ARROWHEAD
BUSINESS AND INVESTMENT DECISIONS

Due Diligence and Valuation Report

Arrowhead Code:	90-02-19
Coverage initiated:	June 03, 2016
This document:	June 22, 2022
Fair share value bracket-DCF:	EUR 0.15 to EUR 0.21
Share price (June 21, 2022):	EUR 0.03

Analysts

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Company:	Drone Volt SA
Ticker:	EPA: ALDRV.PA, ISIN FR0013088606
Headquarters:	Villepinte, France
Founder	Mr. Dimitri Batsis
CEO	Mr. Mark Courcelle
Website:	www.dronevolt.com

Market Data

52-Week Range:	EUR 0.02 - EUR 0.20[i]
Average Daily Volume (3M):	58,16,404[ii]
Market Cap (June 21, 2022):	EUR 11.0 million (mn)

Financial Forecast (in EUR) (FY ending – Dec.)

EUR	'22E	'23E	'24E	'25E	'26E	'27E
High NI	(565)	940	3,017	4,990	7,638	10,497
High EPS	(0.00)	0.00	0.01	0.01	0.02	0.03
Low NI '000	(964)	359	2,147	3,298	5,178	7,283
Low EPS	(0.00)	0.00	0.01	0.01	0.01	0.02

Company Overview: Drone Volt SA ("Drone Volt," "DRV" or "the company") is a France-based company, which specializes in the production, integration and sale of drones or Unmanned Aerial Vehicles (UAVs) and software for professionals. The company, established in 2011, is listed on AlterNext under the stock symbol "ALDRV." The company is an expert in artificial intelligence (AI) and provides customized professional civil drones and several related services (pilot training, regulatory certification, etc.), which enables it to provide turnkey solutions to its clients. Drone Volt is the market leader in the European broadcasting and service drone industry. The company's client list includes government organizations and industrial groups such as the French army, the French Ministry of Defense, Engie, Total, Bouygues ES, ADP, the Air Transport Gendarmerie (GTA) & international government agencies.

Q1 2022 Financial Results: Drone Volt reported sales of EUR 1.7 mn in Q1 2022, declining slightly by 3.2% on a year-on-year (YoY) basis owing to a slight slowdown in activity (as compared to Q1 2021). Revenue from the high-value added segment fell slightly by 0.1% YoY to EUR 0.8 mn and included contribution of ~EUR 300k and EUR 110k, respectively, from Aquiline Drones and SKYTOOLS. Revenue from the distribution segment decreased by 5.7% YoY to EUR 1.0 mn and included contribution of EUR 58k from SKYTOOLS. The company reported a 9.9% YoY decrease in gross profit as it amounted to EUR 627k, despite an increase in margin from high-value added segment, as the margin from distribution segment and revenue fell. On a consolidated basis, the company's gross margin decreased to 35.9% from 38.6% in Q1 2021.

Key Highlights: (1) Drone Volt has a positive outlook for FY 2022, owing to its order pipeline, partnerships and organic and inorganic growth initiatives despite the pandemic situation; **(2)** In FY 2021, the company reduced its debt by around EUR 7 mn, reducing its debt ratio to less than 2% (from more than 10% in FY 2020); **(3)** Drone Volt acquired the assets of Viking Drone, a Denmark-based specialized manufacturer of connected drones for developers and integrators to augment its existing offerings ; **(4)** Drone Volt acquired Skytools, a drone distributor and service provider with sales of over EUR 1 mn, in January 2022, to grow its revenue base and expand into new markets; **(5)** The company raised EUR 8.8 mn through the issuance of shares (with redeemable warrants) at a price of EUR 0.075 per share; **(6)** Drone Volt delivered two HERCULES 20 to the French Navy and trained 2 expert pilots; **(7)** The company has entered into a joint venture with Pragma Industries, a leader in production of compact hydrogen fuel cells, to substantially increase flight times of drones; **(8)** The company received an order from a customer based in Central Europe for the delivery of 275 HERCUELS 20 SPRAY drones (for upto EUR 5 mn) in the next 3 years; **(9)** DRV signed a letter of intent (LOI) to acquire a minority stake in Skycorp (for upto EUR 500k), an Estonian drones manufacturer, to commercialize its hydro-power motor technology through drones production or licensing agreements; **(10)** LineDrone, a drone for inspection of power transmission lines, developed with Hydro Quebec, is expected to commercialize in FY 2022; **(11)** Drone Volt signed a partnership with ROTH2, which will offer hydrogen and deploy recharging stations for its drones; **(12)** Drone Volt sold 50% of its stake in Aerialtronics for EUR 6.5 mn to Aquiline Drones; **(13)** The company delivered 271 drones and 3 PENSAR smart cameras in FY 2021, followed by 14 drones in Q1 2022;

Risks: The key risks include evolving regulatory policies for the sector, supplier risk, emerging competition and cheaper alternatives.

Valuation and Assumptions: On the basis of due diligence and valuation estimates, Arrowhead believes that Drone Volt's fair share value lies in the EUR 0.15 - EUR 0.21 bracket using a Discounted Cash Flow (DCF) model – our primary valuation methodology.[iii] In addition, the target P/S multiple and our average revenue per share estimate for 2022 imply a fair value of EUR 0.12.

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1. Summary and Outlook

We are updating our coverage on Drone Volt SA. The company, headquartered in Villepinte, France, specializes in designing and marketing civil UAVs for professional purposes. It offers turnkey business solutions to its customers, which include several related services and pilot training. The company is a leader in audio visual drone solutions and provides aerial photography services to public administration and industry.

Key Highlights:

(1) With a strong order pipeline, negotitiations underway to add orders, existing partnerships and JV, the commercialization of LineDrone, and integration of acquisitions, the company has an optimistic outlook for FY 2022, with the growth momentum expected to continue.

(2) The company acquired the assets of Denmark-based Viking Drone, which specializes in manufacturing connected drones for developers and integrators, in an all-cash transaction for an undisclosed amount. Viking Drone has developed a drone with a simplistic design which is equipped to adapt to different payloads and allows for use of Artificial Intellgence. Drone Volt has also onboared 3 engineers from Viking Drone to assist with the integration. The acquisition will enable Drone Volt to strengthen its technologies and offerings.

(3) Drone Volt created a strategic joint venture with Pragma Industries, a manufacturer of compact hydrogen cells. The joint venture will potentially represent a technological leap, facilitating development of drones with increased flight time for transport and surveillance missions, with the aim to provide manufacturers of fixed or rotary-wing drones with hydrogen engines. The joint venture is also complementary with the the existing partnership with ROTH2. Drone Volt will look to strengthen this association by subscribing to 10% of Pragma Industries' capital, while Pragma Industries can subscribe to 18% of Drone Volt's capital.

(4) Drone Volt delivered two HERCULES 20 drones to the French Navy and trained two pilots, with the potential of receiving a larger order. The two drones will be used in an experiment to transport materials by two different means: a winch or a dropper.

(5) The company reported a revenue of EUR 1.7 mn in Q1 2022, declining slightly by 3.2% YoY. The primary reason for this decrease was a downturn in the business operations. Revenue from the high-value added segment amounted to EUR 789k (down by 0.1% YoY), while the revenue from the distribution segment saw a slightly more steep fall (by 5.7% YoY) to EUR 956k. Gross profit in the high-value added segment increased by 0.6% YoY to EUR 507k, with the gross margin increasing to 64.3% from 63.8% in the corresponding period in FY 2021. However, gross profit in distribution segment decreased by 37.5% YoY to EUR 120k, with the margin decreasing to 12.6% from 18.9% in Q1 2021 leading to a fall in consolidated gross profit of 9.9% YoY to EUR 627k in Q1 2022.

(6) The company acquired Skytools, a drones' distribution and services company based in Netherlands with a turnover of more than EUR 1 mn, to increase its sales, diversify its products and enter new markets and geographical areas.

(7) In January 2022, the company launched a new drone belonging to the Heliplane range. The drone has a fixed wing and can take off vertically and fly like an aircraft. With the ability to fly for up to 3 hours and over 1600 hectares, it is suitable for long distance monitoring missions and high precision survey missions. Additionally, the company is working on developing a new version with a hydrogen engine to reduce environmental footprint.

(8) To accelerate the production activity in the U.S., the company trained four drone operators from Aquiline Drones in July 2021. The company later met with team from Aquiline Drones to structurally improve the HERCULES 2 drone (improving its strength and reducing its weight to less than 2 kgs) which will open up new avenue for the company.

(9) The company raised EUR 500k through a state-guarenteed loan, similar to the ones raised in FY 2020 on favorable maturity and interest terms. Additionally, the company raised EUR 8.8 mn in a capital increase exercise, through the issue of shares with warrants (ABSAR) at a price of EUR 0.075 per share.

(10) In December 2021, the company received an order of 275 HERCULES 20 SPRAY drones for a total of EUR 5 mn to be delivered in the next three years to a leading industrial player in Central Europe. The company plans to deliver 50 drones by the end of the first year. Additionally, the company will discuss the possibility of a licensing arrangement for the production of the drones with the customer (which already has a drone assembly line installed). It had delivered 8 drones by Q1 2022, as per the schedule.

(11) The company signed a letter of intent to acquire a minority stake (worth up to EUR 500k) in SkyCorp. SkyCorp is an Estonian manufacturer of drones that has developed e-Drone Zero which converts hydrogen into electricity and replaces batteries, leading to lower weight and lower environmental footprint. With the stake,

the company plans to utilize the technology to produce similar engines or license the technology. The agreement builds on the partnership with ROTH2, with the company looking to HERCULES 20 with hydrogen cells.

(12) In FY 2021, the company reported a revenue of 8.7 mn, up by 49.5% YoY as the company delivered 273 drones and 3 PENSAR smart cameras in FY 2021. The revenue from the higher-value-added activities increased to EUR 3.7 mn, growing by 66.9% YoY, and that from the distribution segment amounted to EUR 5.1 mn, growing by 39.0% YoY. Gross profit increased to EUR 2.9 mn, growing by 70.3% YoY as gross margin increased to 33.4% from 29.3% in FY 2020. The company additionally paid off debt of around EUR 7 mn in FY 2021.

(13) In April 2021, the company signed a record order with Aquiline Drones, to deliver 600 HERUCLES 2 drones over the next 2 years, which will generate EUR 3.0 mn in revenues for the company, with more than EUR 1.5 mn being generated in FY 2021. The delivery of the order started in Q2 2021. Half of the order will be assembled in Drone Volt's factory in Paris and the other half in Aquiline Drones' facility. The volume of the order was 10 times that of the volume delivered in FY 2020, which highlights the scale and importance of the agreement with Aquiline Drones. The company delivered 211 drones in FY 2021.

(14) In June 2021, Drone Volt signed a partnership with ROTH2, a leader in production of high-pressure steel batteries. ROTH2 will offer hydrogen engines for Drone Volt's HERCULES 10 and HERCULES 20 drones and will deploy recharging stations for the drones, allowing drones to fly twice as long with the same carrying capacity and over longer distances. The recharging stations will be marketed under the Drone Volt brand name with Drone Volt receiving licensing revenues from the sales of these stations for refueling.

(15) In June 2021, Drone Volt raised EUR 3.7 mn from historical shareholders and new investors through issuance of shares at a price of EUR 0.195 per share. The shares were subscribed to by the investors in cash and by offsetting receivables' balance. The cash proceeds will be used to support working capital needs in line with the increase in orders received by the company in H1 2021.

(16) Drone Volt signed significant agreements with Hydro Quebec and Aquiline Drones in FY 2020/21 and received substantial interest from customers (including signing of a contract with a Europe-based customer for a minimum of 275 HERCULES 20 SPRAY UAVs). Thus, the company has a positive outlook for FY 2021 and expects its entry into and activities in the U.S.to drive growth.

(17) In August 2020, the company signed an LOI with Aquiline Drones, an American provider of drones and cloud-based solutions in the Aviation industry, granting it a license to produce HERCULES 2 drones and ALTURA ZENITH drones with PENSAR cameras. In return for granting the license for a period of 5 years (to be reviewed annually), Drone Volt was expected to receive 10% of the recommended selling price of the drones with a minimum of USD 100k to be received monthly (first payment received in October 2020). This amount was expected to appreciate by 10% each year. In addition to the above, it was expected to receive EUR 450k in the first year for the transfer of know-how. Each of the two companies, to foster a long-term relationship, was to exchange 10% of its shares for those of the other (Aquiline was to subscribe to 19,259,415 shares for EUR 0.225 per share while Drone Volt was to subscribe to 990,000 shares). The licensing agreement had been finalized in Q4 2020 and Drove Volt is expected to receive a total of USD 7.7 mn over the next five years.

(18) The agreement with Aquiline Drones was to additionally allow Drone Volt to use Aquiline's production facility in Hartford for up to 25% of its capacity, allowing it to produce drones in the U.S. at competitive costs.

