IMPACT REPORT 2022

D-ORBIT

D-Orbit's business approach goes beyond the mere economic benefit: all our activities aim at producing a wider benefit that can impact positively on humanity.

We direct our efforts on delivering a positive impact to society: A better D-Orbit, a better world.

D-Orbit places equal emphasis on three pillars: profit, social benefit, and global impact.

Our products and services are designed to solve global challenges with a high social impact.

Our internal organization leverages the value of people and the positive relationships with all our stakeholders.

D-Orbit was one of the first European companies to be registered as a Benefit Corporation, and the first certified space B-Corp worldwide.

TABLE OF CONTENTS

1. READING INSTRUCTIONS

A Benefit Corporation (B-Corp) is a model of private enterprise that commits to producing public benefit[1]. Jay Coen Gilbert, Bart Houlahan and Andrew Kassoy founded B Lab in the United States in 2006 as an independent nonprofit.

A B-Corp is a corporate entity committed to delivering benefits to all the stakeholders: customers, society, workers, suppliers, the community and the environment while pursuing profitable goals.

The B-Corp certification is a third-party validation of the company's positive impact with respect to the stated goals.

The Benefit Corporation legislation, law nr. 208 approved by the Italian parliament on December 28th, 2015[2], requires a Company to:

1. Have a corporate purpose to create a measurable positive impact on society and the environment.
2. Consider the interest of workers, community, and the environment when assessing the impact of its decisions, and not just the interest of shareholders.
3. Publish an annual benefit report to assess their overall social and environmental performance against a third-party standard.

D-Orbit has chosen the B-Impact assessment (BIA) as the most relevant third-party standard.

This annual report, which fulfills legal requirements, follows the BIA structure, outlined below:

1. **Governance** – To evaluate the degree of transparency and responsibility of the Company in pursuing its common benefit objectives.
2. **Workers** – To evaluate the relationships with employees and collaborators in terms of salary, benefits, training and opportunities for personal growth, quality of the work environment, internal communication, flexibility, and job security.
3. **Community** – To evaluate the relations of the Company with its suppliers, the region, and the local communities in which it operates.
4. **Environment** – To evaluate the impacts of the Company, in terms of use of resources, energy, raw materials, and production processes.

D-Orbit changed its status to become "Società Benefit" (Benefit Corporation) on February 26th, 2016.

As a "Società Benefit", the Company also intends to pursue one or more common benefits and act in a responsible, sustainable, and transparent way to people, communities, territories and the environment, cultural and social activities, organizations and associations and other stakeholders.

In a sustainable society, nature is not subject to systematically increasing:

1. concentration of man-made objects in space,
2. concentrations of substances extracted from the Earth's crust,
3. concentrations of substances produced by society,
4. degradation by physical means,
5. and people are not subject to conditions that systematically undermine their capacity to meet their own needs.

[1]Marquis, C., Klaber, A., Thomason, B. (2010). "B Lab: Building a New Sector of the Economy". Harvard Business School
[2]www.gazzettaufficiale.it/eli/id/2015/12/30/15G00222/sg - commi 376 to 384

2. VISION & MISSION

VISION

Creating the first space logistics infrastructure to enable the next trillion-dollar space economy and human expansion in a sustainable space.

Our ultimate vision is to become the first space transportation company, a sort of orbital courier with the capabilities to deploy space assets to any orbit, move them from orbit to orbit, service and repair them, and dispose of them at the end of their lives.

MISSION

Provide end-to-end solutions to improve new and traditional space businesses by streamlining in-space and on-ground operations with unique, innovative, and proprietary technologies.

An important aspect of our mission is that whatever we are doing is contributing to the incremental development of the technology platform that will enable our ultimate vision. This is made possible by the service suite InOrbit NOW. By taking care of the entire vertical, we aim at influencing how new operators deal with issues like orbital clearance in a moment where the industry is moving towards mega-constellations of large numbers of satellites.

3. BUSINESS DESCRIPTION

D-Orbit is the first space logistics company in the industry; its solutions, based on proprietary technologies, allow the optimization of operations both in orbit and on the ground through last-mile delivery of satellites, orbital transportation, space logistics, and space waste management.

Our initial offering was focused on the last phase of satellite missions, i.e. orbital debris mitigation. Today our products and services cover the entire lifecycle of a space mission, including mission analysis and design, engineering, manufacturing, integration, testing, launch, orbital transportation, and end-of-life decommissioning.

D-Orbit provides end-to-end solutions for New Space companies and innovative, innovative products and services for traditional space companies, creating an ideal connection between tradition and innovation.

