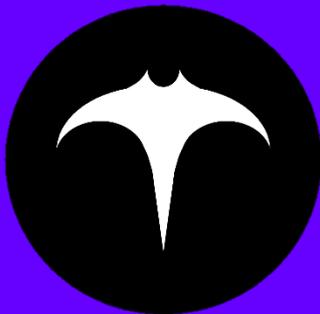
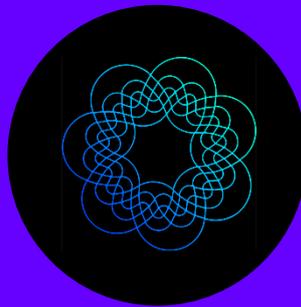


X-ENDER

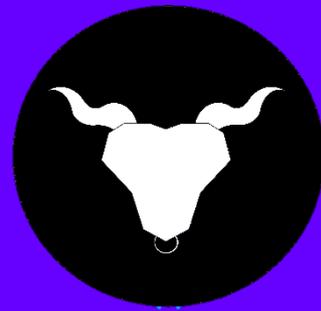
Embrace the Vision of the Ecosystem



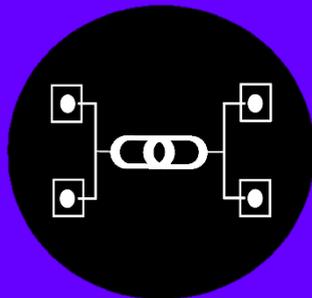
MANTA



**DECENTRALIZED
CONTROL**



OX



BLOCKCHAIN



SKYSHIELD



INTRODUCTION

“The secret of change is to focus all of your energy, not on fighting the old, but on building the new”

Socrates

We are developing a **decentralized control system** for groups of smart items to deliver a fully scalable and safe autonomy. This system could be intended as an undefined master-slave logic with multiple thematic common registers with relative prioritizations.

Our mission is to deliver value to the world in the fields that are most sensible for our subsistence: *food production and emergency response*. In particular, we designed an heavy (**250kgs of payload**) autonomous drone to fight wildfires and for aerial agriculture, based on decentralized control system being cited first.

The aerial drones **MANTA**, the land drones **OX** and the **SKYSHIELD** sensing architecture will be the beginning of a new ecosystem of services and products that will *aesthetically and functionally evolve* our approach to *existentialism, irrationalism and idealism*.

We aim to provide a more scalable and affordable solution to these issues, by providing a way to stop wildfires before it's too late, by merging extensive and precision agriculture advantages, by leveling up logistics and by making possible the deployment of drones through commercial blockchain smart-contracts, a staking collateral principle and a pay-per-service leasing business model.

Expecting as outcome reducing any operational errors, inefficiencies, wastes, automating and optimizing any aerial and heavy duty tasks, providing a system capable of autonomous intervention in situations of environmental emergencies (in particular for wildfires, but also for rescue and survival search during floods, earthquakes).

The ecosystem purpose is to reduce operational costs of targeted tasks, while ensuring interoperability of the services into multiple application fields and creating a safe and solid business model capable of changing completely the customer-service relation.

We're not trying to change the market, to change the culture or to alter reality through mere power of will; they will just be side effects from our growth towards our fated future.

We believe that flight, automated motion and aesthetically distributed artificial intelligence are a reflection of life itself and that's why we chose to build.

Our prototypes will be the motion of subsistence in material form, yet they won't just be prototypes, but an anticipation for things to come. The ecosystem we are creating will be the beginning of a distributed existential revolution and a colossal proposition of explicit sustainability and efficiency.



DECENTRALIZATION & CONTROL

"In the middle of chaos lies opportunity"

Bruce Lee

The system is the core of our whole company. It's an on-board decentralized control system for groups of autonomous items, specifically for us: drones. It is a so-called **proto-blockchain-like** system based on multi-frequency validation and proof of work verification with multiple common thematic registers as expression of decentralized logic calculations and an undefined master-slave priority of signals. The system's safety is protected by multi-frequency cryptography.