(19) Aquiline Drones announced an expansion of its capacity and was expected to produce 1,000 units per month for the remaining part of FY 2020. It was expected to increase its production to 3,000 units per month in FY 2021 with the goal of increasing it to 10,000 units per month in the coming years.

(20) The company announced in January 2021 that it is in discussions with Aquiline Drones for a new partnership to combine the companies' R&D within Aerialtronics for the civil UAV sector. This partnership is likely to involve Aquiline Drones acquiring a 50.0% stake in Aerialtronics on a valuation of EUR 15 mn (book value of Aerialtronics is less than EUR 3.5 mn). The company is expected to complete the partnership deal by Q2 2021.

(21) In February 2021, Drone Volt signed a contract with a European distributor to supply a minimum of 275 HERCULES 2 SPRAY drones over the next three years for an order value (based on the list price) of more than EUR 5 mn.

(22) In October 2020, the company received an order for 5 HERCULES 10 and 4 HERCULES 2 from a French company which exported industrial equipment and had placed 5 orders previously.

(23) In December 2020, the company raised EUR 3.9 mn (EUR 4.1 mn excluding costs) via a preferential subscription rights issue it launched in November 2020, with an issue of 18,390,416 shares at a price of EUR

0.220 per share. The amount was expected to help strengthen capital structure and help finance its solutions globally.

(24) In September 2020, Drone Volt increased its holding in Aerialtronics to 100.0% from 50.2% (acquired in 2017) on the basis of a valuation of EUR 5 mn, lower than the EUR 7 mn and EUR 10 mn that it was valued at by independent valuation firms. The payment was to be made in the form of a seller's credit with a 36-month maturity period and 3% interest. The acquisition was expected to allow Drone Volt to capture all the value from the performance of Aerialtronics. DRV had in 2017 acquired the assets of Aerialtronics with a view to enhance its offerings in the field of security.

(25) In light of the global healthcare scenario, Drone Volt's subsidiary, Aerialtronics, has developed SaaS software which can be used to detect wearing of maks through a network of IP cameras.

(26) In August 2020, Drone Volt renewed its existing relationship with ASO to add a flexible financing line which was expected to allow Drone Volt to issue 17 bond tranches of EUR 600k each convertible into shares (OCAs) of Drone Volt.

(27) The company issued 1,613 convertible bonds with a nominal value of EUR 1k per bond, having a maturity of 24 months at an interest rate of 12% to be payable monthly. The bonds, if converted at a price of EUR 0.1275 per share (closing price on August 25, 2020), were likely to translate into an owners' capital of 0.906%. The company could issue further convertible bonds up to EUR 10 mn by the end of FY 2020. In October 2020, the company issued convertible bonds amounting to EUR 1.1 mn, to be repaid at a rate of 7% monthly over three years. The company additionally had the option of prepaying the amount without a penalty and paying in the form of shares.

(28) In July 2020, the company received an order for 2 ALTURA ZENITH with PENSAR cameras from a customer in the U.S. for a value of EUR 100k, which had already been received. The customer expressed interest in acquiring a dozen drones. In the same month, a customer of a company in Belgium completed the first Beyond Visual Line of Sight (BVLOS) flight of its Vertical Take-Off and Landing (VTOL) drone.

(29) The company had received orders from the Middle East (3 HERCULES 10 Spray drones for EUR 100k) and its Hungarian distributor (for 1 HERCULES 10, 2 HERCULES 20 and 1 ALTURA ZENITH with PENSAR camera) previously in July. It provided e-training sessions to its customer for 2 weeks as part of the order in March 2021.

(30) The company raised EUR 411k in March 2020 through a private placement of 5.9 mn shares at a price of EUR 0.07 per share to its long-term shareholders. It additionally raised a EUR 500k state-guarenteed loan at a rate between 0.75% and 2.5% for up to 5 years. The fund raisings reiterated Drone Volt's focus on diversifying its sources of financing and reducing dilutive financing.

(31) The company further raised EUR 2.2 mn through issuance of 28,897,890 shares at a price of EUR 0.075 per share to its long-term shareholders in May 2020. The company followed it up by yet another private placement, raising EUR 1.1 mn through issuance of 14,072,568 shares at a price of EUR 0.079 per share in June 2020. The two recent private placements are expected to allow the company to reduce its debt by prepaying a major portion of the ORNANE bonds it issued in May 2019 and November 2019.

(32) Drone Volt has converted the convertible bonds, attached with the ten tranches, it had issued in relation to its agreement with ASO signed in May 2018. The company additionally reduced the size of future tranches (to EUR 200k from EUR 800k) and thereof, the warrants attached with each tranche (to 40,000 from 160,000). The company is likely to have the flexibility of accessing twelve such tranches instead of three and will be able to reduce the dilution of stake with issuance of each tranche.

(33) Drone Volt signed an agreement in December 2020 with Hydro Québec for the industrial development and marketing of a drone desgined for inspecting high-voltage transmission lines, using a sensor developed by Hyrdo Québec's research center for making precise measurements on live lines without interrupting the supply.

(34) In February 2020, Drone Volt received an order for an ALTURA ZENITH drone equipped with PENSAR camera from a new customer in the U.K. (in the energy sector). The order worth approximately EUR 100k could be followed by a similar order. The company further delivered a spray version of HERCULES 10 drone in Africa and recorded an order for the delivery of three HERCULES 20 and one HERCULES 2 drone to a distributor in Hungary who previously ordered four drones in 2019.

(35) The company raised EUR 1.7 mn through the issue of non-convertible bonds in January, 2020. The bonds, which did not dilute the stake of existing shareholders, had a term of 24 months paid on a monthly basis and carry an interest rate of 12%. The company redeemed the loan in February 2021, 11 months before the redemption date, for EUR 832k, saving EUR 50k in financial costs.

(36) Drone Volt formed partnerships with Robotic Skies Inc and Metatron Unmanned Solutions to access the opportunities available in the U.S. market. These collaborations will help Drone Volt to utilize the maintenance, manufacturing and regulatory expertise of Robotic Skies and established capabilities of Metatron in terms of sales, training and service. Previously, in June 2019, the company announced the signing of a memorandum with METATRON, one of the largest UAV service companies in the US, which includes a first order of 15 drones and 1 smart camera PENSAR, as well as the opening of the first Drone Volt Academy in the US. In March 2020, the company announced that Robotic Skies was ready for production of a number of its drones and would begin doing that once industrial activity was resumed.

(37) The company raised EUR 1.7 mn through the issue of non-convertible bonds in January, 2020. The bonds, which did not dilute the stake of existing shareholders, had a term of 24 months paid on a monthly basis and carry an interest rate of 12%. The company had also issued bonds worth EUR 815k redeemable in cash and in new and existing shares (ORNANE) in December, 2019, similar to the ones issued in May, 2019. The bonds have a term of 3 years and carry an interest of 7% to be paid monthly. The bonds are repayable at any time without a penalty, except on maturity when the subscriber is to receive an additional interest of 7%.

(38) In May 2019, the company completed the successful placement of bond issue for EUR 760k at the rate of 7% per year over 3 years. These bonds were redeemable in cash and in new and existing shares. At maturity, subscribers would have received an additional interest of 7%. Drone Volt retained the choice of repaying the principal and interest remaining in the form of shares. The principal and interest, however, were repaid in cash.

(39) In September 2019, the company announced the successful launch of Heliplane, its brand new Vertical Take-Off (VTOL) drone. Drone is close to finalizing an order from for the newst version of Heliplane a government agency. The value of the order may cross more than EUR 200k and could lead to even more significant orders.

(40) The company marked its entry into the U.S. markets by delivering its first HERCULES 10 drone to a group of U.S. energy producers for training pilots for the inspection of high-voltage lines in January, 2019. The entry is expected to lead to larger consequent orders for drones, given that the US's 300,000-kilometer (km) high-voltage line network is aging and requires more frequent inspections. DRV is also targeting the security market in the U.S. via a contract signed with a government agency in the U.S. for the supply of two PENSAR intelligent cameras. The company delivered two HERCULES 5 drones to a U.S. Government Agency in June, 2019.

(41) The company has an approximately 70% - 80% share in the French TV market, which uses drones for aerial shots, images, videos, which are otherwise either impossible to attain or costlier if shot using helicopters and cranes.

Key Risks: Key risks for the company include tougher regulations in the area of operation, along with supplier risk and emerging competition in the foreseeable future. In addition, cheaper alternatives of Drone Volt's products by small players could also impact the company's growth.

Industry Overview: The UAV or drone industry has seen rapid growth over the last decade owing to technological advancements in this sector. New markets, such as civil and consumer drones, have emerged and have been driven by new technologies and keenness regarding the various usages of drones across sectors. There have been varied forecasts by industry experts regarding the likely market growth. Teal Group, a U.S. aerospace consulting firm, estimates the commercial drone market to increase to USD 3.92 billion (bn) in the next decade, constituting 28% of the total drone industry (USD 14 bn) in that period. Another U.S. market & research consulting firm, Grand View Research, estimates that the commercial drone industry will reach USD 2.07 bn by 2022, while other experts have different views on the subject. However, all these estimates highlight the view that the commercial/civil drone industry is expected to witness significant growth over the next decade and will be a major contributor to overall drone industry sales. In addition, the use of commercial drones is likely to increase in areas such as agriculture, media, cinematography and photography, inspection and maintenance, surveillance and real estate. It corroborates our view that there is considerable scope for Drone Volt to capture greater market share with its unique and customized products.

2. Business Overview

Drone Volt is a leading French aeronautical company producing civilian drones and specializing in the manufacturing, assembling and distribution of professional drones. It came into existence in 2011 as a private limited company, headquartered close to Paris CDG airport, France. It was listed on Euronext Marché libre Paris in April 2015, before being transferred to AlterNext Paris in December 2015. The company's shares are traded under the symbol "ALDRV". Drone Volt is self-sufficient in developing new technologies based on UAVs or Unmanned Ground Vehicles (UGVs) used for civil applications since 2011. The company is present in France, Belgium, the Netherlands, Denmark, Switzerland, the US, Canada, and Indonesia. On December 31, 2019, the company had 46 employees and 2 production centers in France and the Netherlands.

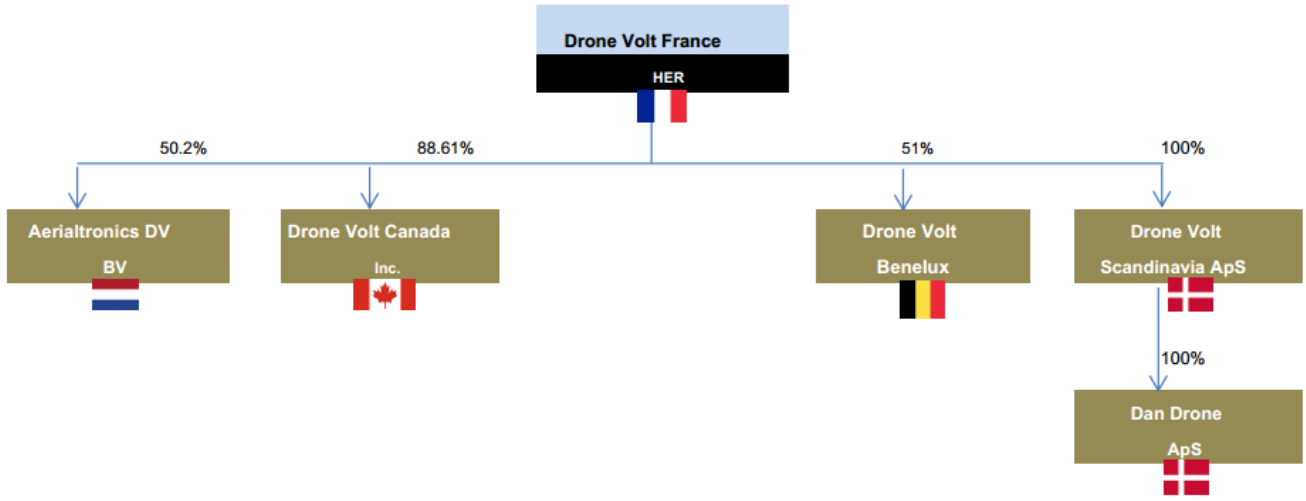
It designs and manufactures innovative commercial service drones useful for agriculture, audiovisual applications, building and civil engineering works and security. The company offers complete solutions for the professional industries. It also provides services such as drone pilot training, repair and maintenance services, or undertaking administrative actions. Drone Volt's customers notably include government organizations and industrial groups such as the French army, the French Ministry of Defense, GDF Suez, Engie, Total, Bouygues ES, ADP, the Air Transport Gendarmerie (GTA) and international government agencies.

The company is steadily expanding its geographical reach beyond France. In FY 2020, the share of revenues accruing from France increased by 7.0% YoY, while that from Europe (ex-France) decreased by 22.1% YoY. The revenue from other countries increased by 55.7% YoY.