D-Orbit was founded in 2011 and offers, via in-house produced technology, highly reliable in-orbit transportation and logistics services.

3.1 CURRENT BUSINESS ACTIVITIES

All of our products and services are invented and designed with a strong attention to their value in terms of sustainability; in the space industry, sustainability is not only about having a better future: it is about having a future at all. While orbital space is vast, it is still a finite resource that needs to be managed according to principles of sustainability to preserve it for the years ahead. Our most advanced services take this consideration a step forward, thinking about how to best facilitate and accelerate a space circular economy, that is to say a sustainable economy in space by reducing waste, reusing resources, and recycling materials. This involves designing space missions, spacecraft, and space habitats with the goal of achieving a closed-loop system where waste products are repurposed or recycled to create new products. This can help address the challenges of sustainable resource use in space; as human activity in space expands, the amount of waste generated and resources consumed will also increase, which could lead to environmental degradation and the depletion of finite resources. By adopting circular economy principles in space, we can create a sustainable system that can support long-term human habitation and exploration.

3.1.1 SERVICES

ION Launch Service: ION Launch service is an end-to-end launch procurement, hosting, and deployment service that leverages ION Satellite Carrier, an orbital transportation vehicle designed, manufactured, and operated by D-Orbit that can host satellites up to 150 kg of mass, hosted payloads, and third-party launch tubes alongside D-Orbit's mission-related hardware. Commercial service started in Q3 2020, and benefits include:

- **Faster time to revenues:** precise positioning in target orbit enables operators to start their own missions earlier.
- **Launch cost reduction:** One single launch can now deploy a constellation in multiple orbital planes, reducing operator costs.
- **Faster time to space:** Opportunity to ride the first launch available.
- **Reduction in the number of satellites:** ION replenishes constellations faster, reducing the need for spare satellites to be launched initially.
- **Lower manufacturing costs:** Reduced need for integrated propulsion on customer satellites decreases development, integration, and testing costs and increases mass budget.

ION Hosted Payload Service: ION Satellite Carrier offers a plug-and-play mechanical, electrical, and data interface to quickly integrate experiments and instruments on board and operate them from the ground as subsystem of ION itself.

D-Orbit Cloud Platform: D-Orbit Cloud Platform is a state-of-the-art innovative space cloud-based technology that will revolutionize the speed that data is shared between space and ground. The main features of DCP are: Data computing: data personalization with customized apps and multiple data sources integration; Immediate results: real-time response without the need for ground processing; Data storage: secure data storage and immediate access to relevant data, saving time, and resources, and increasing productivity.

Satellite as a Service: the Satellite as a Service model allows customers to leverage the capabilities of satellite technology without having to invest in and operate their own satellite infrastructure. Through this model, customers can simply purchase operations on ION to access services that range from basic connectivity to more advanced operations that leverage satellite data.

A great example of the Satellite as a Service model is IRIDE, a space-based observation program initiated by the Italian government. D-Orbit will provide one SAR (synthetic aperture radar) satellite, called NOX, and will manage its flight operations segment on behalf of the end user. The satellite constellation will use various detection techniques and technologies, including microwave and optical imaging in different frequencies, and will provide data for applications in commercial startups, SMEs, and industry.

Satellite for Rent: through the satellite for rent model a customer can physically rent a slot on ION Satellite Carrier to place a payload that will generate data; D-Orbit will operate ION and deliver the data to the customer via Aurora, the company's cloud-based mission control software.

In Orbit Servicing: D-Orbit is working towards a space servicing infrastructure that will be powered by proprietary robotic servicing vehicles designed to achieve multiple mission objectives throughout their lifespan; these services include lifetime extension of older spacecraft through extension modules that take over propulsion and attitude determination and control, in orbit assembly of spacecraft and space infrastructures, in orbit refurbishment of existing vehicles by upgrading and replacing outdated and malfunctioning components, in orbit refurbishing of spacecraft parts from feedstock and basic components coming from Earth and/or from in-orbit recycling, resupply of propellant and other consumables, recycling of parts and materials already in space, from old Spacecraft or space debris, into usable feedstock for the manufacturing of new parts and equipment, relocation of space assets or infrastructures to a different orbit, orbital inspection of space objects, asset or infrastructure, end-of-life removal or relocation of a space asset or infrastructures (including space debris), storage of feedstock, fuel, supplies and goods in general in space.