It is basically what a scaled down blockchain for IoT would look like, just *aesthetically better*. Our protocol would enable the communication among the drones of group and facilitate a distributed intelligence for the decisional process.

There is a primitive beta mainnet being currently testing among 15 virtual machines with basic signals.

The decentralized control will be fundamental for the intervention on missions of **up to 40 drones**, perfectly harmonized. Paradoxically, *a primitive form of neuronal communication*. It will enable 30 to 40 drones moving and **acting as one, but existing as pluribus**.

The system is designed for drones; however, it would be a waste not to expand the vision of the applications that could be significantly needing a substantial and radical upgrade.



Indeed, we received requests to apply the system on diverse fields:

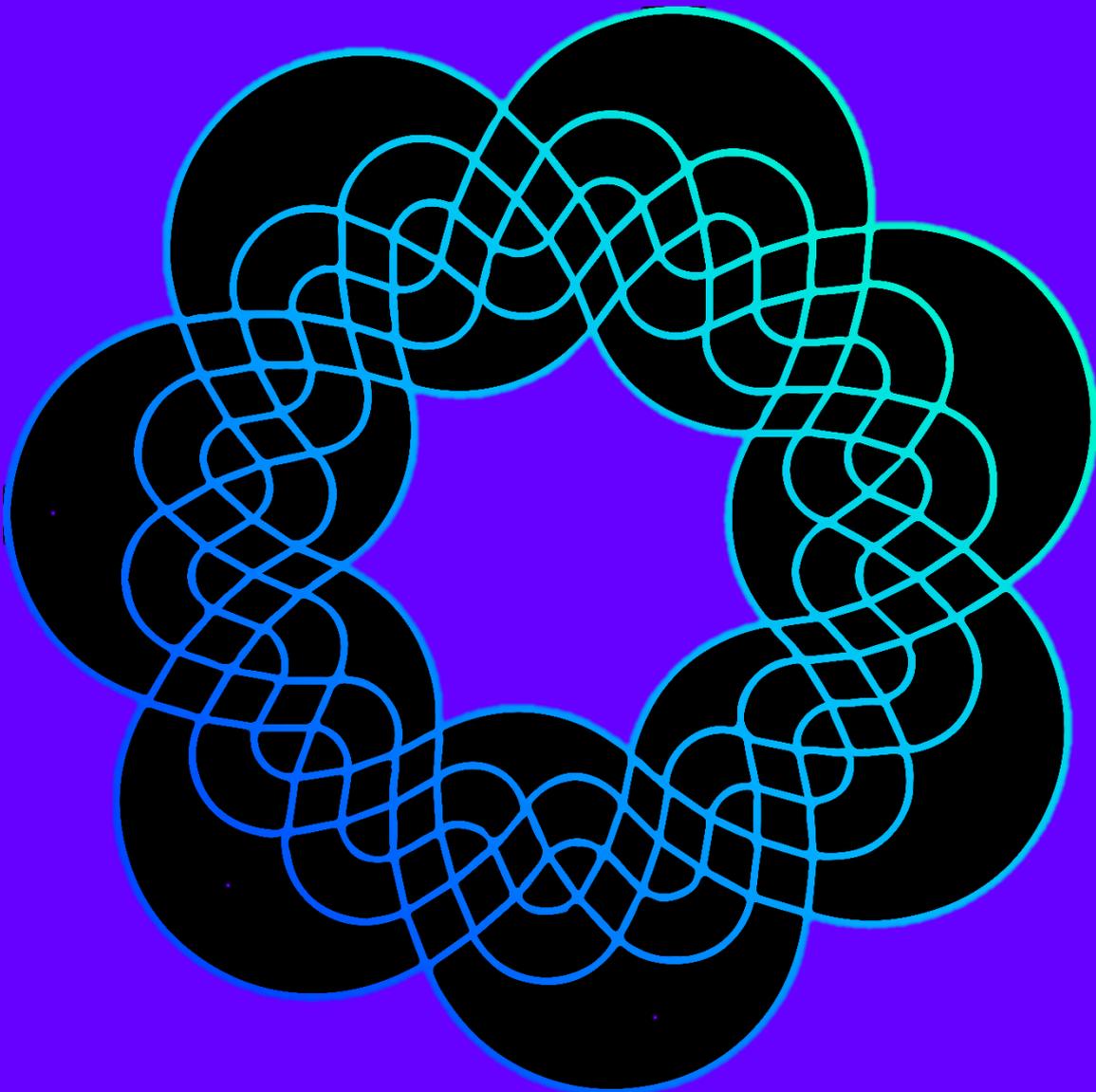
- **Nanosatellites:** the system will autonomously coordinate multiple satellites and diverse land sensors and data acquisition and elaboration systems. We have already received interest from an aerospace company.
- **Smartcities:** the decentralized control system will be deployable on any connected systems supporting AI algorithms. It could be a game-changing technology capable to connect diverse hardware items into a one sensing and acting platform.