2.1 Ownership Structure

Drone Volt SA's organizational chart is as follows:

Exhibit 1: Organization Structure[iv]



2.2 Business Model

Drone Volt is involved in manufacture and sale of drones to individuals and professionals. Apart from this, the company offers various drone-related services such as pilot training, regulatory certification and engineering consulting, besides providing customized products, which allows it to offer its clients, turnkey products. The company also provides training, repair and maintenance services for drones. It even provides administrative assistance for registering operators with the DGAC (French Civil Aviation Authority), obtaining flight authorizations, training pilots and providing them with requisite certification from the DGAC. Resultantly, Drone Volt has become a one-stop shop for comprehensive solutions to its customers.

The company follows a sales-based model which provides DRV a competitive edge over its peers who follow a rental model, in terms of availability and customization of drones. Its sales-based model also lowers the risk of obsolescence as the company is not required to store any inventory to rent out its products and can easily adapt to changing technology and market needs.

The company has shifted its focus from distribution to the strategic segment which includes Drone Volt Factory, Services & Academy as the demand has shifted from low-value products to high-value drones. In October 2020, Drone Volt entered into a promising relationship with Aquiline Drones in the U.S. The company signed an LOI with Aquiline Drones, with a view of granting it the license of producing the drones HERCULES 2 and ALTURA ZENITH with PENSAR camera, in return for 10% of the recommended selling price of the drones in addition to compensation for the transfer of know-how. The deal is expected to generate USD 7.7 mn over the next five years. The company additionally collaborated with Hydro-Quebec to industrialize and commercialize a drone for inspecting high-voltage electricity transmission lines. The commercialization of the drone was expected to be completed in H1 2021.

The company implemented a cost optimization plan, which allowed it to reduce EBITDA loss by EUR 535k in FY 2019 as it amounted to EUR 1.6 mn.

2.3 Products and Services Offered

The company offers a plethora of products from leading world manufacturers of drones. It also designs and manufactures in-house, particularly focusing on making customized products for sectors such as agriculture, surveillance and security, construction. The following is the product portfolio offered by Drone Volt:

HERCULES 2

Exhibit 2: Product Image and its Specifications

- Tactical drone for reconnaissance and surveillance
- Microdrone with a flight speed of up to 2 kmph
- 27 minutes flight time without payload
- Capable of flying up to 90 kmph in all weather conditions
- Resistant to winds up to 70 kmph
- The dimensions of the frame are 300x300x150 mm, with propellers as long as 254 mm (10 inches)
- This drone's total weight is 1.2 kgs

Drone HERCULES 10 Spray

Exhibit 4: Product Image and its Specifications	
	• Tethered spraying • Designed for precise spraying of liquid products for surface, roof and facade treatments, offering new treatment solutions aimed at a number of applications • Foldable system • The customizable high-pressure system is fully foldable and makes the HERCULES 10 ultra-compact to facilitate transport • HERCULES 10 allows quick and easy access to inaccessible and dangerous areas. It is operational within 10 minutes and reduces the hardware installation and human risk

Drone HERCULES 20 Spray

Exhibit 5: Product Image and its Specifications	
	• The customizable crop spraying system length is up to 3 meters wide. The fully foldable system that makes the HERCULES 20 - Sprayer Drone ultra-compact was designed to facilitate transport • The HERCULES 20 Sprayer Drone is designed for an accurate and constant spraying for various surface treatments: liquid pesticides, fertilizers, new treatment solutions for a wide range of applications. The flow is manually (with the remote control) or automatically adjustable via the application / flight controller • The tank, with integrated pump, can load up to 12 liters for crop spraying. It is fully interchangeable and easy to remove because of the quick release system. The HERCULES 20 can take up to 20 kgs payload

HELIPLANE

Exhibit 6: Product Image and its Specifications	
	• It combines the advantages of multirotor drones with fixed drone wing • The unfolded dimensions of the drone are 1000x1300 mm with a height of 200 mm • It has a maximum payload weight of 1 kg and maximum take-off weight of 2.5 kgs • It is equipped with an infrared camera with a daytime zoom of 12.2x • Heliplane is widely used across the security and construction sectors

ALTURA ZENITH

Exhibit 7: Product Image and its Specifications	
	• The drone has dimensions of around 600×600 mm with a height of 470-570 mm with a max take-off weight of 9.65 kgs • It has max payload capacity of 3kg. With the largest payload compatibility and the simple and fast "click and go" system, it is the most flexible drone in the market • It is equipped with a high-capacity battery and can fly for up to 40 minutes • ALTURA ZENITH has a high level of redundancy which is ensured by 8 motors, coupled with redundant inertial measurement units (IMUs)

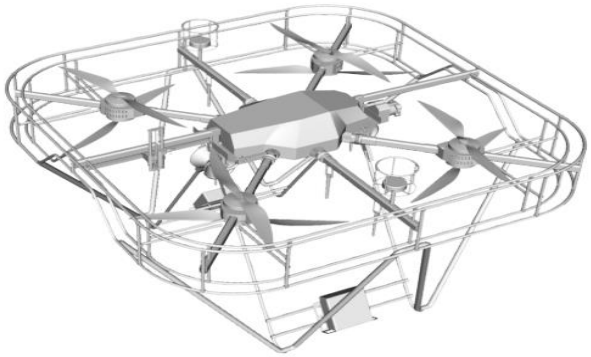
PENSAR camera

Exhibit 8: Product Image and its Specifications	
	• World's first dual-spectrum computer vision platform • Powered by AI • Sony 30x zoom HD vision • FLIR Boson IR allows identification of heat signatures • NVIDIA® Jetson™ Graphics Processing Unit allows AI-based real-time aerial processing • Optical character recognition reads texts and recognizes characteristics • Daylight and thermal vision overlaid on one screen in real time • Privacy masking • Hand-coded deep learning algorithms

INSPECTOR

Exhibit 6: Product Image and its Specifications	
	• It is designed to explore extremely small and confined spaces and helps to reduce inspection costs • It is powered by 3,000 Lumen LEDs with a 180° orientation, allowing it to operate in dark and unlit spaces • Optical flow system automatically adjusts the drone's altitude, keeping it at a distance of 50 meters from the ground • 4K camera in Timelapse mode can click pictures at regular intervals, which assists in 3D modeling • Honeycomb structure and cage makes it shock proof

Line Drone

Exhibit 5: Product Image and its Specifications	
	• It is designed in partnership with Hydro Québec to inspect high-voltage transmission lines • It is immune to electromagnetic fields of up to 400kV • It has a motorized rolling system, which allows it to make motorized movements on the lines and pilot assistance system helping it to land on electric conductors • It is a UAV with 8 motors and propellers • Sensors calculate loss of steel thickness and prevent power breakages

Other drones that DRV offers include DJI Phantom 3 Professional, DJI Phantom 4, Drone Yuneec Q500 Typhoon, FreeFly Alta, FreeFly Movi M15, DV Wing. DRV also sells drone accessories from various manufacturers on its website.

2.4 Company Premiums[v]

1. **Shift in focus to boost margins and profitability:** The company has shifted its focus and efforts from the distribution segment towards the high-value-added Drone Volt Factory, Services and Academy segment. This high-margin segment is expected to boost overall profitability of the company going forth. Revenue contribution from this segment, which stood at 32.4% of the aggregate revenues of the company in FY 2018, increased to 39.3% in FY 2019. Further, 53.7% of aggregate gross margins for FY 2018 accrued from this high-value-add segment, and this share increased to 59.4% in FY 2019. Revenue from sales of services improved by 14.8% YoY in FY 2019, while that from sales of drones dipped by 6.5% YoY in FY 2019. In FY 2020 and FY 2021, despite the impact of COVID-19 on the activities of the segment, the share of the segment in the total gross profit of the company increased to 62.2% and 70.6%, respectively.
2. **Strong geographical presence and expertise:** The company is present in 13 countries across Europe and North America and its employee base includes experts from the professional drone segment. For instance, in the US, the company hired Daniel Roe as EVP, who was with FreeFly systems as worldwide director of sales and an expert in the professional drone field. In North Europe, it hired Stefano Valentini, former CEO with Cybergun Italia Srl, to manage sales operation in Switzerland, Italy, Adriatic and Slovenia. Their expertise should help the company grow at a rapid pace in these regions. Drone Volt is currently eyeing the U.S. market as its next big growth avenue. In January 2019, the company signed a contract with a U.S. government agency for the supply of two PENSAR smart cameras. It announced in March 2020, that its partner in the U.S. was ready to manufacture a number of the company's drones which would help serve the U.S. market. Drone Volt signed an agreement with Aquiline Drones, granting it a license to produce HERCULES 2 and ALTURA ZENITH with PENSAR camera in the U.S. The company delivered a spray version of HERCULES 20 in Africa in February 2020. It additionally received orders from the Middle East (3 HERCULES 10 Spray drones for EUR 100k) in July 2020.
3. **Competitive edge over peers:** Drone Volt has launched several new products with multiple applications, such as Drone Spray, Drone Paint and Drone Surveillance. These drones can be used for multiple purposes such as treatment and cleaning of surfaces, inspection of work, paint and live surveillance. Drone Volt focuses on providing customized products to its clients. It is developing drones which can carry extra payloads and give it a competitive edge over its peers. It has also launched drone software Drone Volt Pilot, the application that offers easy access to autopilot for DJI drones.
4. **Turnkey products:** Drone Volt also provides a range of services, including administrative support to comply with French regulations, training to operate the drone, and help to acquire a license for flying the drone for operational purposes. The customers receive turnkey products for immediate use. This business model saves the time and cost involved in getting proper training, acquiring a license and dealing with regulations.

2.5 Company Risks[vi]

1. **Regulations:** The varied regulations for use of drones in different countries are expected to pose the main challenge to Drone Volt's expansion plans. With the company is looking at expanding its presence worldwide, it needs to follow a different set of rules and regulations for each country. Also, the drones can be categorized differently in each country, typically by weight, size, altitude, speed, etc. With many countries still in the process of legislating regulation into law, the expansion plans in some regions may be affected.
2. **Suppliers' risk:** For its distribution segment, Drone Volt faces the risk of dependency on the supplier's commercial policies as the company's margins could plunge if the supplier increases prices. This risk is partially mitigated by the fact that the company has already tied up with several leading drone suppliers worldwide. Moreover, with the company now focusing on its R&D and attempting to design and develop a majority of the drone parts in-house, this potential threat from suppliers should be mitigated in the future.
3. **Competition:** While the commercial drone market is still nascent, it is rapidly evolving and the competition within the industry is expected to increase with many small and large players entering the market, eyeing the prospective growth opportunities. The industry may also witness price-based competition, which will significantly impact small players in the market. Another challenge could be the launch of cheap alternative drones in the market, created using copied technology.
4. **Innovation in technology:** The commercial drone industry is still in its early age and is expected to grow significantly over the next decade, driven by strong innovation in technology. In order to compete, players within the industry need to come out with new and innovative products regularly, which would distinguish them from the others. Therefore, lack of innovation, leading to the obsolescence of its products, could hinder performance and in time even threaten the existence of the company.

2.6 Shareholding Pattern

On June 22, 2022, the number of shares outstanding was 394,926,175.

Exhibit 9: Shareholding pattern[vii]

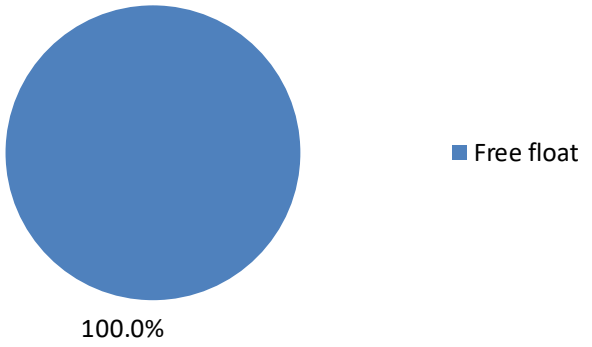


Exhibit 10: Shareholding Pattern[viii]

Shareholders	No. of Shares	% of total
Free Float	394,926,175	100%

2.7 Listing and Contact Details

The ordinary shares of Drone Volt are listed on AlterNext Paris (Ticker: ALDRV, Date of Listing – April 28, 2015). The company's warrants are listed as BNBS.PA Code ISIN : FR0014007951.

Contacts : 14, Rue de la Perdrix, FR-93420, Villepinte, France

E-mail ID: finance@dronevolt.com

Phone: +33 (0)1 80 89 44 44

Fax: NA

3. Key Variable Analysis[ix]

3.1 Variable 1 – Revenue from Drone Volt Factory, Services & Academy

This segment generates higher margins for the company as it focuses on providing customized products based on client requirements. Given that the company is primarily focusing on growth in this high-value-added activity segment, we estimate the number of drones sold in the segment to increase considerably, and thereby, the contribution of this segment to the company's total revenue to be between 66%-69% by the end of 2021.