D-Orbit has also signed a contract with ASI for the first national in-orbit servicing demonstration mission; the mission, in cooperation with other Italian companies of

the space sector, will include two satellites and the related ground operation segments, and will carry out various in-orbit demonstrations ranging from close inspection, repositioning, refuelling, deorbiting of spacecraft, to assembly of infrastructures and satellites in orbit. D-Orbit will provide the target spacecraft.

3.1.2 SOFTWARE

Aurora: a powerful cloud-based mission control software suite designed to control a single satellite or a complete constellation through a user-friendly, fully customizable control interface. Aurora shortens the time to market and reduces costs associated with the control of a wide variety of space missions, especially for small satellites and constellations. It also facilitates ground communication accessibility, space data integration and the exploitation of downstream applications.

3.1.3 HARDWARE

AOCS Suite: a modular attitude and orbit control system solution built around three nested systems that can be acquired separately. Each layer is built on top of the ones below, enabling satellite designers to create an attitude determination and control system (ADCS) that fits their needs and budgets. An architecture with redundant data, power, and propulsion interfaces guarantees failure tolerance.

D-Sense: a multi-sensor module designed to track the position of the Sun, the Earth's horizon, the magnetic field, and the angular rate of the spacecraft. It also includes a camera that can be used as a star tracker, and to take photos and videos.

IA Core: a general-purpose computing node with standardized mechanical and electrical interfaces. The core incorporates several onboard data storage units and a low power 32-bit microprocessor for on-board computing tasks. It also provides access to a wide variety of communication buses and peripherals.

OBC Core: an affordable general purpose onboard computer for mini and micro satellites, built with automotive-grade components. It features a double or quadruple redundant architecture.

D3: an autonomous smart propulsion system available for all satellite platforms operating in LEO, MEO, and GEO. It is specialized in decommissioning maneuvers to remove the hosting satellite from the operational orbit in a quick, direct, and controlled way at the end of the mission or in case of major malfunction.

D-Raise: a propulsion system for full-electric satellite platforms. It speeds up the transfer maneuver from parking orbit to the operational orbit, reducing the exposure of the satellite's solar arrays to the Van Allen belts' radiation, bringing forward the revenue-generating phase of the mission.

Simba: a versatile, lightweight, and cost-effective onboard computer for platform management and general-purpose applications.

SimOn: an electro-explosive system (EES) used for the remote safe ignition of pyrotechnical chains. It is particularly recommended for the ignition of solid rocket motors.

3.2 TOOLS FOR IMPLEMENTATION

To ensure proper monitoring of status and improvements, D-Orbit acquired ISO 9001, UNI EN 9100 and B-Corp certifications. Although the certifications are different, they all have a common background that D-Orbit integrates into an extended quality manual that is part of the company's DNA and is applied in business processes and in daily work.

UNI EN 9100 (and ISO 9001) is a widely adopted and standardized quality management system for the aerospace industry. It fully incorporates the entirety of the current version of ISO 9000, while adding requirements related to quality and safety. The purpose of the quality objectives is to determine the conformity of the requirements with respect to customers and organizations and improve the quality management system.

B-Corp Certification measures a company's entire social and environmental performance. The certification is available to any corporation in any country in the world and is voluntary.

To fulfill the performance requirement for B-Corp Certification, a company must complete the B Impact Assessment. The B Impact Assessment (BIA) is a free, confidential platform designed to help measure and manage a company's positive impact on its workers, community, customers, and environment. The BIA assesses the impact of a company's day-to-day operations, both what the company does and how it does it. The responses to the B Impact Assessment determine the total numeric score. B-Corp Certification requires a minimum verified total score of 80 across all impact areas.[3]

[3] bcorporation.net/certification/meet-the-requirements

4. IMPACT SESSION

4.1 B-IMPACT ASSESSMENT (BIA) SCORE

The BIA score for the last reporting period (the year 2021) and its details are shown in the Table 1 below. The presented scores have not been verified by B-Lab. Last verified score is 82.2, dated November, 2019.

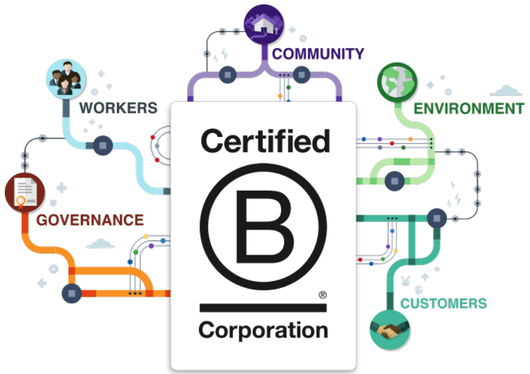
Governance	16.4
Workers	23.0
Community	13.6
Environment	38.4
Customers	4.1
2021 Overall B-Impact assessment score (sum of the above)	**95.6**

Table 1: BIA Score (2021)

4.2 D-ORBIT GOALS SUMMARY

In the following pages we will present each of the above-mentioned sections in detail, highlighting the goals we set for 2022 and their level of achievement. The goals that have been partially achieved or achieved in full show the numerical or descriptive result in the "This year result" column. For the others, in the same column we have highlighted the reasons that have prevented reaching the target this year.