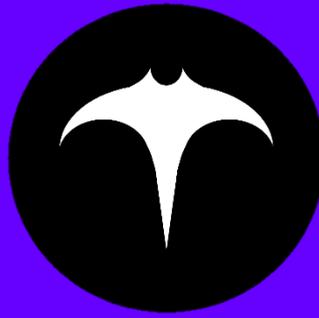


The advantages and the multiple applications of this system are evident. **The added value is qualitative.**

Technology readiness level:

- Agriculture applications: Innovation Readiness Level – **IRL* 4** _ *Capability to work limited-scope programs with project teams;*
- Other applications: Innovation Readiness Level – **IRL 3** _ *Experimental evidence of business opportunity, Experimental evidence of business opportunity.*





MANTA - HEAVY AUTONOMOUS DRONE

*"Everything is hard before it is
easy"*

Goethe



Heavy Autonomous Drone ("MANTA") is a drone under development capable of lifting up to 250kg of payload, 420kg (925 lbs) of maximum take-off weight and has been designed to work in complete autonomy. It is powered by a hydrogen turbine (hence reaching up to 1.5 hours of flight at full payload) and able to reach up to 50km of distance from base.

MANTA immediate applications will be:

- Agriculture: top-dressing, drop-dusting, watering, seeding, side-dispersion, monitoring;
- Firefighting: a scalable solution to deal with wildfires before Canadair-sized intervention (that are generally too late, land-extension and losses speaking).

Future applications will involve people and sensible goods transportation.



When these systems and their connected services will reach the market, it will be an aesthetic revolution for the approach to the traditional ways of tasks completion and to solving problems that as society we may face.

Short-term, our goal is to reach a test market in 2023 and the full scale market the following year.

Main features:

- Maximum payload: up to **250kgs** (550 lbs);
- Full **autonomy**: relying on *AI*, *GNSS* and a peculiar *radio* system;
- Hybrid technology: **hydrogen turbine** powered generator to directly feed the **electric motors**;
- **Team work capability**: up **30/40 drones** working together through the *decentralized control system*;
- Self stock-up of both hydrogen and water/material to be lifted/dispersed;
- **Autogenous dispersion system**;
- Range of action of 50km (software limited);
- Material dispersion both vertically and laterally (side-dressing, for vineyards, through the use of designed appendices);
- In-flight adaptability and optimization of the tasks to the circumstantial events and conditions.
- 25kgs payload scale-down full carbon fiber prototype being tested (image below, damaged on front by some test exposure).





Agriculture

“Any product that needs a manual to work is broken”

Elon Musk



Numbers of the market (2019):

- The current market cap value of the Airtractors and modified Cessna and Piper and their operating resources in the sole Americas is around **17BN \$**. The expected growth depends on the growth of the population; the projection of this is set to keep growing.