The following are our estimates for revenues from the Drone Volt factory, service and academy segment for the forecast period under two scenarios - low bracket and high bracket:

Exhibit 11: Drone Volt factory, academy and services segment revenue

In EUR '000	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
Low Bracket	6,935	11,096	16,089	21,720	29,323	36,653	43,251	49,304
High Bracket	7,483	12,720	19,080	26,713	36,062	44,356	50,566	56,634

3.2 Variable 2 – Revenue from distribution

This segment has traditionally seen lower growth. The company purchases drones and their parts from other manufacturers and then assembles and distributes, renting the final product through the company's website. The distribution has been historically contributing more than half of the company's total revenue. However, the company has now shifted its focus to the factory, service and academy segment. Therefore, the distribution segment may witness lower growth and its contribution to the total revenue is expected to come down significantly in future.

The following is the estimated revenue from the distribution segment for the forecast period under two scenarios - low bracket and high bracket:

Exhibit 12: Distribution segment revenue

In EUR '000	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
Low Bracket	5,327	5,593	5,873	5,990	6,110	6,171	6,202	6,233
High Bracket	5,530	5,806	6,096	6,218	6,343	6,444	6,541	6,606

4. News[x]

- **Announced delivery of two HERCULES 20 UAVs to the French Navy:** On May 03, 2022, the company announced that it has delivered two Hercules 20 to the French Navy along with two trained expert pilots. The aim of this delivery is to conduct an experiment on transport of materials through two different tools: a winch and a dropper.
- **Announced a joint venture with Pragma Industries to create long-range hydrogen drones:** On April 28, 2022, the company announced its joint venture with Pragma Industries to create the drones that are capable of flying long distances with Hydrogen fuel cells.
- **Announced Q1 2022 revenues:** On April 20, 2022, the company announced its Q1 revenue and gross profit numbers. Revenue of the company declined slightly by 3.2% to EUR 1.7 mn in Q1 2022 compared to EUR 1.8 mn in Q1 2021. Gross profit was reported at EUR 627k showing a decline of 9.9% in Q1 2022 compared to EUR 696k in Q1 2021.
- **Acquired assets of the Danish company Viking Drone:** On March 02, 2022, the company announced that it has acquired the assets of a Danish company named Viking Drone which manufactures connected drones for developers and integrators. Drone Volt has specified that it will pay the entire transaction in cash.
- **Completed conversion of remaining bonds**: On February 01, 2022, DRV announced that it had completed the conversion of bonds, attached to Atlas' tranches, into shares, following up from it's announcement of suspending the use of the Atlas Special Opportunities' financing line.
- **Reported higher sales in FY 2021**: On January 19, 2022, the company reported sales of EUR 8.7 mn in FY 2021, up 49.5% YoY, owing to strong commercial activities. Revenue from both the segments of the company grew significantly. Gross profit amounted to EUR 2.9 mn, increasing by 70.3% YoY owing to higher revenue.
- **Acquired Skytools**: On January 18, 2022, the company announced that it had acquired Skytools, a Netheralands-based distributor and service provider of drones, to enter new markets and benefit from its revenue base (EUR 1 mn).
- **Launched a new version of Heliplane drone**: On January 05, 2022, the company announced that it had launched a new version of the Heliplane drone, which can fly for 3 hours and over 1800 hectares, making it suitable for long-distance monitoring missions.
- **Raised EUR 8.8 mn through issuance of shares**: On December 10, 2021, the company announced that it had completed the capital increase exercise, raising EUR 8.8 mn through a reserved offering and a private placement. The amount was raised by issuance of shares with redeemable warrants at a price of EUR 0.075 per share.
- **Received significant order from Central Europe**: On December 02, 2021, the company received an order of 275 HERCULES 20 SPRAY drones from a leading player in Central Europe. The order, worth around EUR 5 mn, is required to be delivered over the next three years, with 50 drones expected to be delivered in the first year. Additionally, the company will explore the possibility of signing a licensing agreement with the customer, which has its own drones assembly line.
- **Raised loan of EUR 500k**: On August 24, 2021, the company announced it had raised a third state guaranteed loan of EUR 500k on favourable terms (the first two in FY 2020).
- **Signed LOI to acquire minority stake in SkyCorp**: On August 03, 2021, the company announced that it had signed an LOI to acquire a minority stake in SkyCorp, an Estonia based developer of drones, which possesses the technology that allows conversion of hydro-power into electricity to motor a drone. The company plans to use the technology for production or licensing purposes.
- **Completed transfer of know-how to accelerate the U.S. production process**: On July 27, 2021, the company completed the training of four drone operators from Aquiline Drones which will help accelerate the production process in the U.S. facility.
- **Signed partnership agreement with ROTH2**: On June 17, 2021, Drone Volt announced that it had signed a partnership agreement with ROTH2, a leader in production of high-pressure steel batteries. ROTH2 will offer hydrogen engines and deploy recharging stations for Drone Volt's HERCULES 10 and HERCULES 20 drones. The recharging stations will be marketed under the Drone Volt brand name with Drone Volt receiving licensing revenue in return.
- **Raised funds worth EUR 3.7 mn**: On June 09, 2021, Drone Volt announced that it had raised EUR 3.7 mn through issuance of shares to historical shareholders and new investors at a price of EUR 0.915 per share. The shares were issued for cash and by offsetting receivables' balance.

- **Received order of 600 drones**: On April 21, 2021, Drone Volt announced that it will deliver 600 HERCULES 2 drones, half of which will be assembled in Paris and half in Aquiline Drones' facility. The order will generate EUR 3 mn in royalties, with more than EUR 1.5 mn generated in FY 2021. The volume of the order is 10 times the volume delivered in FY 2020. The deliveries will start in Q2 2021.
- **Announced Q1 2021 numbers:** On April 14, 2021, Drone Volt announced its Q1 2021 revenue and gross profit numbers. Drone Volt reported a revenue of EUR 1.8 mn, higher by 43.1% YoY, with growth seen in both its business segments. The gross profit increased by 91.7% YoY to EUR 696k in Q1 2021, with gross margin increasing to 38.6% from 28.8%.
- **Announced FY 2020 results:** On March 25, 2021, Drone Volt announced its FY 2020 results. The company reported a revenue of EUR 5.8 mn, 17.9% lower on a YoY basis, as a result of the COVID-19 pandemic. The gross profit decreased by 29.9% YoY to EUR 1.7 mn. The net income of the company amounted to EUR 8.2 mn in FY 2020 as compared with EUR 3.5 mn in FY 2019. Cash and cash equivalents increased to EUR 6.9 mn as compared with EUR 0.9 mn in FY 2019.
- **Conducted online training session for a customer:** On February 25, 2021, Drone Volt announced that the company had provided an online training session to a customer in the Middle East as part of its order of 3 HERCULES 10 Spray UAVs.
- **Redeemed high-yield debt early:** On February 25, 2021, Drone Volt announced that it had redeemed debt that it had issued in January 2020, 11 months earlier than the redemption date, for an amount of EUR 832k, saving costs of EUR 50k in the process.
- **Announced historic order from European distributor:** On February 08, 2021, Drone Volt confirmed the signing of a major contract worth more than EUR 5 mn with a European distributor for a minimum delivery of 275 HERCULES 20 Spray UAVs over the next 3 years; 50 UAVs to be delivered in 2021.
- **Raised EUR 3.9 mn by way of rights issue:** On December 02, 2020, Drone Volt announced that the company had raised EUR 3.9 mn (net of expenses) through a rights issue. The company's rights issue garnered significant interest from investors and saw an oversubscription rate of 2.26x.
- **Signed an agreement with HydroQuebec:** On October 29, 2020, Drone Volt announced that it had signed an agreement with Hydro Quebec to industrialize and commercialize the line drone that was developed with Hydro Quebec for sale in mid-2021. Several copies of the UAV were to be obtained by Hydro Quebec.
- **Signed agreement with Aquiline Drones in the U.S.:** On October 18, 2020, Drone Volt announced that it had signed an agreement with Aquiline Drones in the U.S., granting it a license to produce HERCULES 2 and ALTURA ZENITH with PENSAR camera, in return for 10% of the recommended selling price of the drones, in addition to EUR 450k for transfer of know-how.
- **Received order from a French export company:** On October 06, 2020, Drone Volt announced that it had received an order for 5 HERCULES 10 and 4 HERCULES 2 with an invoice value of more than EUR 100k. It was the sixth order from the customer.
- **Announced H1 2020 results:** On September 16, 2020, Drone Volt announced the company's H1 2020 results. In H1 2020, Drone Volt saw a 44.4% decline in revenue as it amounted to EUR 2.0 mn as a result of the impact of the COVID-19 pandemic. The operating loss decreased marginally by 0.9% to EUR 2.0 mn, because of lower operating expenses. Lower financial charges led to a lower operating loss, which amounted to EUR 1.6 mn.
- **Increased stake in Aerialtronics to 100.0% from 50.2%:** On September 09, 2020, Drone Volt announced that it had increased stake in Aerialtronics to 100% from 50.2% on the basis of a valuation of EUR 5 mn. The acquisition was to be made on the basis of seller's credit with a maturity period of 36 months and interest of 3%.
- **Secured EUR 10.2 mn financing line from ASO:** On September 04, 2020, Drone Volt announced that it had secured a financing line from ASO of EUR 10.2 mn through 17 convertible bond tranches of EUR 600k each, which it could issue whenever it needed financing
- **Raised EUR 1.6 mn through convertible bonds:** On August 26, 2020, Drone Volt announced that it had secured EUR 1.6 mn through issuance of 1,613 convertible bonds with a nominal value of EUR 1k each. The company could raise EUR 10 mn by issuance of more convertible bonds in FY 2020.
- **Carried out BVLOS flight of VTOL drone:** On July 29, 2020, Drone Volt announced that its customer, a Belgian player in the security market, carried out the first BVLOS flight using a VTOL drone in Belgium.
- **Received order from the U.S.:** On July 16, 2020, Drone Volt received an order for 2 ALTURA ZENITH drones with PENSAR cameras for a value of approximately EUR 100k which had been received. The customer expressed an interest to order a dozen drones.

- **Recorded new orders from its Hungarian distributor:** On July 07, 2020, Drone Volt announced that it had an order for 1 HERCULES 10, 2 HERCULES 20 and 1 ALTURA ZENITH with PENSAR camera from its Hungarian distributor that it had previously supplied drones to.
- **Supplied HERCULES 10 Spray drone in the Middle East:** On July 01, 2020, Drone Volt announced an order for 3 HERCULES 10 Spray drones for a value of approximately EUR 100k, including training and accessories in the Middle East. The company had received two-thirds of the order amount.
- **Raised EUR 1.1 mn through a private placement**: On June 16, 2020, the company announced that it had raised EUR 1.1 mn through its third private placement of the year. The company issued 14,072,568 shares to its long-term shareholders at a price of EUR 0.079 per share.
- **Developed software to fight the global pandemic:** On May 26, 2020, the company announced that Aerialtronics had developed a software that could be used to detect wearing of masks by citizens through an extension of IP cameras. The software which would be delivered in SaaS could be used for other activities including detection of personal protective equipment in a construction site and tracking of crowd movements.
- **Raised EUR 2.2 mn through a private placement:** On May 21, 2020, the company announced that it had raised EUR 2.2 mn through a private placement of 28,897,890 shares at a price of EUR 0.075 per share. The financing was expected to allow the company to prepay its debt and reduce interest payments.
- **Fulfilled eligibility criteria for PEA-PME share savings plan:** On April 27, 2020, the company announced that it had fulfilled the elgibility criteria for PEA-PMA share savings plan. Shares of Drone Volt could be added to PEA-PME share saving account which could provide tax advantages similar to traditional PEA share saving account.
- **Raised EUR 500k through a state-guaranteed loan:** On April 22, 2020, the company announced that it had raised EUR 500k in a state-guaranteed loan at a rate between 0.75% and 2.5% for up to five years.
- **Announced Q1 2020 sales numbers:** On April 15, 2020, the company announced Q1 2020 sales numbers. The company reported a revenue of EUR 1.3 mn, a decrease of 28.5% YoY as a result of plant shutdowns and restricted freight services in Asia which led to a supply shortage affecting the Drone Volt factory and distribution segment. Postponement of training activities contributed to the decline. The revenue from Drone Volt Factory, Services and Academy amounted to EUR 565k, down 36.9% YoY while distribution segment reported a revenue of EUR 694k, down 19.7% YoY. The gross profit amounted to EUR 363k, decreasing by 44.8% YoY, while gross margins reduced to 28.8% in Q1 2020 from 37.4% in Q1 2019.
- **Converted warrants and reduced size of tranches:** On April 04, 2020, the company announced that it had converted all warrants associated with the tranches it had issued related to an agreement with Atlas Special Opportunities fund. The company additionally reduced the size of future tranches to EUR 200k from EUR 800k. This resulted in an increase in number of tranches that could be issued to 12 from 3 and a decrease in the number of warrants attached to each tranche to 40,000 from 160,000.
- **Secured EUR 411k through private placement:** On March 31, 2020, the company announced that it had secured EUR 411k through a private placement of 5.9 mn shares at a price of EUR 0.07 per share to its long term shareholders.
- **Signed an MoU with Hydro Québec:** On March 10, 2020, the company announced that it had signed an MoU with Hyrdo Québec for industrial development and marketing of a drone developed for inspecting high-voltage transmission lines. The drone was expected to use a sensor developed by Hydro Québec's research center which was expected to allow it to make precise measurements on live lines without affecting the service.
- **Provided update on COVID-19 impact:** On March 05, 2020, the company updated that it had not seen any order cancellations as a result of the global healthcare scenario. Additionally, the company faced a supply shortage while witnessing a rescheduling of training activities. The company adopted a partial unemployment plan provided by the government and used government measures to gain an extension in payment deadlines.
- **Order received from Hungary:** On February 20, 2020, Drone Volt announced that it had received an order for three HERCULES 20 and one HERCULES 2 drone from a distributor in Hungary who previously ordered four drones in 2019.
- **Order received by Drone Volt Aerialtronics:** On February 06, 2020, the company announced that its Dutch subsidiary Drone Volt Aerialtronics received an order of around EUR 100k. Drone Volt will be providing Altura Zenith drone equipped with PENSAR intelligent camera to a new customer from the energy sector and this order could be followed by an additional order in the coming weeks.
- **Order received by Drone Volt Benelux:** On December 17, 2019, the company announced that its Belgian subsidiary Drone Volt Benelux received an order of around EUR 100k. This is the first order and could be followed by second one in FY 2020.