If we consider the not-achieved goals still applicable for the next year (2023 for the present report) they are proposed again as targets to reach.



4.3 GOVERNANCE

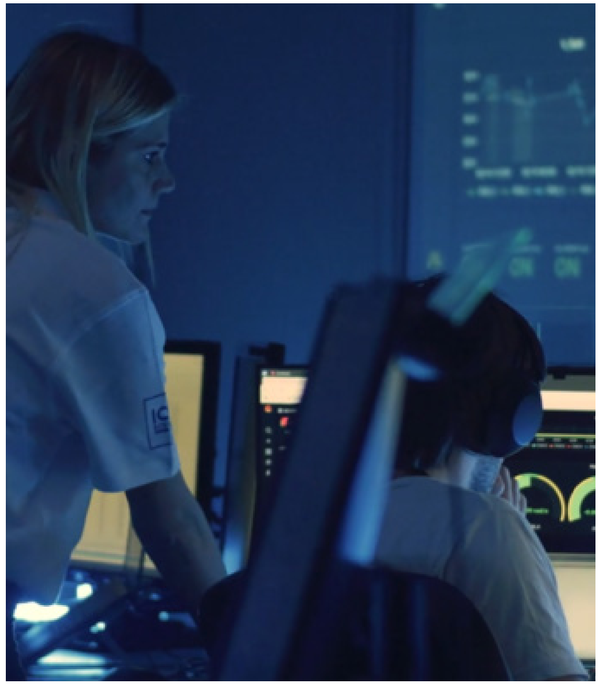
4.3.1 DESCRIPTION

This section of the B Impact Assessment evaluates a company's overall mission, ethics, accountability, and transparency. It measures whether the company has adopted a social or environmental mission, and how it engages its employees, board members, and the community to achieve that mission. This section assesses employee access to financial information, customers' opportunities to provide feedback, and the diversity of the company's governing bodies.

4.3.2 WHAT WE DID IN 2022

Deployed a new organisation structure for D-Orbit to:

- Work with a "one team" approach across the D-Orbit Group.
- Enable Company growth in all areas.
- Strengthen the focus on business performance developing a customer/market-centric structure.
- Enable D-Orbit to be more industrialised for proven services and products, while encouraging innovation for the development of next generation services and products.



4.3.3 WHAT WE ACHIEVED IN 2022

#	Goal Description	Benefits	Instruments to Reach Targets	Previous Year Reference	Targets	2022 Result	
1	Maintain quality at high standard with 0 major non-conformances in December 2022 EN 9100 audit for D-Orbit ITA.	Continue to have a solid framework, internationally known and accepted, to work within.	Confirm quality management system certification	0 major non-conformances	0 major audit non-conformances in EN9100 audit for D-Orbit SpA	0 major non-conformances	✔
2	Use the B-Impact assessment tool to verify the impact of D-Orbit on the UN 2030 sustainable development goals (SDGs).	Focus the social and environmental impacts of D-Orbit's activities in a shared framework. Thanks to them, each type of organization can clearly indicate which particular global challenges it is acting as a positive and regenerating force	B-Impact assessment linked with the SDGs tool	-	Identify the SDGs on which D-Orbit can have an impact and set an improvement plan with SMART goals to be addressed in 2021-2022.	Activity performed. the SDGs where D-Orbit can have an impact are: · SDG 5 - Gender Equality · SDG 6 - Clean Water and Sanitation · SDG 8 - Decent Work and Economic Growth · SDG 11 - Sustainable Cities and Communities · SDG 12 - Responsible Consumption and Production	✔
3	Set SMART sustainability goals for area leaders, before Q1 2021	Align area leaders' mind-set with the Company's bylaws and strategy	SDGs tool B-Impact Assessment (BIA) D-Orbit bylaws	Area leaders' goals set for 2021	Set SMART sustainability goals for area leaders, before Q1 2021	Goals have been set for 2021. Evaluation of achievement is currently in progress.	✔