Target customers:

- **Extensive plantations/crops** (> 15 hectares), high-revenue plantations (**vineyards**) communities, consortiums.
- Already introduced to future market customers in South America with a design-concept prototype (image in the next page).



Added value:

- **Waste reduction;**
- Pollution reduction;
- Tasks optimization;
- Deployment on high-revenue crops (ex. vineyards);
- **Merging of extensive and precision agriculture advantages;**
- Up to **7 times less resource-demanding** than Airtractors (purchase, maintenance).
- **No-fixed costs during non-operational times** (through *pay-per-service smart-contract-based leasing system*, explained later).

Technology readiness level:

- Innovation Readiness Level – **IRL 4** _ *Capability to work limited-scope programs with project teams* (Basic technological and business components are developed to establish that they will work together; an initial business plan is available).



Firefighting

“Let him who would move the world first move himself”

Socrates



Numbers of the market (2019):

- The current **market cap** value of the *Canadairs* and their operating resources is around **900MN \$**.

Target customers:

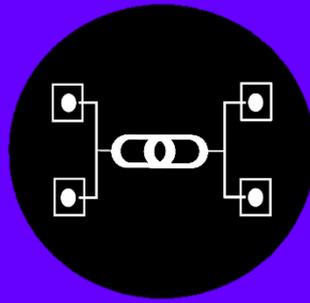
- Governments, civil protection entities, NGO, fire departments

Added value:

- Up to **5 times less resource-demanding** than *Canadairs* Bombardiers (purchase, maintenance).
- Intervention from **100 sqm areas to 15he**.
- **Airdroppable**/ship-based launched into emergency areas.
- Working in **GPS/vision blind** conditions; no no-fly conditions.
- Autonomous intervention, SKYSHIELD integration.
- Multi-application operability.

Technology readiness level:

- Innovation Readiness Level – **IRL 4** _ *Capability to work limited-scope programs with project teams.*



BUSINESS MODEL & BLOCKCHAIN

“My powers are ordinary. Only my application brings me success”

Isaac Newton

The drones will not be sold to the client. For both **safety and efficiency** reasons, the company will own the items and supervise their operations. On the side of the customer, this will cut costs and bureaucracy, approaching a bigger number of operators that otherwise couldn't even access to the services. The drones could basically work 24/7, be moved in through different areas and serve multiple applications.

This “uberization” non-property system will be enabled by the peak customer-distribution technology as per now available: **Blockchain**.

Smart-Contracts, Staking, Benefits

“Art cannot result from sophisticated, frivolous, or superficial effects”

Hans Hofmann

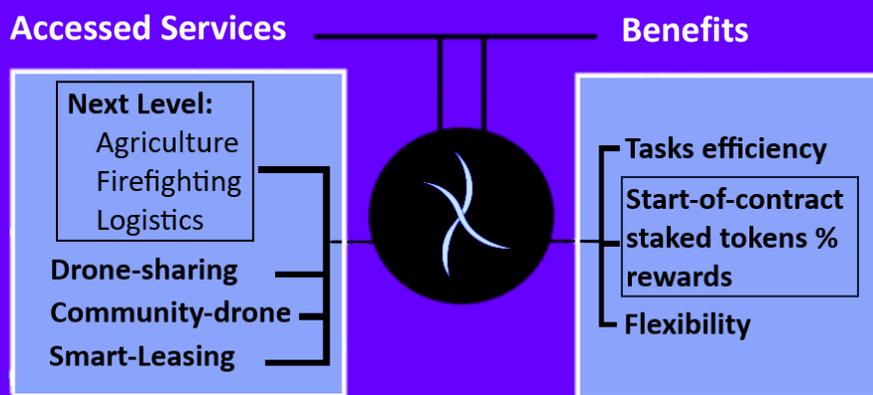
A **smart contract** is an arrangement between two entities in the form of a computer code. These codes are then run on the blockchain, as a result they are stored on public databases and cannot be altered. In a smart-contract the transactions take place when the conditions in the agreement are met *without the involvement of a third party* like a bank, a broker or a government. This solves issues like trust, speed and safety.



