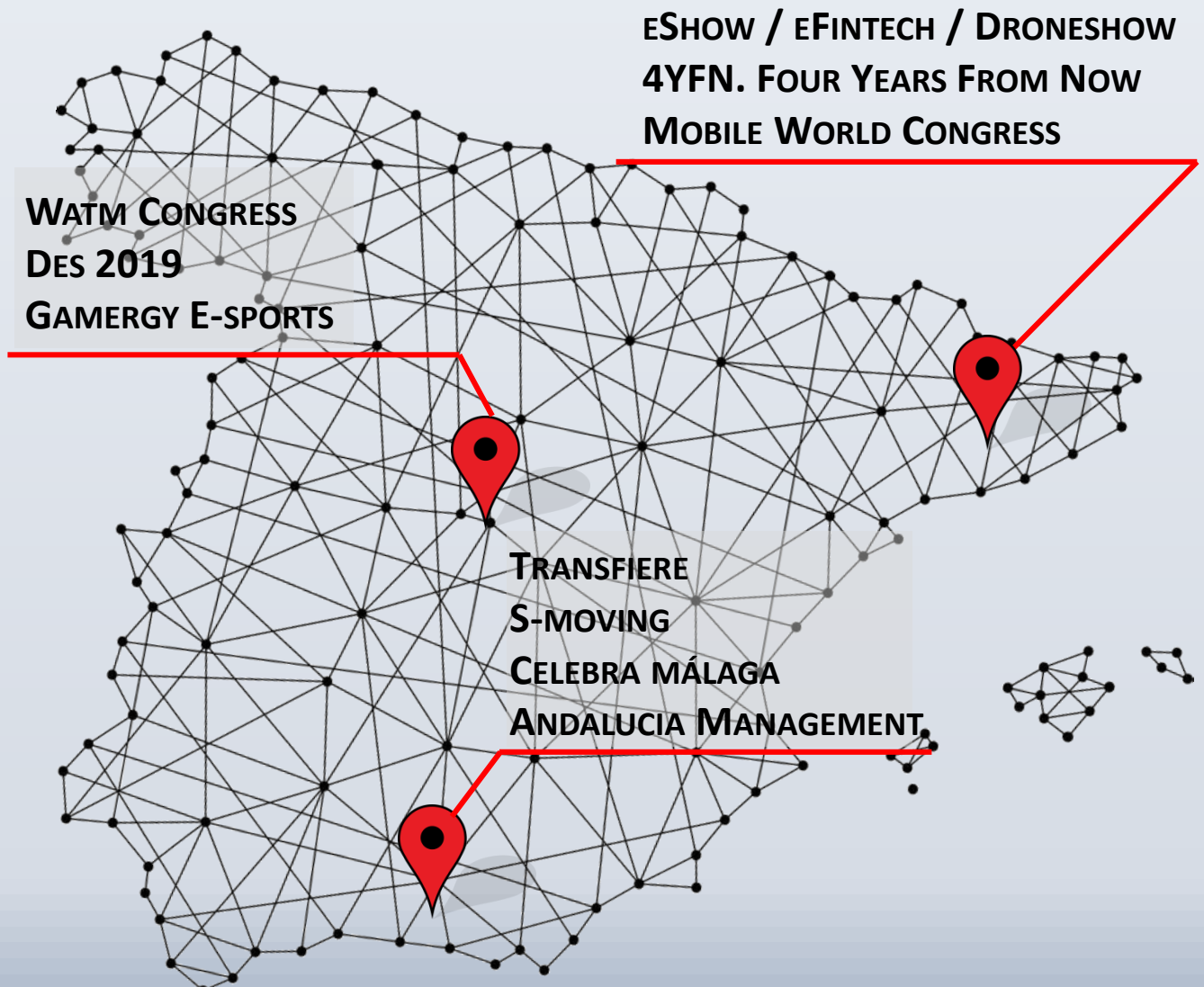
- Communicate authority
- Show authenticity
- Encourage Engagement
- Provide support
- Affordable
- Brand loyalty

If people do not know about your business, they cannot become your customers and provide benefits. Social media and website boost your visibility



## FAIRS & PROMOTION EVENTS

The aim of sales force is to be present in the most important fairs to spread the word. Starting a business network is essential for us, and that is the reason to invest a lot of effort on this. Main fairs will be visited in cities such as Barcelona, Madrid and Málaga.