4.3.4 NEXT YEAR'S GOALS

#	Goal Description	Benefits	Instruments to Reach Targets	2023 Targets
1	Perform a review of the Organization structure introduced in 2022	Improve efficiency, communications and define clear responsibilities enabling company growth.	Collect feedback and organization improvement suggestion from the wider audience possible including managers and non-managers, through interviews and surveys.	Identification of quick-wins and long-term improvement to the Organization by June 23.
2	Contribute to an environment where thanks to regular 2-way feedback and clarity of goals assigned and metrics used to measure performance, everyone is in the condition to express their full potential	Increased clarity Improved communication Reduced stress levels due to unclear expectations	1. Manager development/ learning path 2. Formal, Company-wide Performance management Process	· develop a management training learning path and have at least 50% take part in leadership development training sessions · complete first run of fully digitalized performance management process
3	Maintain high quality standards: · Confirm B Corp certification for D-Orbit group for 2023. · Confirm EN9100 certification for D-Orbit ITA. · Start EN9100 certification for D-Orbit UK and PT.	Continue to have a solid framework, internationally known and accepted, to work within. Expand the framework to the other companies of the group.	Confirm quality management system certification	· Increase B Impact Assessment score by 5% · Recertification confirmed by external audit.

4.4 WORKERS

4.4.1 DESCRIPTION

The Workers section of the B Impact Assessment assesses the company's relationship with its workforce. It measures how the company treats its workers through compensation, benefits, training, and ownership opportunities provided to workers. The category also focuses on the overall work environment within the company by assessing management/ worker communication, job flexibility, corporate culture, and worker health and safety practices.

4.4.2 WHAT WE DID IN 2022

If we look at the numbers, the reader can find the 2022 figures related to workers.

Year of Analysis	Countries of Analysis
2022	Italy, Portugal, and United Kingdom

	Total Departed	Total People
Italy	14	222
Portugal	1	10
United Kingdom	8	19

Average Age (2022)	33
Youngest Employee	19
Oldest Employee	62

	Absolute	% (2022)
Number of Women	41	16

Historical Data

Year	Total Hired	Total Departed	Delta	Tot nr. employee each year	Delta % wrt previous year	Attrition rate (%)
2011	2	0	2	2	-	-
2012	2	0	2	4	100	0
2013	2	0	2	6	50	0
2014	2	0	2	8	33	0
2015	12	0	12	20	150	0
2016	5	1	4	24	20	4
2017	3	3	0	24	0	13
2018	23	2	21	45	88	4
2019	18	3	15	60	33	5
2020	35	2	33	93	55	2
2021	83	13	70	166	56	8
2022	116	23	93	251	54	9

The focus areas addressed during 2022 have been:

- Feedback, performance management, clear goals
  - Launched Performance Management Process
  - Launched managers development
- Adequacy of working environment and available tools
  - Facility enlargement and enhancement
  - Increased focus on health and safety
- Working remotely
  - Smart working policy with unlimited number of days of remote working
  - Increased data security & protection awareness
- General wellbeing
  - Welfare vouchers
  - Online counselling

4.4.3 WHAT WE ACHIEVED IN 2022

#	Goal Description	Benefits	Instruments to Reach Targets	Previous Year Reference	Targets	2022 Result	
1	Satisfaction	Happy people mean: 1. Better decision-making abilities[4] 2. Higher levels of creativity[5] 3. Reduction in lost productivity because happy people are healthier[6]	In March 2020 in the middle of the first wave of Covid-19, D-Orbit issued an online questionnaire to understand the happiness and satisfaction of people.	-	≥80%	Response rate: 88% Mean Satisfaction: 71%	✘
2	Deploy a mental wellbeing platform	This is the project winning the D-Orbit "Space Race competition. Empower you to be the best you. When we feel mentally well, we can work productively, enjoy our free time, and contribute actively to our communities.	External help and support. External tool External professional	-	Tool deployed and available to employees	Online Tool deployed and available to all employees since January 2022	✔

[4] *www.swarthmore.edu/SocSci/bschwar1/maximizing.pdf*
[5] *www.ncbi.nlm.nih.gov/pmc/articles/PMC1693418/pdf/15347528.pdf*
[6] *www.hsph.harvard.edu/news/magazine/happiness-stress-heart-disease/*