5. Management and Governance[xi]

The company has a team of experienced professionals with expertise in the fields of technology, operations, sales and marketing and finance. These highly qualified professionals have been with the company for a long time, signifying the stability of its management. The management's focus is on improving profitability and creating shareholder value.

Exhibit 13: Management Team

Name	Designation	Background
Marc Courcelle	Chief Executive Officer	• Marc Courcelle was appointed as the Chief Executive Officer of the company in October 2020. • He previously served as the Director of Production of the group.
Stefano Valentini	Chairman	• Stefano Valentini was Director of the Group's International Strategic Alliances. • He led the development of the company in the U.S. • He additionally managed Aerialtronics, Drone Volt's subsidiary, between 2017 and 2019.
Sylvain Navarro	Group CFO	• Sylvain Navarro was appointed as the worldwide CFO of Drone Volt in May 2018. • He formerly served in companies such as Invest securities (as Head of Cash Equity and Equity Capital Market).
Martin Laporte	CEO, Drone Volt, Canada	• Martin Laporte has earlier served as General Manager of KoptR image.
Kim Larsen	Managing Director, Drone Volt Scandinavia	• Kim Larsen oversees managing Drone Volt's Scandinavian operations.
Benoit De Bruyn	Managing Director, Drone Volt Belgium	• Benoit De Bruyn oversees managing Drone Volt's Belgium branch. • He has formerly served as senior manager in Delaware Consulting.

6. Industry Characteristics

6.1 Industry Overview[xii]

UAVs, popularly known as 'drones', are unmanned aircraft or 'flying robots'. The UAVs evolved during World War I when these were used for military operations. These have improved significantly over time, with use of advanced technology such as miniaturization. The UAV market has grown rapidly in the last decade and has created a lot of eagerness in various parties and companies engaged in UAV technology development. Currently, the UAV market is driven by new technologies such as next-generation unmanned combat systems, and the development of new markets such as civil and consumer drones.

As per GlobeNewswire, the global drones market can reach USD 129.3 bn by 2028 at a CAGR of 20.18% from 2018 to 2028.[xiii]

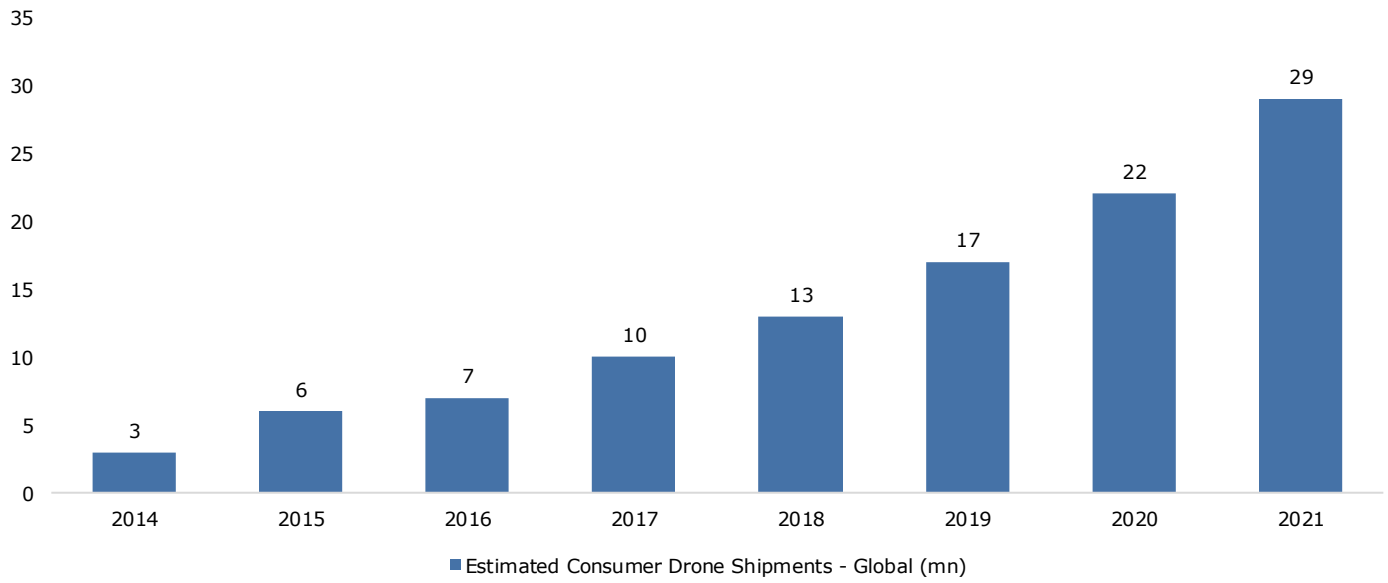
The Teal Group estimated that UAV production would increase to USD 14 bn in 2026 from USD 5.6 bn in 2020, with global trade movements and advancements in technologies expected to drive the growth.[xiv]

As per Drone Industry Insights, the market will grow at a CAGR of 9.4% to USD 41.3 bn by 2026. Even with the impact of the COVID-19 pandemic, investments in the industry increased substantially to USD 2.3 bn in 2020 (from USD 1.3 bn in 2019).[xv]

Increasing prevalence in different industries, time-saving benefits, a favorable regulatory framework and technological improvements, as per Data Bridge Market Research's report, will see the drone services market grow to USD 103.1 bn by 2027 at a CAGR of 48.3% from 2020. Factors such as lack of skilled operators, limited bandwidth and security concerns could, however, impede the growth.[xvi]

BI Intelligence estimated that global consumer drone shipments reached 29 mn by 2021.

Exhibit 14: Estimated Consumer Drone Shipments - Global (mn)[xvii]



6.2 Outlook

The commercial UAV industry has immense growth potential. However, it is difficult to make a proper market size estimate considering the potential uses of drones in various sectors, such as agriculture, construction, surveillance, aerial photography and media and entertainment. We have compiled market forecasts from different sources. Although the market size estimates vary significantly, all are positive about the industry and expect exponential growth.

Exhibit 15: Outlook on the Commercial UAV industry size			
Sources	**Market Size**	**Estimated Period**	**Published**
Teal Group	USD 95.5 bn[xviii]	2029	December 2020
Grand View Research	USD 501.4 bn[xix]	2028	April 2021
ABI Research	US 101 bn[xx]	2030	July 2019
Drone Industry Insights	USD 41.3 bn[xxi]	2026	April 2021
MarketsandMarkets	USD 58.4 bn[xxii]	2026	June 2021
RnRMarketResearch.com	USD 40.9 bn[xxiii]	2027	September 2021

Note: We have clubbed 23% and 5% market for consumer and civil reported by Teal Group for the projection.

6.3 UAV Components

UAS can range from small drones that fly on a single charge for 10 minutes and cost under USD 200 to commercial-level aircraft that can fly much longer and cost as much as USD 10,000 or more.[xxiv] Military grade UAVs can cost several mn dollars. Some drones are operated by controllers, while others can be operated by operator's smartphone or tablet. A drone's basic elements are frame, propellers, small motor and battery, electronic sensors, global positioning system (GPS) and a camera.

Presently, there are several types of UAVs, depending on the project they are used for, ranging from toy UAV, almost-ready-to-fly (ARF) UAV to ready-to-fly (RTF) UAVs. The essential kit for UAV includes RC transmitter, multi-rotor frame, motors/speed controllers, flight controller and battery charger. Apart from these, optional accessories, such as battery alarm, flight controller add-ons, camera gimbal, telemetry and wireless video, could be added in the drone as per the purpose of a project.

Multi-Rotor Frame –The frame is the basic requirement of the UAV. The configuration depends on the purpose it is to be used for and the loads to be carried. The most popular designs are quadcopter (4 motors), hexacopter (6 motors) and octacopter (8 motors).

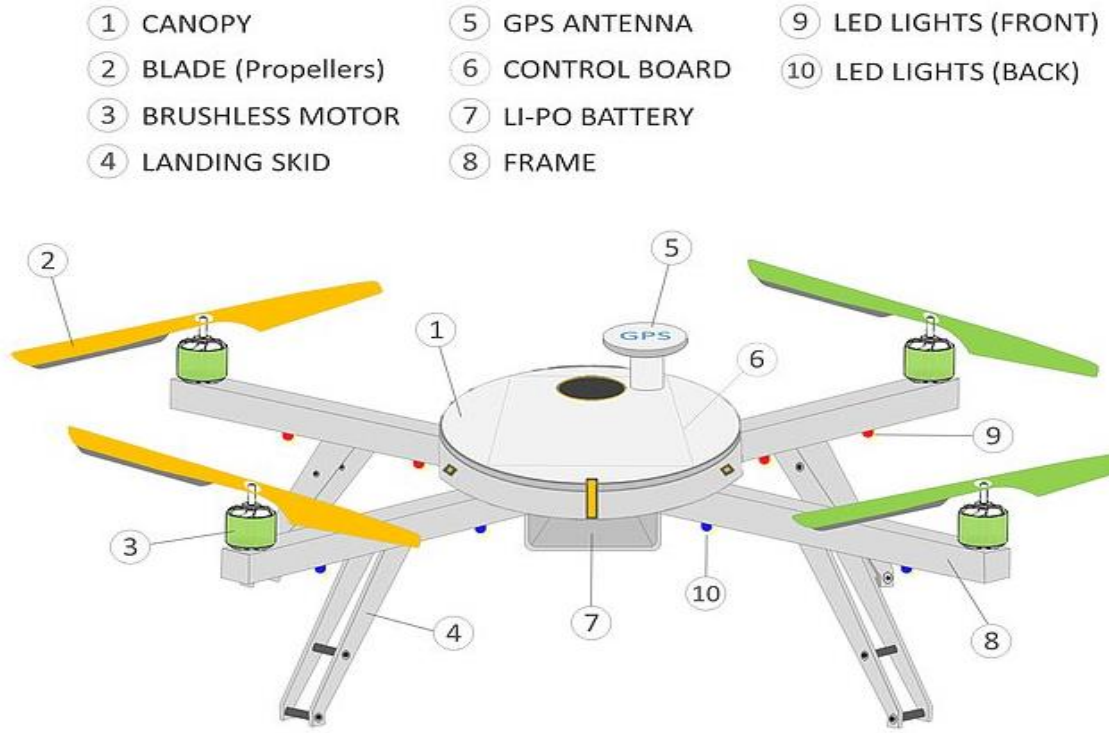
Motors/Speed Controllers and Propellers – The motor is an essential requirement as it impacts the flight time and how much load a drone can carry. It also provides the lift for the UAV. A motor ideally should have less weight with high efficiency. A propeller is an airfoil and consists 2-3 blades; it provides the thrust to the drone and acts as a rotating wing creating a lift force.

Flight Controller – It acts as the brain of the UAV, connecting all the pieces together. It is used to stabilize the multi-rotor and synchronize it. The more advanced flight controllers can take off, fly and land the UAV autonomously with a preprogrammed waypoint.

Battery and Charger – Battery provides the power to the UAV to fly and would control both motor and flight controller. It is also the heaviest item on a UAV. While choosing the ideal battery, the capacity and voltage factor needs to be considered. The Lithium polymer battery is the most ideal and most used battery as this has a high power-to-weight ratio and is readily available.

RC Transmitter – It is possible to fly and control the UAV autonomously without a transmitter, but it is a good idea to have manual backup for the drone in case something goes wrong. A hand-held transmitter is adequate for most cases.

Exhibit 16: Basic Components of a UAV



6.4 Pricing[xxv]

Depending on the requirement, the cost of a drone can vary considerably. The drones can be divided into different classes depending on the level of expertise and range they can fly.