We designed specific smart-leasing systems that would act as start-of-leasing smart-contract and then as **smart-contracts per service** requested to the product (MANTA or OX); the resulting model would be a smart-leasing system based on a **pay-per-service structure of action**.

The blockchain we firstly selected is *Solana*, while could be considered *Ethereum* or any L2 when they could result conveniently better (mostly referring to *gas fees*); the price predictions will also be enabled by blockchain oracles (such as *Chainlink*).

The smart-contracts and the **smart-leasing** will be assured by the **staking** of a quantity of tokens that would be required to the customer before starting the contracts. In this way the customers will be stakeholders in some way owning and having benefits from the product they don't formally own. At the end of the period, the stake with its benefits can be removed and the tokens and the *token benefits returned to the customers*. It's a kind of **indirect investment to use the product** itself: using the product, *the customer will simultaneously be stakeholder and informal shareholder of the company*.

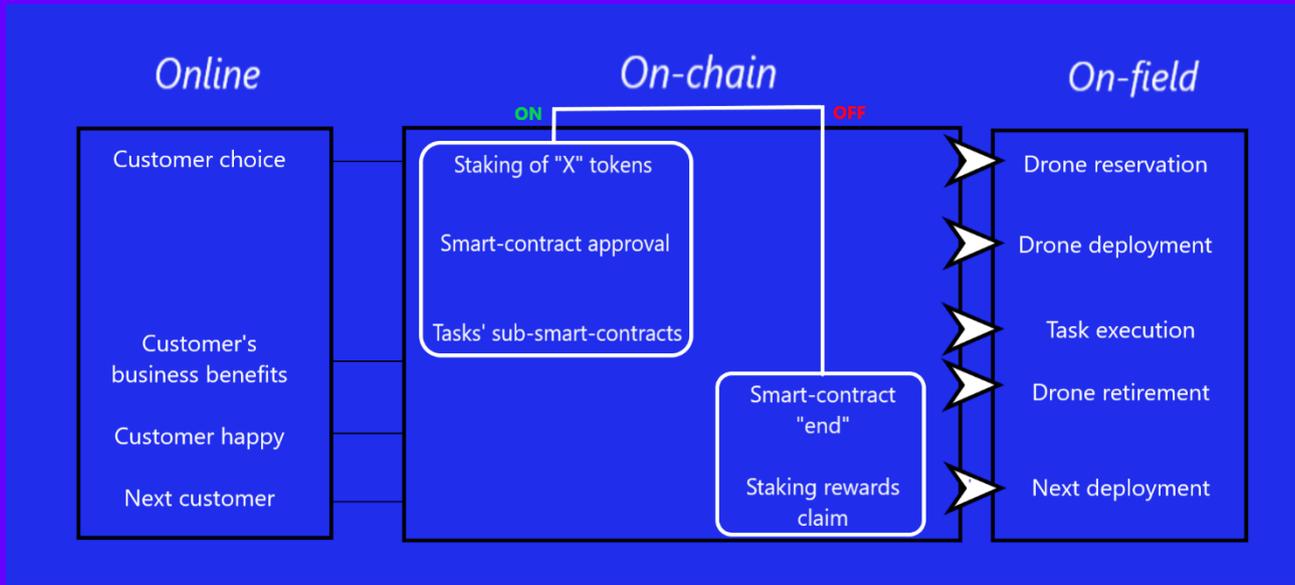


The pay-per-service leasing pricing will be determined by the drone itself, before taking off, depending on the conditions of operation: flight time, speed of execution, type of task assigned, weight of the transported load, type and status of the transported load, continuous no-fly time plus a factor that calculates the related production increase.

This type of offer to the customer can have several customers served with the same contract: each group of drones and tractors can serve seasonally in different crops and farms according to the need for use. *Each drone can also serve in different fields of application*.