4.4.4 NEXT YEAR'S GOALS

#	Goal Description	Benefits	Instruments to Reach Targets	2023 Targets
1	Foster open communication at all levels, giving everyone the opportunity to speak their mind in a protected environment, suggesting improvements and highlighting potential critical areas.	Improved engagement and loyalty.	Anonymous survey.	Run at least 2 surveys. One focused on overall working environment, requesting feedback from all, and at least one focused on specific initiatives / groups of employees.
2	Confirm our commitment to employee wellbeing, with particular focus on mental health.	Reduced stress levels. Availability of tools that can contribute to having better control over work-life balance.	Mental wellness platform.	Adopt a platform, available in the three company languages (English, Italian, Portuguese), that provides employees, in an anonymous way, to access both learning tools related to mental wellbeing as well as mindfulness and psychological support.
3	Increased attractivity on the talent market; Promote a culture focused on trust and responsibility.	Improved work-life balance for employees. Be more competitive in terms of talent attraction and retention.	Smart working Policy with unlimited number of days working remotely. Institutional messages encouraging people to take time off in specific times of the year (birthdays, around festivities, summer months...)	Agile work adopted in all company areas (except for specific activities which can be exclusively carried out on-site) At least two formal messages to employees about the importance of taking time off.

4.5 COMMUNITY

4.5.1 DESCRIPTION

The Community portion of the B Impact Assessment evaluates a company's supplier relations, diversity, and involvement in the local community. It also measures the Company's practices and policies around community service and charitable giving, including whether a company's products or services are designed to solve social issues, such as access to basic services, health, education, economic opportunity, and the arts.

4.5.2 WHAT WE DID IN 2022

D-Orbit signed a collaboration agreement with the institute of atmospheric pollution research to promote the development of scientific research in orbit and develop technology transfer projects. The agreement includes public awareness initiatives, such as seminars, webinars, public competitions for research institutes, universities, start-ups and companies, and activities aimed at schools, such as 'teaching space', which aims to involve the youngest. In the context of this cooperation, the Brown University School of Engineering launched the SBUDNIC satellite mission to test an open architecture based on commercial ground-based components that will enable researchers worldwide to develop cost-effective space missions.

In November 2022, a delegation of ten D-Orbit people (and some family members) participated in the "Colletta Alimentare": an initiative, organized annually by the Banco Alimentare, to recover surplus food to benefit charitable facilities that offer assistance to individuals and families in need, something that has made a difference for many people over the past three years. D-Orbit participated in the Fino Mornasco superstore, which is directly in front of the D-Orbit headquarters.

4.5.3 WHAT WE ACHIEVED IN 2022

#	Goal Description	Benefits	Instruments to Reach Targets	Previous Year Reference	Targets	2022 Result	
1	Contribution to adoption of the Benefit corporation model.	Increase B-Corp awareness outside the company in the university environment; create a positive impact on future managers and employees.	Case study in innovation in thesis about the B-Corp model applied to space industry.	2 Theses	1 Thesis	2 Theses	✔
2	Increase awareness about B-Corps and themes like innovation, entrepreneurship, and space engineering.	Increase B-Corp awareness outside the company; create a positive impact on people and environment in which the Company does business.	Participate in the apprenticeship program “alternanza scuola lavoro” with schools. Participate in at least 1 event to disseminate space and B-Corp ideas.	2 high school classes mentored. Participation in 3 events.	2 high school classes mentored. Participation in 1 event.	2 high school classes mentored. Participation in 1 event.	✔

4.5.4 NEXT YEAR’S GOALS

#	Goal Description	Benefits	Instruments to Reach Targets	2023 Targets
1	Increase visibility among future generation of stakeholders, contribute to greater knowledge about our industry and the opportunities offered by studying STEM subjects.	Contribute to promoting STEM studies on our territory, develop greater employability for future generations.	Student visits	Host at least two student visits to our site.
2	Increase awareness about B-Corps and themes like innovation, entrepreneurship, and space engineering.	Increase B-Corp awareness outside and inside the company; create a positive impact on people and environment in which the Company does business.	Participation as mentor in program with high-school students. Participation in at least 1 event to disseminate space and B-Corp ideas. Dissemination inside the company of B Corp and Benefit corporation information to increase awareness.	1 mentorship to high-school students 1 internal dissemination activity