Exhibit 17: Basic Components of a UAV

Segment	Entry-Level users	Professional users	Commercial users
Specifications	Kit with drone, four rotors, batteries, charger, GPS and spare propellers	Kit with drone, four rotors, batteries, charger, GPS, spare propellers, advanced cameras and separate controller	Kit with drone, six rotors, larger propeller blades, batteries, charger, GPS, advanced cameras and separate controller
Duration of flight	10 minutes	25 minutes	1 hour
Range	150-200 feet	Half a mile	> a mile
Control	Smartphone or tablet	Smartphone or tablet	Smartphone or tablet
Cost	USD 500	USD 750-2,000	USD 10,000

6.5 History

Early History - The concept of UAVs is old. In August 1849, Austria used unmanned balloons loaded with explosives to attack Venice.

World Wars - Going back to World War 1 (WWI), necessity, the 'mother of invention,' led to use of flying bombs with the development of first unmanned aircraft. The U.S. army and navy both used aerial torpedoes and flying bombs in WWI but faced difficulties in launching and recovering their UAVs. During World War II (WWII), drones were used as gunnery practice targets by the U.S.forces and for aerial attack missions. Meanwhile, Germany produced its own drones, which used jet propulsion-built aircraft.

1950s – A U.S.company, Northrop, developed 'Falconer' and 'Shelduck' UAVs for battlefield reconnaissance. These had an auto pilot system with radio-control backup and video cameras; these also carried flares for night reconnaissance. These were built in great numbers and were used by several military forces internationally. In the 1950s, UAVs were also used as decoys and were released to confuse the radar systems of the enemies.

1960s - This era saw the faster and longer-range aircraft, 'Ryan Firebee,' being developed to air bomb targets. UAVs were developed to fly at high altitudes, controlled by radio lines, and to fly at lower altitudes controlled by standoff manned aircraft. These drones carried cameras for reconnaissance over enemy targets.

1970s – During the Vietnam War, drones were used extensively by the US. The drones were used as 'Lightning Bugs.' These were used for intelligence gathering and for taking images from both low and high altitudes. These drones were modified with bigger engines and could carry heavier payloads. In the 1970s, Israel modified the drones it purchased from the U.S.and developed the first UAV with real-time surveillance. It used these in its war against Syria as reconnaissance drones, electronic jammers and as decoys; and had minimal losses.

1980s – In 1982, during the Lebanon War, Israel used its self-made UAVs for images and radar decoying to neutralize Syria's air defenses. By the late 1980s, Israel tested a variety of drones on Lebanon. With rapid advancement in technology, Israel not only outpaced the U.S.in the development of drones, by producing a number of surveillance drones in 1980s, it also sold them to the US.

1990s – U.S.marine, army and navy units, along with coalition forces, used 'the Pioneer' UAV substantially for imagery support during its operations against Iraq. The UAVs were used for bombing target enemy areas. Following bombing raids, it was used to inspect the target area and transmit live coverage of the damage.

2000s - In early 2000, after 9/11, U.S.military used drones for attacks in Afghanistan, Pakistan, Yemen and Somalia. These were also used for the operation to hunt Osama Bin Laden. In 2006, America used drones within the U.S.civilian airspace for search and rescue operations following Hurricane Katrina.

2010s - In 2013, Israel used drones in Gaza during its military operations. In 2013, Amazon, the largest online retailer, announced it is developing drone technology for delivery services.

6.6 Industry Segments

Military Drone Market

Utility in armed conflicts led to the invention of UAVs during World War I and World War II. Drones are normally used in circumstances considered too risky for manned flights. Drones can provide real-time imagery, intelligence and surveillance information by scanning an area and transmitting the information back to the commanders, in order to destroy enemy targets. Military drones are generally used for air strikes and surveillance. As per the Teal Group's projection, research expenditure on Military UAS will amount to USD 64.5 bn in the next decade, while Military UAS procurement expenditure is expected to increase to USD 13 bn in 2030 from USD 11 bn in 2021 (amounting to USD 123.1 bn in the next decade). About 80% of the expenditure on R&D of military UAS and 40% of the expenditure on military UAS procurement will come from the US. Therefore, the US will be the biggest UAV market over the next decade.[xxvi]

IHS Jane's Intelligence, a specialist in defense publications, has reported that global defense and security market for UAVs is expected to grow at 5.5% per annum from the current level of USD 6.4 bn and increase to USD 10 bn by 2024.[xxvii] According to the report, Israel was the biggest exporter of UAVs last year, but the U.S.is expected to overtake its position in the coming years.

Commercial/ Civil Drone Market[xxviii]

According to the Teal Group, Non-military (commercial and civil) UAS production will increase to USD 18.9 bn annually by 2030 at a CAGR of 14.1% from 2021. The growth will be driven by the commercial drones market with the civil drones market expected to experience a slowdown and government drones market making up a small percentage of the overall market.

Tractica, a market intelligence firm, estimates worldwide shipments of commercial drones to reach 2.7 mn units by 2025 from 80,000 units in 2015. Also, annual revenue from commercial drone hardware is estimated to reach around USD 4 bn from the current level of USD 283 mn during that period, whereas, annual revenue from commercial drone-enabled-services would generate USD 8.7 bn compared with USD 170 mn currently.[xxix] The commercial drone sector will be driven by aerial imaging and data analysis applications. Film, media, agriculture and oil & gas will drive the growth in adoption of commercial drones. Whereas, filming and entertainment, mapping, aerial assessment, disaster relief and prospecting will lead to the strong growth in drone-enabled services market.

There is immense scope for drones in the future. The usage of drones is still in early or mid-stages in many sectors and could play a critical role in reviving the growth in various sectors because of its cost-effectiveness and ability to perform tasks which would have been impossible earlier. The table below shows 22 sectors expected to benefit from the use of drone technology; most are in either early or middle stages of adoption and usage growth, and just a handful of sectors have seen the benefits of higher levels of usage of drone technology over a long time. The agriculture sector is expected to account for approximately 80% of commercial drone usage. By using high resolution imaging and aerial mapping, identification of crop conditions, checking for diseases, spraying pesticides and fertilizers, prevention of any disease outburst is possible at a much lower cost.

In the US, the delivery segment is expected to be the largest segment whereas the agriculture segment is likely to account for the largest share in the overseas market by 2030 owing to investment by Chinese firms and because small firms are likely to lower costs and increase capabilities.

Commercial drones are also increasingly used for ensuring public safety. For example, drones with high definition and infrared cameras can assist police and fire departments in intelligence gathering, rescue missions, road patrolling, aerial surveillance, etc.

With drones becoming increasingly popular, the market has attracted the attention of venture capitalists in recent years. US-based startups led the funding rounds, with 65% of the total funds raised flowing to the US. Chinese firms received 16% of the funds in the same time duration (last 10 years).

Exhibit 18: Development Stage of Commercial drones used in different sectors[xxx]

	Early Stage	Middle Stage	Late Stage
Application			
Aerial photography			L
Border patrol			L
Construction and real estate images and monitoring		M	
Emergency management		M	
Infrastructure monitoring		M	
Mail and small package delivery	E		
Filmmaking and other media uses		M	
Oil and gas exploration		M	
Precision agriculture			L
Public safety			L
Weather forecasting and meteorological research		M	
Wildlife and environmental monitoring		M	
Technology			
Advanced manufacturing techniques		M	
Batteries and other power	E		
Communication systems			L
Detect, sense, avoid capabilities		M	
GPS			L
Lightweight structures		M	
Microprocessors			L
Motors			L
Engines		M	
Sensors			L

6.7 Uses of drones across sectors

1. Agriculture

Agriculture is expected to benefit significantly from the use of drone applications. Monitoring fields from the sky would drive the new farming revolution. The US-based Association for Unmanned Vehicle Systems International predicts that agricultural uses will eventually account for 80% of the commercial market for drones. With the help of drones, it is possible to capture images of fields at a much cheaper cost compared to when using helicopters or satellite imagery. Drone technology with cameras could enable farmers to monitor their crops, check for diseases or spray pesticides and fertilizers and prevent any disease outburst.

It is difficult for the farmers to collect data of farmland spread across large areas. With the help of drones, valuable information can be collected with high accuracy in a short span of time, which in turn can be used to avoid damage caused by various means.

Drones can provide infrared pictures, which help farmers identify exact locations of weed emergence or insect infestations and enable them to quickly focus on the targeted areas. Drones have potential applications in precision agriculture, which involves the use of detailed data on soils, crops, nutrients, pests, moisture and yield to increase farm productivity.

2. Real Estate

Aerial videography and photography are the new perquisite provided by high-end real estate marketers. Drones effortlessly cover areas, which would be difficult to access otherwise and provide perfect images and videos. For real estate clients, it could provide a virtual tour with interactive and realistic presentations. UAVs can be used as maintenance tools to inspect large commercial places such as malls, undeveloped lands and office parks. These can also be useful for inspecting places after incidences of storm or vandalism, for example.

3. Media and Entertainment

The use of UAVs in the media sector has grown substantially and it is said that 'the age of drone journalism' has started. Drones are used by the media industry in numbers. These have become significant instruments for news gathering by leading media players. News agencies can use drones for capturing images and videos of events from different height and angles. Drones can act as a powerful tool in the hands of journalists with proper training, who know the capabilities of the vehicles. Due to their small size, flexibility and ability to perform in the harshest weather, these could be used to take aerial surveys of places and events such as volcanos, demonstrations or warzones, which were not possible to get up close to by manned aircrafts before. Also, as they would not require the direct presence of reporters, news stories which were earlier missed due to risk of personal injuries to reporters on the ground, could be covered.

Also, using drones is changing the way films are made as these are better than traditional methods for capturing perfect aerial shots. These are also cheaper, safer and faster solutions. As drones cost a fraction of helicopter or crane shoots, these open new avenues for filmmakers looking to capture aerial shots impossible in the past. Drones will continue to change the way movies are filmed. Their use in the film industry will increase with continual improvement in the quality of drones and decrease in the cost of drones.

4. Surveillance

The trend of using UAVs for commercial aerial surveillance is rapidly increasing, with the development of automated and low-cost drones and technology for object detection. Drones with high definition and infrared cameras can access areas not accessible otherwise, due to the small sizes of drones. UAVs are used for gathering intelligence against enemy targets by government agencies and competitors in business. Drones can help in search and rescue missions, scientific research, wildfire mapping, road patrols, anti-piracy and aerial surveillance of large areas at a low cost. However, the widespread use of drones for domestic surveillance raises serious privacy concerns. These present a threat to privacy as drones are capable of monitoring personal conversations, peeking into many places.

Beside the mentioned sectors, drones can also be used for a wide range of activities, including archaeological surveys, firefighting, healthcare (including medical supplies/delivery), delivery in commercial use, wildlife conservation, monitoring marine life, etc.

5. Inventory Management and Delivery: With the booming e-commerce sector, the proper identification of the stock plays a key role in managing the accuracy of approaching deliveries. Drones help in tracking and locating the inventory while also reducing the turnaround time. The embedded sensors in these small machines can measure and transmit data on a real-time basis and help supervise warehouses more efficiently. Drones can also be used for intralogistics, where they can be used to tranfer parts from warehouses to different workshops. However, the main issue for intralogistics is the trade-off between power supply and payload. The most challenging issue with drones in inventory manangement is that they are yet to reach full automation with indoor navigation. There are recent advancements in line that promise high accuracy in indoor navigation in the near future.

6. Healthcare: Drones have the potential to revolutionize the healthcare industry as they are being utillized for transporting lab samples, tests, medicines and even small equipment during medical emergencies. They are designed to fly to vast distances with speed and can carry adequate payload to disconnected communities or islands or to any affected areas. There are a few more applications of drones within the healthcare industry that can come up and eradicate the geographical boundaries completely. Recently, the Vital Intelligence project in Australia used drones to oversee and monitor people for the signs of COVID-19. The drones can also be used to spread the warning that people should stay home during lockdowns as happened in Spain and China.