# COMPANY ORGANIZATION



To define how the company will work. It is necessary to define a multitasking structure with an agile way of working.

# COMPANY ORGANIZATION

## Company Structure and HR Plan

### MATRIX ORGANIZATIONAL STRUCTURE

A company structure in which the relationships are set up as a grid, making it faster and work team oriented.

The main advantages of using this structure are that:

- Resources can be used efficiently, since experts and equipment can be shared.
- Products and projects are formally coordinated across functional departments.
- Information flows both across and up through the organization.
- Employees are in contact with many colleagues, helping sharing of information and resources.
- There is a sharing self-management, enhancing motivation and decision making

Board of Directors					
CTO	COO	CMO	CFO	CEO	
					Strategy
					Human Resources
					Finance
					Procurement
					Marketing
					Customer Services
					Finance
					Logistics
					Manufacturing
					Quality
					R&D
					Engineering

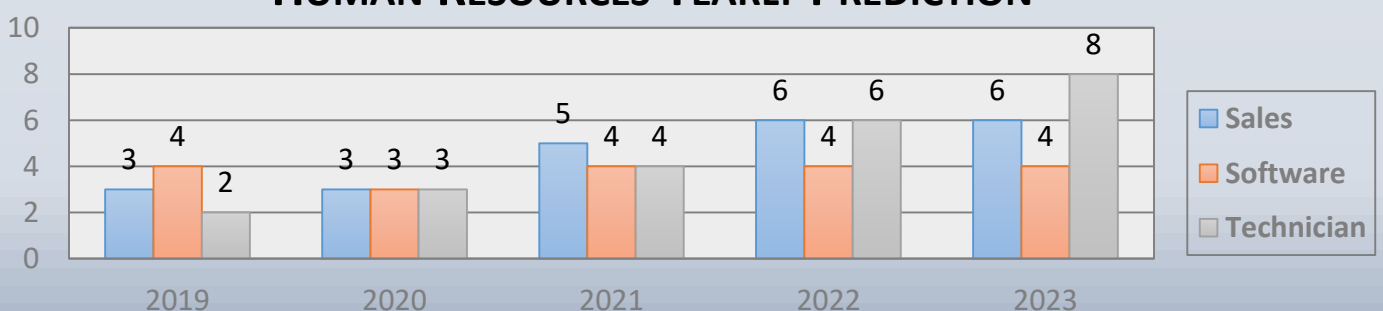
SUPERVISORY BOARD

### HUMAN CAPITAL COMPANY'S VALUES

Company's values are very focused on keeping the loyalty of customers, as the cost of making one is relatively high. Also effort aims to have a clear communication flow and a collaborative team. Regarding to equality, every person will have the same opportunities. Finally, each employee works with self-discipline, related to compromise and motivation for the whole company.



### HUMAN RESOURCES YEARLY PREDICTION





# OPERATIONAL PLAN

Firefly is a company focused on spectacles, using the technology to bring unexpected features to every performance. Using a coordinated squad of drones to create a wide variety of forms, figures and choreographies.



# OPERATIONAL PLAN

How do we make the magic happens?

We use the most developed technology to bring unexpected features to every performance.



To do so, a coordinated and autonomous squad of drones will be used to create a wide variety of forms, figures and choreographies.

We offers predefined shows or customized ones, and also they could be accompanying other performance, creating forms in the air according to the theme and music, to transmit a message and to create a unique atmosphere never seen before on the spectacle world.



## Business model is defined as follows

- ❑ Customer provides a performance date and the theme of it, and then the team is in charge of creating an aerial choreography that matches customer's needs, satisfying the expectations of the spectators and customers.
- ❑ To create the choreography that the drones are following, it is necessary a properly developed software, that will establish aerial trajectories for each of the drones of the fleet, avoiding collisions among them.
- ❑ The team will also customize the drones, creating different accessories based on the different amount of topics. Those can be manufactured with different technologies and materials, like fabric, plastic or electric components.



## 2 LOCATIONS OF PERFORMANCES

**1 Outside Shows:** They will generally be at night, as they are usually performed by drones flying with lights.



**2 Inside Shows:** Shows in interior have a potential bigger variety of possible shows, as daylight is not a problem!



The service itself would depend on the magnitude of the event, utilizing a certain amount of drones regarding the forum, time of performance and the place, specifically the available space to do the show.