4.6 ENVIRONMENT

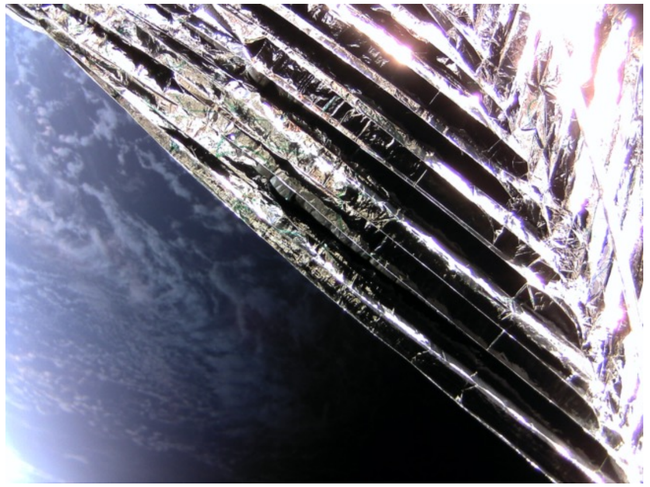
4.6.1 DESCRIPTION

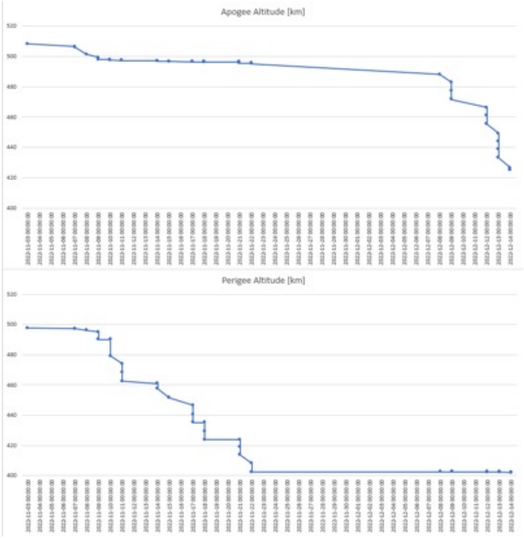
The Environment portion of the B Impact Assessment evaluates a company's environmental performance through its facilities, materials, emissions, and resource and energy use. Companies answer questions about their transportation/distribution channels and the environmental impact of their supply chain. The assessment also measures whether a company's products or services are designed to solve environmental issues, including products that aid in the provision of renewable energy, conserve resources, reduce waste, promote land/wildlife conservation, prevent toxic/hazardous substance or pollution, or educate, measure, or consult to solve environmental problems.

4.6.2 WHAT WE DID IN 2022

Here below a summary of the actions performed and going on in line with our benefit corp. status:

1. **ION SCV-003:** After installation on the ION spacecraft in 2021, the innovative ADEO space braking drag sail has now been opened in orbit (see picture below). This is a passive deorbit technology that will reduce the orbit of a satellite, interacting with solar activity – like a sail interacts with the winds to move a sailboat. This reduces the orbit decay at satellite end of life to 1.33 years (significantly below the 25 years rule and below the FAA proposed 5 years re-entry obligation).
2. **ION SCV-004:** at end of life, the D-Orbit flight operations team used part of the propellant for an orbit lowering maneuver (to comply with the 25-years-rule) and passivating the satellite depleting the remaining propellant and emptying the energy stored in the batteries.
3. **ION SCV-009:** for ION's first orbital transportation mission into a mid-inclination orbit, all the operations of the spacecraft are planned to be in an orbit lower than the International Space Station to reduce to the minimum the risks for the ISS itself, for the astronauts living there, and to reduce to the minimum possible the stay of the satellite in orbit – still performing all the activities requested by our customers.
4. **Reduction of paper usage during incoming:** after analyzing the incoming process and the tools used to perform and store incoming verifications on parts shipped from suppliers, 2 improvements have been introduced:
   a. A single sticky label now includes all the information of the incoming part and has substituted the 2 A4 pages that were printed beforehand.
   b. An excel template has been introduced to digitally store the verification activities (for example parts measurement) that before we manually write on the drawing of the part, printing each time the related drawing.





4.6.3 WHAT WE ACHIEVED IN 2022

#	Goal Description	Benefits	Instruments to Reach Targets	Previous Year Reference	Targets	2022 Result[7]	
1	Reduce 5% electricity consumption by the end of 2022.	Reduce supply consumption, reduce the impact D-Orbit has on the environment and (of course) the cost.	$Pow\ consumption = \frac{Pow\ consumption}{P^*}$ [8]	-1%	-5%	-10%	✔
2	Reduce 5% heating consumption by the end of 2022.		$Gas\ consumption = \frac{Gas\ consumption}{Tot\ nr.\ people}$	-34%	-5%	-52%	✔
3	Reduce 5% water consumption by the end of 2022.		$Water\ consumption = \frac{Water\ consumption}{Tot\ nr.\ people}$	-23%	-5%	+59%	✘