The drones will be activated by the smart-contract themselves requiring nearly zero bureaucracy. This system enables to share the drones and optimize the technology deployment.

On the next page: the flow of customer-drone relation.



Tokenization

“Once we accept our limits, we go beyond them”

Albert Einstein

The choice of launching a property token will depend on market conditions and demand; regardless this decision, the staking will be a cross-chain type, accepting cryptocurrency as collateral for the smart-leasing. This staking method will provide benefits to the customers in the measure of growth of the company value.

Our plan to launch a property token follows the concept of both fundraising-to-scale and to boost research and development of new markets and projects to be explored. However, we also consider that even equity property should be as liquid as possible for the investors willing to either buy or sell without going through any bureaucratic process: this is why a token could be deployable with success for the fast and efficient scaling of the company *without creating an illiquid asset*.

As many could object, this could create unwanted complications that may have the opposite of the desired effect. Some difficulties might be avoided through sell locks conditions, limits of buys per address and liquidity time-locks. However, we consider that the best way to deal with this would be to do this through *an holded company created to develop a specific project*, so any good side will be amplified and any problem limited. It would also not interfere with any planned IPO of the mother-company, that would be strengthen instead.

Using partner-companies technologies, we are also planning to make sustainable a possible tokenization and smart-contract deployment by designing a **mining center concept** powered by green hydrogen-generated energy.



SKYSHIELD

“The future belongs to those who believe in the beauty of their dreams”

Eleanor Roosevelt

SKYSHIELD is an AI – powered satellite and land data analysis for wildfire-fighting and agriculture optimization.

We are developing the system together with universities and private institutions and it will be a complementary and empowering tool for MANTA drones.

The system is composed by:

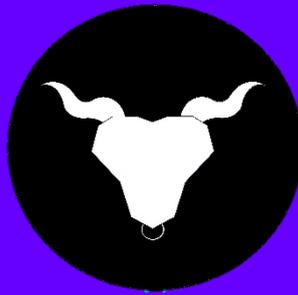
- Low-cost and low-energy consumption tiny sensors to be placed on land;
- Open-source satellites’ data provided by third parties (eg. Copernicus data);
- AI software.

The land and satellite data will be processed along with the historical data from the focused endangered areas. AI will then merge the actual and past data into an algorithm with a target of accuracy bigger than **90%** in detecting an actual wildfire.

Once such probability is triggered, a signal to local authorities is generated; as soon as it will be optimized enough, the signal will be sent directly to a group of drones MANTA that will **autonomously intervene** to shut it off.

Subsequently, the same data will be studied to manage agriculture more efficiently and provide reliable data for crops location and optimization.





OX

“Most powerful is he who has himself in his own power”

Seneca



OX is a **controlled-autonomy modular tractor/truck** that will be initially deployed as “*drone mobile landing platform*” and “*2D drone tracker and header*” for the tests of the heavy drones MANTA.

We plan to use the experience and the data collected by the vehicle as drone mobile landing platform to extend the application of OX as an **independent product**.

The main applications will be replacing agriculture tractors and replacing heavy logistic trucks in closed areas. In particular:



The philosophy of the logical system on which it is based is derived from the "MANTA" project and aims to provide an efficient service while aiming at a decisive increase in productivity and it's designed for the safety of people and environment.

OX is not just a tractor but an entire work system that reinvents the traditional processes. The classic tractor/truck is replaced with a vehicle with the ability to perform autonomously the tasks assigned to it by calculating every movement *as a function of an improvement of efficiency*.

OX is "modular" because it can be deployed in different fields and situations *by just changing tyres*. The distribution will follow the same **smart-contracts** and **pay-per-service leasing**.

Features:

- **Autonomy** of mission fulfillment;
- **Learning optimization** to increase efficiency;
- Maximum payload capacity: **10 tons**;
- **Modularity**;
- **Hybrid technologies**;
- Compatibility with traditional equipment: **standard agriculture machines and standard logistic containers**;
- **Material displacement and sample collection**.