# OPERATIONAL PLAN

What does our software develop?

## *Smart Sky*

- High-performance mathematical algorithms, allowing advanced sensor fusion and control generating of drones .
- Synchronization between drones in order to perform tasks in group.
- Fly between waypoints, circulate around a point or steer by controlling heading, altitude and speed.

Components needed for flying the drones:

- Simulator
- Ground control Station
- Programmable plates, Amplifiers and repeaters



### Way of connection/technology

- The drones are equipped with **programmable plates**. The information of the flight is given by the **Ground control Station** using GPS signal with a special protocol called MAVLINK for communication.
- This information is contained in files with an **.xml** extension, which allows it to be structured and packaged using different programming languages.
- This Files are generated by our software **Smart Sky** with the code for the flight.
- Before a real flight, We will Plan and fly “missions” in a simulated environment.



## Maintenance plan

Software maintenance

- Periodically updates

Hardware maintenance

- Independently of the amount of shows performed Motor and Battery maintenance after show visually maintenance



# STRATEGY PLAN

We are planning to success and to start doing it, we are defining our strategy, where we are defining our milestones.



# STRATEGY PLAN

## Roadmap

### Stage 1. - The big Idea.

Initial analysis of the market and technic development in order to settle down the company:

- Market analysis
- Feasibility study

### Stage 3. – Beginning of the business.

Launching the company and the project.

- Software development
- Sale strategy distribution and marketing.
- Objective: positive result at the end of the year



### Stage 2. – Getting funds.

Financial issues and found of customers.

- Partners and friends funds
- Crowdfunding campaign
- Business angel round
- Bank investment
- Financial resources

### Stage 4. – First expansion.

Expansion of the business and invest in drones:

- Team recruitment
- Set up a new base in Barcelona

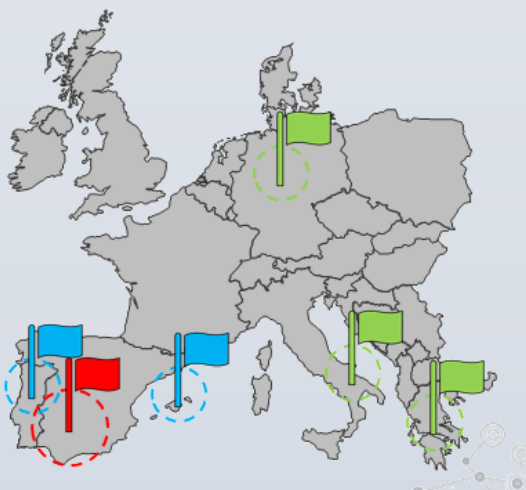
### Stage 5. – Second expansion.

Transformation from a Start-up to a formal company:

- Fleet investment
- Going to Europe

## Scalability

The strategy targets for the scalability plan would be:



- Avoid markets with a strong leader at the beginning.
- Expand in other countries to cover the increasing market needs.
  - similar to Spain: Italy and Greece.
  - countries like Germany with high GDP and activities during spring and summer.
- Look for partners experienced in the sector that could help us.
- More investments in our brand position, to defend our competitive advantage

# LEGAL FRAMES & REGULATIONS



Following compliance, we are setting which are the rules to be followed and the steps to follow.

# LEGAL FRAME & REGULATIONS

Drone legislation and flying rights to perform spectacles

## LEGAL INSTITUTION

The unmanned aircraft are regulated by AESA (Agencia Estatal de Seguridad Aérea) and as an aircraft, the only responsible for a drone is the owner and therefore it will be he who answers legally.

## PERMISSION PROCEDURE

Who to apply:

- Local administration of the public space.

When to do it:

- More than 5.000 people.
- Flying at night outdoor.
- With impact in public spaces.

What to do:

- Official formulary.
- Company documents.
- Plan of areas and space.
- Affluence estimation.
- Insurance documents.
- Emergency plan.
- Prevision of occupancy.

## LEGAL MAIN ISSUES



Never surpass 120m and do not lose from sight



Fly with proper weather conditions



Have insurance and respect GDPR



Permits to fly over buildings and people



Permits to fly at night with no more than 2kg



Do not fly on restricted air space



Respect airports and controlled air places



Control danger from people and goods

## INSURANCE REQUIREMENTS



Comply requirements of the “Real Decreto Ley 8/2014, de 4 Julio 2014”: Unmanned aircraft must have a civil liability insurance.