6.8 UAV Market in France

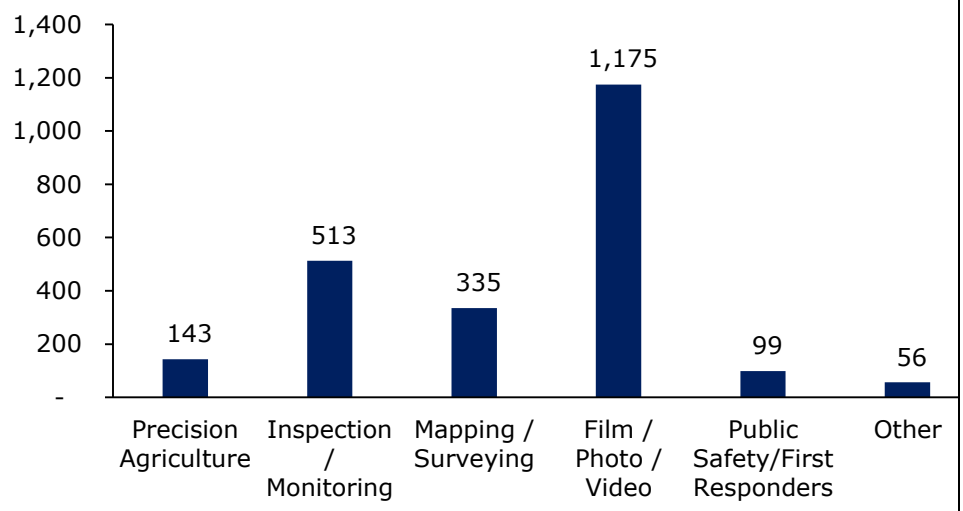
Globally, France has been the pioneer in the commercial drone market. It was one of the first countries to regulate the use of commercial drones. In 2012, the Ministry of Transport's Civil Aviation Authority, DGAC made a law relating to design and use of drones in French airspace. Also, the manner in which drones can be used depends on their types and design. However, the legislation does not apply to military or state-operated drones.[xxxi]

As of 2019, France was the third-biggest drone market in the world and home to companies such as Delair, Parrot and Delta Drone. In 2018, French companies entered into the highest number of stragetic partnerships in the industry. With the increasing investments, encouragement from government to promote adoption and growing end-user industries, the drone market in France can be expected to flourish in the future as well.[xxxii]

6.9 UAV Market in the US

In the US, drones have been primarily used in war zones to deliver weapons and for U.S.military reconnaissance. But, now some new technologies and pending federal regulations are enabling the manufacture and use of UAVs for domestic commercial purposes, giving rise to a growing commercial UAV industry. The commercial drone market in the U.S.is still less advanced due to the Federal Aviation Administration (FAA) regulations, which have closed American airspace for UAV trial flights. The FAA, in May 2014, has granted exemption permitting specific use of commercial drones for agriculture, real estate, film and broadcasting, oil and gas and construction activities. The FAA is trying to establish an unmanned traffic management (UTM) system by supporting different initiatives towards that.[xxxiii] The Teal Group's study revealed that 80% of worldwide military spending on drone technology (Research Development Test and Evaluation) over the next decade is expected to be contributed by the US, and 40% of military procurement spending.[xxxiv]

Exhibit 19: FAA Exemptions Operation / Mission[xxxv]



There is significant investment potential in this sector in the US. According to the study conducted by the Federal Aviation Administration (AUVSI), by 2025 about 100,000 jobs could be created in the American economy through the use of drones and would generate about USD 80 bn between 2015 and 2025.

6.10 Regulatory Framework

Despite the significant interest in drones expressed by various sectors, the UAV industry faces major obstacles, which could cut short this sector's growth story. Regulatory policies, safety and privacy concerns, and public awareness regarding drones are key concerns. Currently, there is no uniform global approach to the legal use of drones by either hobbyists or businesses. Many countries differentiate drones by weight category, wherein drones weighing more than 55 pounds are considered in a heavier category. Drones weighing less than 4.4 pounds are dealt with differently than the heavier ones as these have lower safety risks. There are other risks related to regulations such as sharing of frequencies and radio link; quality of drones (especially the heavier drones); and safety from mid-air collision.

1. Regulations in the US

The U.S.has clearly lagged in creating a framework to support the UAV industry and therefore, U.S.drone companies are at a serious disadvantage as they are unable to test commercial drone applications in the US. The FAA has set its regulations for use of drones and prohibits their usage for commercial purposes with some exemptions for some specific activities, such as for companies conducting agriculture, real estate, film and construction activities. AUVSI has estimated that each year of delay in regulatory constraints has a USD 10 bn economic impact for the US.[xxxvi]

Under the FAA regulations, drones weighing less than 55 pounds are allowed to fly for commercial operations during day time within limited locations, and within the line of sight of the operator. The final set of rules were not expected to be issued until late 2016-17.[xxxviii]

Exhibit 20: Types of UAVs in Commercial Operation[xxxvii]

UAV Platforms Approved Through FAA Exemptions

Industry	Average Weight (in pounds)	Average Endurance (in minutes)
Agriculture	9.14	37.59
Real estate	5.37	23.10
Film and TV	12.39	19.05
Oil and gas	9.83	97.40
Construction	7.22	26.85

FAA has been moving in the right direction. Since May 2014, it has permitted a range of commercial enterprises to use drones. The FAA granted 500 exemptions in its first year in over 20 different industries.[xxxix] As of September 2015, FAA had issued 1,407 exemptions to U.S.companies under Section 333 to operate drones for commercial purposes. [xl]

2. Regulations in Europe

The European Aviation Safety Agency (EASA) has been assigned by the European Commission to set up a common regulation for drones across Europe. The set of standards should cover security, safety, privacy, data protection, insurance and liability. Europe aims to become a global leader in emerging drone technology industry, with the right set of regulations to safeguard the countries' interest. Currently, within the European Union, different states have regulated, or are planning to regulate, different characteristics of civil drones less than 150 kg in weight.

The EASA has recently released a roadmap for UAV airspace integration to operate and fly in the EU, specifying three categories based on operational parameters:

Open Category: Under this category, it's not necessary to get permission, approval or a license from the Aviation Authority for drones weighing 25 kg or less. However, UAVs need to meet the defined limitations, such as flying within the line of sight of the operator and within a defined altitude and distance; flying over a crowd is not permitted.

Specific Category: This category covers characteristics that have not been covered under 'open' category. Under this category, the drone operator has to undergo a safety risk assessment and identify a mitigation structure that needs to be reviewed and approved by the National Aviation Authority.

Certified Category: This category includes large unmanned aircraft and their operations. These would be treated as manned aircraft in terms of rules. The operators engaged in this category would require licenses.

3. Regulations in France

France was one of the first countries to implement legislation on civil drones. The DGAC has classified UAVs under seven categories segmented by weight, the model design and the accessories that these must contain. Along with this, DGAC has identified four scenarios in which UAVs can be used.

Exhibit 21: Possible Scenarios for using UAVs in France[xli]

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Line of Sight	In Direct View	Beyond the remote pilot's sight	In Direct View	Beyond the remote pilot's sight
Area	Clear of populated area	Clear of populated area	Within populated area or close to a gathering of persons/animals	Clear of populated area
Distance (Horizontal)	100m	1Km	100m	Specific activities and flight that do not meet scenario S2 criteria
Height	150m	50m	150m	150m

6.11 Major Drone Manufacturers

Dajiang Innovation Technology (DJI) – DJI, a Chinese company headquartered in Shenzhen, Guangdong, manufactures commercial UAVs for aerial photography and videography. The company offers powerful drones, including its popular Phantom series, which are easy to fly and can shoot high-definition footage. The company is a leader in commercial and civilian drone industry, accounting for over 70% of the market. DJI reported revenue of around USD

2.83 bn in FY 2017[xlii], more than 5 times its revenue in 2014. The company received its last round of funding of USD 75 mn from Accel Partners, the venture capital firm, in May 2015 and has managed to become the first-bn dollar commercial drone company. Currently, the company is focusing on manufacturing agricultural drones and is planning to lower its prices to penetrate this segment.

AeroVironment (NASDAQ:AVAV) – AeroVironment, a California-based technology company, designs, develops, and produces drones for video surveillance as well as for tactical purposes. It is a leader in the military drone space and offers a portfolio of unmanned aircraft systems to the U.S. Department of Defense and international allied governments. The company reported revenue of USD 271 mn in FY 2018 and is expected to cross USD 300 mn in FY 2019. AeroVironment has now ventured into the commercial drone space with its simple yet powerful drone, Quantix.

Parrot – Parrot, a French wireless products manufacturer, specializes in technologies involving voice recognition and signal processing for embedded products and drone manufacturing. The company has captured the consumer drone market in a short period of time with its most popular product, AR.Drone and AR.Drone 2.0, a mid- range hobby drone with integrated FPV system controlled by a smartphone app. The company's Bebop series is one of the most popular camera drones in the market due to its affordability and is giving stiff competition to DJI's products. The company reported total revenues of EUR 152 mn in FY 2017, of which drones constituted almost 79% of the total.

3D Robotics – 3D Robotics, an American company founded in 2009, manufactures consumer drones and offers a range of drones for everyday exploration and business applications. Its popular drone 'Solo' released in May 2015 is argued to be the smartest drone ever. It captures breath-taking aerial imagery and data analysis, enabling mapping, surveying, 3D modelling and more. The company raised USD 53 mn in its latest round of capital infusion in April 2017[xliii] to support product development. Though the company was an early entrant into the consumer drone space, it has recently exited the market and started building software for commercial drone use.

Competition in UAV industry

Exhibit 22: Peer Comparison

	Country	Segments
DJI	China	Consumer drone maker; the leader in this category; makes drones for hobbyists and professionals; 'Phantom' series is said to be the most popular drone worldwide; widely used by videographers globally
Parrot	France	Second-largest civil & consumer drone manufacturing company
3D Robotics	US	Consumer drone manufacturer; offers drones for exploration and business applications
Dassault Aviation	France	Designs, manufactures and sells combat aircraft for the military sector; also sells products ranging from business jets to military drones
Delta Drone	France	Designs and manufactures civilian and commercial drones and provides a range of payloads. It also offers consulting, technical assistance and maintenance services
Fly-n-Sense	France	Designs and sells end-to-end commercial UAVs for security, agriculture, environment and industrial activities
RedBird	France	The company analyzes and processes the data acquired by drones and offers data processing solutions to optimize resources, improve performance and secure operations with drone-based information
SurveyCopter	France	Designs and manufactures remote-controlled drones and robots; considered to be a pioneer in mini UAVs; offers products for civilian and military uses
AeroVironment Inc	US	The company makes small UAVs for the U.S.army for real-time reconnaissance, intelligence gathering and surveillance

7. Valuation

The Fair Market Value of all the company shares stood between EUR 57.3 mn and EUR 83.2 mn on June 22, 2022. The Fair Market Value for one of the company's publicly traded shares stood between EUR 0.15 and EUR 0.21 on June 22, 2022. The valuation approach followed was the DCF method.

7.1 DCF Method

Valuation	
WACC	
Risk-free rate	0.20%[xliv]
Beta	1.05[xlv]
Market Return	9.3%[xlvi]
Additional Premium	0.00%
Cost of Equity	9.73%
Cost of Debt (after tax)	1.25%
Terminal Growth Rate	2.00%
WACC (Discount Rate)	7.61%

Year Ending - Dec	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
FCFF (High)								
Net cash from operating activities	644	134	1,981	4,638	7,446	8,895	10,700	12,622
Capital Expenditure	(3,123)	(1,945)	(2,769)	(3,293)	(3,944)	(4,724)	(5,140)	(4,427)
Free Cash Flow to Firm	(2,478)	(1,811)	(789)	1,345	3,503	4,170	5,561	8,196
Discount factor	0.83	0.77	0.72	0.67	0.62	0.58	0.53	0.50
Present Value of FCF	(2,059)	(1,398)	(566)	897	2,170	2,401	2,975	4,074
FCFF (Low)								
Net cash from operating activities	399	(248)	1,345	3,233	5,274	6,382	7,961	9,799
Capital Expenditure	(2,943)	(1,752)	(2,416)	(2,771)	(3,295)	(3,983)	(4,451)	(3,888)
Free Cash Flow to Firm	(2,544)	(2,001)	(1,071)	462	1,979	2,399	3,511	5,911
Discount factor	0.83	0.77	0.72	0.67	0.62	0.58	0.53	0.50
Present Value of FCF	(2,113)	(1,545)	(768)	308	1,226	1,381	1,878	2,939

Arrowhead Fair Value Bracket	High	Low
Terminal Value (TV)	1,48,940	1,07,426
Present Value of TV	74,042	53,404
Present Value of FCFF	8,493	3,306
Present Value of TV+FCFF	82,535	56,710
Present Value of Equity	83,153	57,328
Shares O/s (000's)	394,926	394,926
Fair Share Value Bracket (EUR)	**0.21**	**0.15**
Current Market Price (EUR)	0.03	0.03
Upside/(Downside)	602%	384%
Current Market Cap. (EUR '000)	11,848	11,848
Target Market Cap. Bracket (EUR '000)	83,153	57,328

Sensitivity Analysis

Sensitivity Table - High		WACC (%)				
		6%	7%	8%	9%	10%
Growth Rate (%)	1.5%	0.33	0.25	0.19	0.16	0.13
	1.8%	0.35	0.26	0.20	0.16	0.13
	2.0%	0.38	0.27	0.21	0.17	0.14
	2.3%	0.40	0.29	0.22	0.17	0.14
	2.5%	0.43	0.31	0.23	0.18	0.14

Sensitivity Table - Low		WACC (%)				
		6%	7%	8%	9%	10%
Growth Rate (%)	1.5%	0.23	0.17	0.13	0.11	0.09
	1.8%	0.25	0.18	0.14	0.11	0.09
	2.0%	0.26	0.19	0.15	0.11	0.09
	2.3%	0.28	0.20	0.15	0.12	0.09
	2.5%	0.31	0.21	0.16	0.12	0.10

Peer comparison on valuation multiples

Using an industry average P/S for 2021 of 3.0x and our estimate of 2022 revenue, we have arrived at a fair value of EUR 0.12 which is 312% higher than the current share price of EUR 0.03.