Numbers of the market (2019):

- Market by units sold in total (all manufacturers, only agriculture): 2.200.000
- **Market cap: \$ 145 billion** (agriculture) + \$ 40 billion (estimate, heavy industry)

Target:

- **5%** of the market in 7 years



ROADMAP

“Do not go where the path may lead, go instead where there is no path and leave a trail”

Ralph Waldo Emerson

2022

2023

2024

2025

2026



- MANTA scale prototype completion (Q3-Q4 2021)
- Patent requests and design registration (Q3 2021)
- MANTA scale prototype tests (Q1)
- MANTA full scale module completion (Q4)

- MANTA prototype completion (Q1-Q2)
- MANTA tests (Q2-Q3-Q4)
- Regulation compliance (Q4)
- MANTA test market deployment (macro-areas)(Q4)
- Further patents requests (Q2)
- Group of drones autonomy test (Q4)

- To Market (Q2-Q3)
- Further field applications compliance

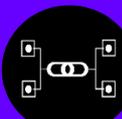
- People transportation aerial vehicle
- Logistics market takeover



- Patent requests and design registration (Q3 2021)
- Decentralized control system preliminary roll (Q4 2021 - ongoing)
- Decentralized control system generalization, beta release (Q2-Q3)

- Decentralized control system alpha test on group of drones (Q2)
- Software licensing release (Q4)
- Decentralized control system distribution for smart-cities and nanosats (Q1)
- On Web3 software distribution (Q2)

- Market expansion
- Aerospace application



- Smart-contracts architecture design (Q1-Q2-Q3)
- Tests (Q1)
- Liquidity token release (Q3)
- Live staking (Q3)
- Smart-contract release (Q4)

- Smart-contracts optimization and tasks sub-smart-contracts release (Q1-Q2)

- Mining facility development

- Quantum technologies integration



- Companies and research institutes cooperation (Q1-Q2)
- Low-energy land sensors (Q3)
- AI algorithm tests (Q4)
- Deployment test (Q1)
- Full deployment (Q2) on wildfire prevention

- Agriculture optimization application (Q1)
- Wildfire intervention with MANTA



- OX adjustments completion (2021, Q1 2022)
- OX presentation (Q1)
- OX tests (Q4)
- OX autonomy implementation (Q1-Q2)
- OX tests (Q4) with MANTA
- Regulation compliance (Q4)

- Test market agriculture (Q2)
- Test market heavy industry logistics (Q3)
- Test market rescue and construction (Q3)
- To market

- OX concept on Mars and Lunar rover application



- First round of fund raising (Q1): EURO 1.700.000 target
- Grants (previsonal): EURO 500.000 target
- Additional investments (Q1): EURO 500.000 target
- IDO token

- Round of fundraising for new projects and for scale up of production

- IPO



FUTURE & CONCLUSIONS

“The future is already here, it's just not evenly distributed”

William Gibson

The future evolution and the fields of application of MANTAs, their unique decentralized control system and this whole ecosystem are countless.

MANTAs' future fields of application:

- **Material displacement:** construction sites, logistics, maritime hubs, working as a mobile crane for urgent and recurrent tasks.
- **Scientific research:** atmospheric, land, plants, building data easily harvested.
- **Weather conditioning:** the drones could be used to drop humidity gatherer materials, following government programs like in UAE, in order to increase the probability of rain.
- **Sensible material displacement:** fast and urgent displacement of sensible items, for example organs from an hospital to another.
- **Renewables maintenance:** we received interest for the scale-down drone to be used for the cleaning, de-icing and maintenance of energy production plants.
- **Rescue:** MANTA look for people or animals in need of help and eventually airdrop medical help or food. It could be deployed together with OX.
- **Future mobility:** we plan to use the same MANTA platform, slightly modified, for people transportation.

As previously anticipated, OX concept could have a future in the next generation **Lunar and Mars rover** applications.

The future is bright and we want to build it together.

Alfredo Mensi, CEO and Founder



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