ALLIANZ: Drone under 25kg – 300.000 € coverage → 180 €/drone



According to the article 1902 of the Código Civil, related to events and spectacles: it is mandatory to repair all damage done to any person or goods

URQUÍA & BASS: 1.200.000 € coverage → 1.345 €/year



# FINANCIAL PLAN

Numbers and figures to explain how the plan is working. Here is the information to show the profitability of this project.

# FINANCE

## Strategic Approach

### ECONOMIC FORECAST STUDY

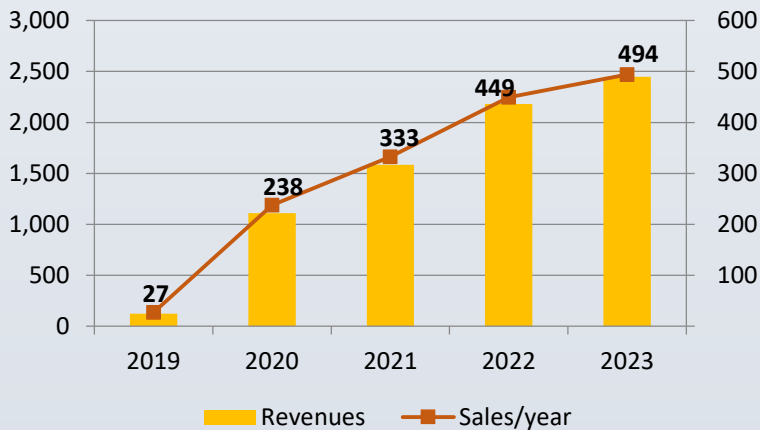
Present financial plan studies two cases which imply different forecasting situations:

- 1) No expansion scenario: Iberian peninsula business case.
- 2) Expansion scenario: International expansion business case.

### SALES FORECAST

Current forecast is showing a grow related to the investment on sales performed every year. To evaluate this, it is necessary to understand that first year there is a development of software and drones, which will limit operational available period of time.

### REVENUES (K€)



### REVENUES STREAMS

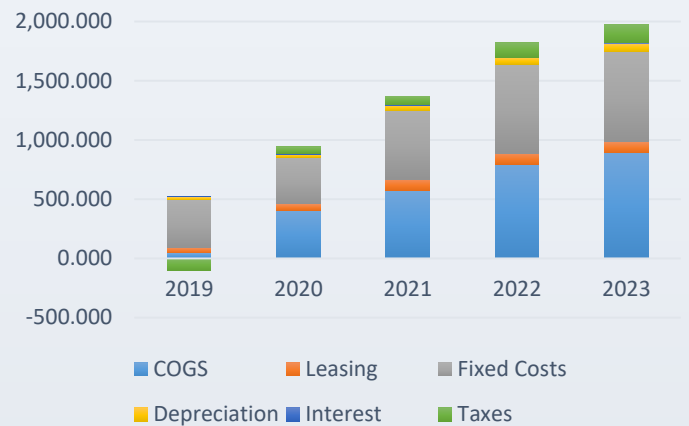
The source of revenues will be the sales. From the beginning we are offering two types of product: inside and outside shows.

The main difference is the drone used for its representation and, noticeably, the costs and the final price are going to be different. To have two different products will allow us to eliminate the seasonality that could have our outside show.

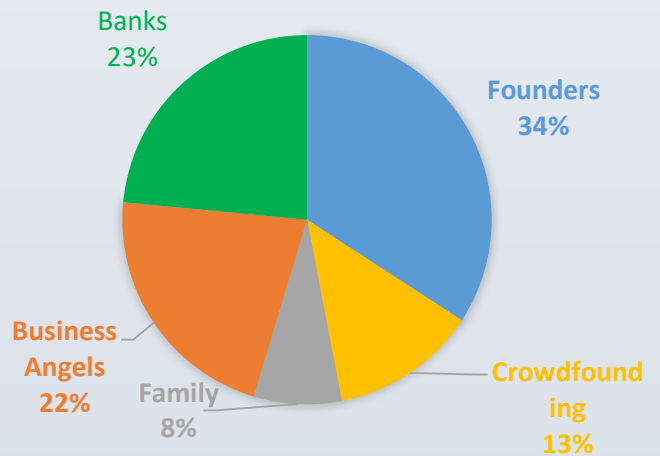
### COST STRUCTURE

COGS represents the biggest amount of the cost structure, increasing every year as the sales increase. Fixed cost are low due to the necessary invest in drones and reduced staff of the company.