Exhibit 23: Valuation Multiples[xlvii]

	Market Cap (EUR mn)	EV/EBITDA		Price to Book Value		Price to Sales	
		2021	2022	2021	2022	2021	2022
Aerovironment Inc	1,953	38.6	22.4	3.6	NM	4.6	4.0
Parrot SA	129	NM	NM	NM	NM	NM	NM
Ambarella Inc	2,475	39.9	26.8	4.3	3.7	7.5	6.1
Safran SA	39,981	11.5	9.2	2.9	2.7	2.2	1.9
Northrop Grumman Corporation*	68,605	16.3	15.5	5.2	4.7	2.0	1.9
Total/ Average		**27.5**	**19.0**	**4.0**	**3.7**	**3.4**	**3.0**

Note:* Not considered while taking average.

Relative P/S	Low	High
Peer P/S Multiple FY 2022	3.0	3.0
Arrowhead Premium	23%	23%
Price to Sales Multiple (P/S)	3.63	3.63
Revenue per share Estimate (EUR)	0.03	0.04
Target Price per share	0.12	0.13
Current Share price (EUR)	0.03	0.03

Approach for DCF Valuation

Time Horizon: The Arrowhead fair valuation for Drone Volt is based on the DCF method. The time period chosen for the valuation is 91 months (2022E-2029E).

Terminal Value: Terminal value is estimated using a terminal growth rate of 2.0%.

Prudential Nature of Valuation: It should be noted that this Arrowhead Fair Value Bracket estimate is a relatively prudential estimate, as it discounts the eventuality of any new products being launched in the market or any significant change in the strategy.

Key Variables: The upper and lower bounds in the estimation correspond to the extreme positions taken by the following key variables:

Variable 1 – Drone Volt factory, academy and services segment revenue

Exhibit 24: Drone Volt factory, academy and services segment revenue								
In EUR '000	**2022E**	**2023E**	**2024E**	**2025E**	**2026E**	**2027E**	**2028E**	**2029E**
Low Bracket	6,935	11,096	16,089	21,720	29,323	36,653	43,251	49,306
High Bracket	7,483	12,720	19,080	26,713	36,062	44,356	50,566	56,634

Variable 2 – Distribution segment revenue

Exhibit 25: Distribution segment revenue								
In EUR '000	**2022E**	**2023E**	**2024E**	**2025E**	**2026E**	**2027E**	**2028E**	**2029E**
Low Bracket	5,327	5,593	5,873	5,990	6,110	6,171	6,202	6,233
High Bracket	5,530	5,806	6,096	6,218	6,343	6,444	6,541	6,606

Important information on Arrowhead methodology

The principles of the valuation methodology employed by Arrowhead BID are variable to a certain extent depending on the subsectors in which the research is conducted, but all Arrowhead valuation research possesses an underlying set of common principles and a generally common quantitative process.

With Arrowhead Commercial and Technical Due Diligence, Arrowhead extensively researches the fundamentals, assets and liabilities of a company, and builds solid estimates for revenue and expenditure over a coherently determined forecast period.

Elements of past performance, such as price/earnings ratios, indicated as applicable, are present mainly for reference purposes. Still, elements of real-world past performance enter the valuation through their impact on the commercial and technical due diligence.

Elements of comparison, such as multiple analyses may be to some limited extent integrated in the valuation on a project-by-project or asset-by-asset basis. In the case of this Drone Volt report, there are no multiple analyses integrated in the valuation.

Arrowhead BID Fair Market Value Bracket

The Arrowhead Fair Market Value is given as a bracket. This is based on quantitative key variable analysis, such as key price analysis for revenue and cost drivers or analysis and discounts on revenue estimates for projects, especially relevant to those projects estimated to provide revenue near the end of the chosen forecast period. Low and high estimates for key variables are produced as a tool for valuation. The high-bracket DCF valuation is derived from the high-bracket key variables, while the low-bracket DCF valuation is based on the low-bracket key variables.

In principle, an investor who is comfortable with the high-brackets of our key variable analysis will align with the high-bracket in the Arrowhead Fair Value Bracket, and likewise in terms of low estimates. The investor will also take into account the company intangibles – as presented in the first few pages of this document in the analysis on strengths and weaknesses and other essential company information. These intangibles serve as supplementary decision factors for adding or subtracting a premium in the investor's own analysis.

The bracket should be understood as a tool provided by Arrowhead BID for the reader of this report and the reader should not solely rely on this information to make his decision on any particular security. The reader must also understand that on one hand, global capital markets contain inefficiencies, especially in terms of information, and that on the other hand, corporations and their commercial and technical positions evolve rapidly: this present edition of the Arrowhead valuation is for a short to medium-term alignment analysis (one to twelve months). The reader should refer to important disclosures on page 35 of this report.

5. Appendix

8.1 Drone Volt's Financial Summary

Exhibit 26: Financial Summary *Low Bracket Estimates*

Year Ending – Dec.	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
Revenue (EUR '000)	12,262	16,689	21,962	27,711	35,432	42,824	49,453	55,539
EBITDA (EUR '000)	(1,044)	(90)	2,594	4,652	7,099	9,468	11,762	14,612
EBIT (EUR '000)	(2,561)	(1,384)	1,265	3,166	5,418	7,533	9,534	12,145
Net Income (EUR '000)	(964)	359	2,147	3,298	5,178	7,283	8,508	11,013
EPS	(0.00)	0.00	0.01	0.01	0.01	0.02	0.02	0.03
Growth rates (%)								
Revenue	42.3%	36.1%	31.6%	26.2%	27.9%	20.9%	15.5%	12.3%
EBIT	NM	NM	NM	NM	71.1%	39.0%	26.6%	27.4%
Net Income	NM	NM	NM	53.6%	57.0%	40.7%	16.8%	29.4%
EPS	NM	NM	NM	53.6%	57.0%	40.7%	16.8%	29.4%
Margins (%)								
EBITDA Margins	(8.5%)	(0.5%)	11.8%	16.8%	20.0%	22.1%	23.8%	26.3%
EBIT Margin	(20.9%)	(8.3%)	5.8%	11.4%	15.3%	17.6%	19.3%	21.9%
Net Profit Margin	(7.9%)	2.1%	9.8%	11.9%	14.6%	17.0%	17.2%	19.8%
Ratios								
Price / Earnings ratio	NM	31.0x	5.2x	3.4x	2.1x	1.5x	1.3x	1.0x
EV/Revenue	0.1x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x
EV/EBITDA	(0.6x)	(7.1x)	0.2x	0.1x	0.1x	0.1x	0.1x	0.0x
EV/EBIT	(0.2x)	(0.5x)	0.5x	0.2x	0.1x	0.1x	0.1x	0.1x

Exhibit 27: Financial Summary *High Bracket Estimates*

Year Ending – Dec.	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
Revenue (EUR '000)	13,012	18,526	25,177	32,931	42,405	50,800	57,107	63,240
EBITDA (EUR '000)	(626)	659	4,037	6,961	10,275	13,273	15,756	18,974
EBIT (EUR '000)	(2,162)	(673)	2,642	5,360	8,419	11,097	13,226	16,167
Net Income (EUR '000)	(565)	940	3,017	4,990	7,638	10,497	11,843	14,908
EPS	(0.00)	0.00	0.01	0.01	0.02	0.03	0.03	0.04
Growth rates (%)								
Revenue	51.0%	42.4%	35.9%	30.8%	28.8%	19.8%	12.4%	10.7%
EBIT	NM	NM	NM	NM	57.1%	31.8%	19.2%	22.2%
Net Income	NM	NM	NM	65.4%	53.1%	37.4%	12.8%	25.9%
EPS	NM	NM	NM	65.4%	53.1%	37.4%	12.8%	25.9%
Margins (%)								
EBITDA Margins	(4.8%)	3.6%	16.0%	21.1%	24.2%	26.1%	27.6%	30.0%
EBIT Margin	(16.6%)	(3.6%)	10.5%	16.3%	19.9%	21.8%	23.2%	25.6%
Net Profit Margin	(4.3%)	5.1%	12.0%	15.2%	18.0%	20.7%	20.7%	23.6%
Ratios								
Price / Earnings ratio	NM	11.8x	3.7x	2.2x	1.5x	1.1x	0.9x	0.7x
EV/Revenue	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x	0.0x
EV/EBITDA	(1.0x)	1.0x	0.2x	0.1x	0.1x	0.0x	0.0x	0.0x
EV/EBIT	(0.3x)	(1.0x)	0.2x	0.1x	0.1x	0.1x	0.0x	0.0x

8.2 Drone Volt's Balance Sheet Forecast

Exhibit 28: Consolidated Balance Sheet

Year Ending – Dec.	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
Total current assets	12,614	11,893	12,454	14,411	17,978	23,734	30,505	40,431
Total non-current assets	32,050	32,508	33,595	34,880	36,494	38,541	40,765	42,186
TOTAL ASSETS	**44,664**	**44,401**	**46,050**	**49,291**	**54,472**	**62,276**	**71,270**	**82,617**
Total current liabilities	6,674	6,936	6,439	6,383	6,385	6,905	7,391	7,726
Total non-current liabilities	958	73	73	73	73	73	73	73
TOTAL LIABILITIES	**7,631**	**7,009**	**6,512**	**6,456**	**6,458**	**6,978**	**7,464**	**7,799**
Total shareholder's equity	37,033	37,392	39,538	42,836	48,014	55,298	63,805	74,818
TOTAL LIABILITIES & EQUITY	**44,664**	**44,401**	**46,050**	**49,291**	**54,472**	**62,276**	**71,270**	**82,617**

Exhibit 29: Consolidated Balance Sheet

Year Ending – Dec.	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E
Total current assets	12,869	12,654	13,870	17,240	22,876	31,375	41,030	54,608
Total non-current assets	32,212	32,826	34,200	35,893	37,981	40,528	43,138	44,758
TOTAL ASSETS	**45,080**	**45,480**	**48,070**	**53,133**	**60,857**	**71,903**	**84,168**	**99,367**
Total current liabilities	6,691	7,034	6,608	6,681	6,767	7,317	7,739	8,029
Total non-current liabilities	958	73	73	73	73	73	73	73
TOTAL LIABILITIES	**7,648**	**7,107**	**6,681**	**6,754**	**6,840**	**7,390**	**7,812**	**8,102**
Total shareholder's equity	37,432	38,373	41,390	46,379	54,017	64,514	76,356	91,265
TOTAL LIABILITIES & EQUITY	**45,080**	**45,480**	**48,070**	**53,133**	**60,857**	**71,904**	**84,168**	**99,367**

6. Analyst Certifications

I, Natasha Agarwal, certify that all of the views expressed in this research report accurately reflect my personal views about the subject security and the subject Company, based on the collection and analysis of public information and public Company disclosures.

I, Sumit Wadhwa, certify that all of the views expressed in this research report accurately reflect my personal views about the subject security and the subject Company, based on the collection and analysis of public information and public Company disclosures.

Important disclosures

Arrowhead Business and Investment Decisions, LLC received fees in 2016-2022 from Drone Volt and will receive further fees in 2022 from Drone Volt for researching and drafting this report and for a series of other services to Drone Volt, including distribution of this report and investor relations services. Neither Arrowhead BID nor any of its principals or employees own any long or short positions in Drone Volt. Arrowhead BID's principals intend to seek a mandate for investment banking services from Drone Volt and may receive compensation for investment banking activities for Drone Volt in 2022 or beyond.

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Investors must make their own investment decisions based upon their specific investment objectives and financial situation utilizing their own financial advisors as they deem necessary.

Investors are advised to gather and consult multiple sources of information while preparing their investment decisions. Recipients of this report are strongly advised to read the Information on Arrowhead Methodology section of this report to understand if and how the Arrowhead Due Diligence and Arrowhead Fair Value Bracket integrate alongside the rest of their stream of information and within their decision-making process.

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7. Notes and References

[i] Source: Bloomberg, 52 weeks to June 22, 2022

[ii] Source: Bloomberg, 3 months to June 22, 2022

[iii] Arrowhead Business and Investment Decisions Fair Value Bracket – AFVBTM. See information on valuation on pages 29-32 of this report and important disclosures on page 35 of this report.

[iv] Source: Company annual report FY 2018

[v] Source: Arrowhead BID analysis

[vi] Source: Arrowhead BID analysis

[vii] Source: Company filings

[viii] Source: Company filings

[ix] Source: Arrowhead BID estimate

[x] Source: Company Website

[xi] Source: Company Reports, LinkedIn

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[xxiv] Source: Unmanned Aircraft Systems (UAS): Commercial Outlook for a New Industry, September 9, 2015

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[xlvi] Source: Arrowhead BID Estimate

[xlvii] Source: Bloomberg Estimates