[7]The consumption rates variation for natural gas and water consumption have been calculated with respect to the total number of people working in the headquarters in 2020 and in 2021. Differently, since the majority of the power consumption relates to the manufacturing area, the consumption analysis takes into account the total number of items produced named P. The increment of the workforce has been +88% (only considering the Italian headquarters)*
[8]P is the total number of items produced by the manufacturing team. This number was 320 for 2019, 540 for 2020 and 1051 in 2021 with an increment of +95%.*

4.6.4 NEXT YEAR'S GOALS

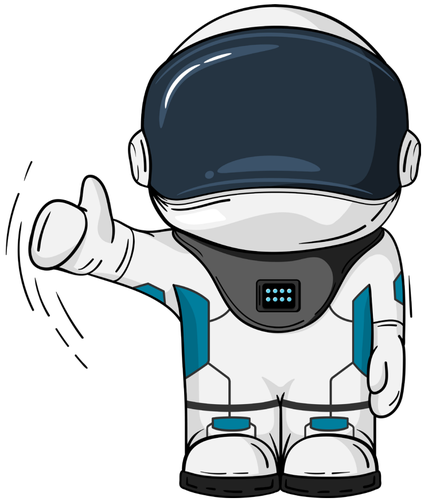
#	Goal Description	Benefits	Instruments to Reach Targets	2023 Targets
1	Internal End of Life (EOL) policy defined.	Make better mid/long term decisions. Provide the company a global, coherent view on Satellite End of Life that is compliant with current policies.	Creation of an inter-area working group.	EOL Policy defined and disseminated.
2	Participate in tenders with focus on In Orbit Servicing activities (IOS).	Progress through the vision of D-Orbit.	Demonstration of in-orbit servicing through a satellite life extension mission.	Win at least one of the proposals sent.

5. FEEDBACK

Being a B-Corp is an important part of our corporate identity, and therefore this Impact Report is especially important for us. We would welcome feedback on what you think about it, and so we have prepared a quick survey to understand how to improve our objectives and the way we present them to the public. The survey is online at the URL below, and it will take only a couple of minutes to fill in. Thank you in advance for doing this, it means a lot to us.

D-Orbit's impact report feedback questionnaire.

We value transparency. Should you have any doubts or questions, please do not hesitate to get in touch with us! You can also write at: matteo.trotti@dorbit.space[9].



[9]*Uses of Information*
Any personal information submitted to us through the submission of the questionnaire is optional and we use it solely for the purpose for which it is collected or for communicating with you regarding the services. At a minimum we ask for your name and email address so that we may communicate with you.

6. CONCLUSIONS

2022 has been an amazing year at D-Orbit.

The growth in 2021 has continued throughout 2022, both in the number of people in the Company and in the number of ION missions successfully launched.

Across all the countries where D-Orbit is present, 116 people joined and 23 left the Company, with a net increase of the workforce by 93 individuals (+54% with respect to 2021 and an attrition rate of 9%, which is in line with market standards).

2022 also saw the growth of the ION Cargo missions, confirming D-Orbit as the first mover in orbital transportation and logistics for commercial and institutional customers. In 2021, we launched two transportation missions (IONs SCV-002 and SCV-003), while in 2022 we flew three missions (SCV-004 to SCV-006) and were ready to fly a further three in Q4 (SCV-007 to SCV-009 – although the latter were moved into January 2023 by the launch provider; they are now launched.

All these missions include End-of-Life measures, which will speed up the natural process of the satellites re-entering into the Earth's atmosphere, finally removing them from orbit. In particular, we are assessing solar sails and maneuvers with our propulsion system after having passivated all the energy storage systems in the spacecraft.

D-Orbit is continuing to build its Vision, creating the first space logistics infrastructure.

Our collaborations with organizations such as the European Space Agency, the European Union, and the Italian Space Agency have offered and continue to offer us opportunities to grow as a company, and a chance to be involved in research and development projects and give our contribution with initiatives with a strong social component. In 2022, we continued working on the De-Orbiting Kit project (design and in-orbit demonstration of a ground-installed deorbit kit for the controlled re-entry of a dual launch adaptor - the preliminary target is the VEGA launcher VESPA), and completed the NOCTUA program for the Regione Lombardia (development of an end-to-end service for the monitoring of the territory). We also started activities and design of future vehicles that will perform In Orbit Servicing, including life extension and de-commissioning missions.

Our targets for 2023 are ambitious, yet achievable.

We will keep working towards the goal of becoming one of the best companies for the world.


D-ORBIT
NEW SPACE SOLUTIONS