### Cost Breakdown (K€)



### FINANCING SOURCES



**Self-Financing:** Each component of the team will put 35K€, which is a total of 160K€.

**Family investment:** Some familiars will invest in our project for an amount of 36K€.

**Crowdfunding:** In our market validation we found our first customer that invest in our project 60K€ in exchange of our products.

**Busines Angels:** We look for an angel investors in differents asociations as AABAN, AEBAN and InnoBAN that invest 110K€ in Firefly.

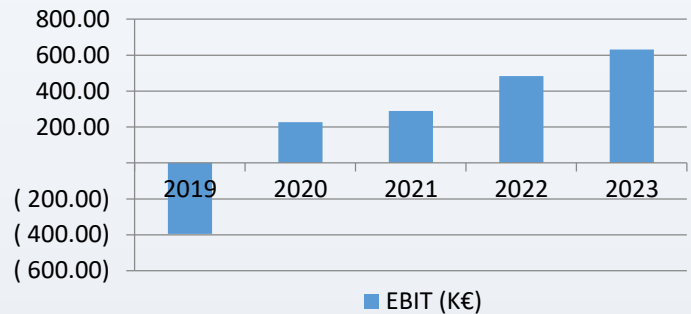
**Banks:** The last part is a 110K€ bank loan used for the drones purchase

# FINANCE

## Strategic Approach

### EBIT

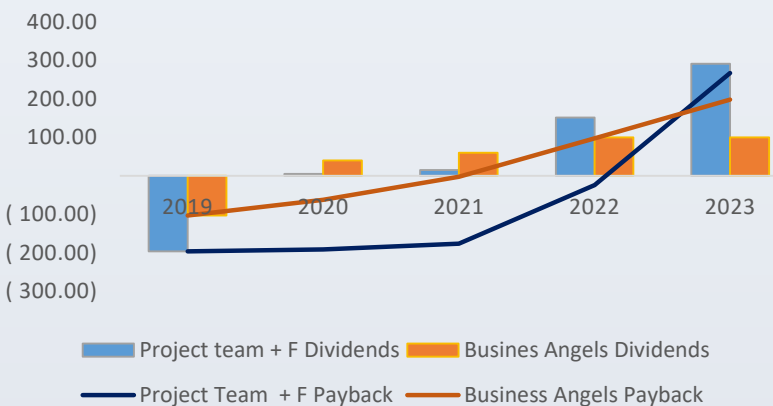
EBIT focuses on a company's ability to generate earnings from operations. It's an indicator of company's profitability. From the second year we achieve a positive value of EBIT due to our high revenues and reduced fixed costs.



### Dividends & Payback

In our financial plan we expect to give dividends to our investors from the second year. The amount of dividends that we're going to distribute will increase year by year and will be accordingly to the initial investment.

However, we start giving more dividends to the Business Angels in order to cover the objective to offer a payback period lower than 3 years.



### FREE CASH FLOW

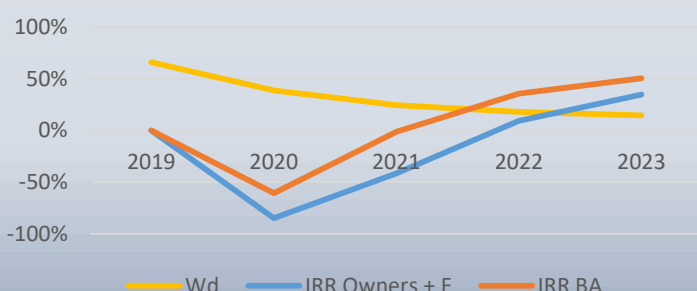
This graph shows the capacity of the company to self finance. From the second year of operations the positive value shows that we have already faced the initial investment.



### Finance Ratios

Debt ratio is decreasing until the last year where the company has 14,4% of his liabilities from banks

IRR is different for Business Angels and the rest of investors, achieving a 50% for BA and 30% for the rest.



**NPV: 4 953 K€**





# Firefly

DRONE SHOW

Define your dreams

DRONE TEAM