KGM1

AIRBORNE WIND ENERGY

PROJECT OF
«AIRBORNE WIND ENERGY GENERATOR»
INSTITUTIONAL REPORT
DOC_K00

if the rope is long, the kite it will fly up

GHIVA PROGETTAZIONE CAD

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Kites
always fly free in the sky,
to the delight of all, children and adults.
Without consuming energy.

Based on this principle we have developed our project "Airborne Wind Energy".

KGMI

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The transition to "green energy" will be imposed for economic reasons, but also and especially to limit the damage caused to the nature and toward the climate from the extraction and use of fossil fuels.

The wind is a solar energy tank, whose speed and consistency increase with altitude. The “lift” of a surface that is affected, grows with the square of its velocity.
On these theories are based now the research in progress on wind energy of High altitude or "AWE - Airborne Wind Energy".

The literature on this matter is now well-established, recognized in academic circles, and validated worldwide by studies, prototypes, dissertations and scientific investigations.

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The KGM1 project will be realized in four distinct steps

- Step 1 – Base design
- Step 2 – Design, development and the first prototype testing
- Step 3 – Refinement, implementation and testing of a second prototype
- Step 4 – Industrialization Project

KGM1

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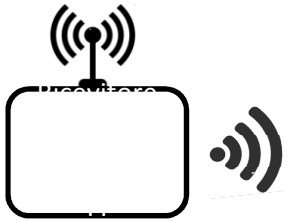
Onboard telemetry 900MHz
(IMU, GPS, barometer, etc)

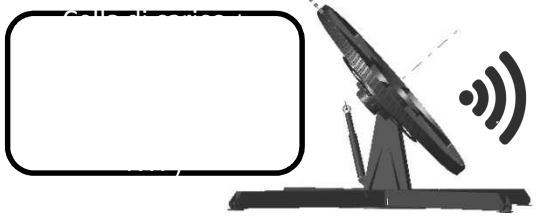
Electronics mounted on the wing:

- ECU with IMU
- 900MHz radio with telemetry
- GPS Module
- Camera with radio 5.4GHz



Router Wi-Fi

PC with data acquisition Sw and real-time processin



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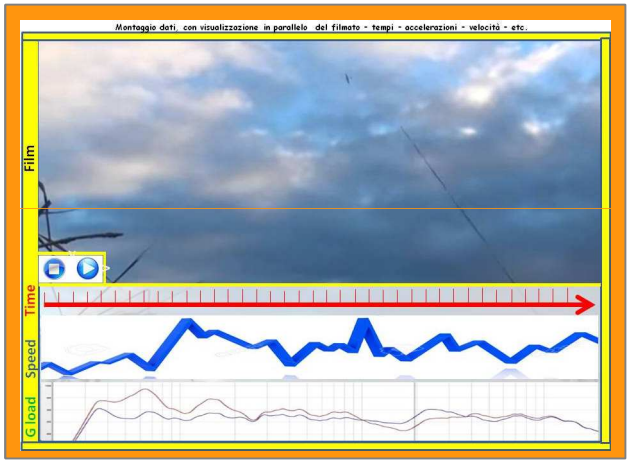
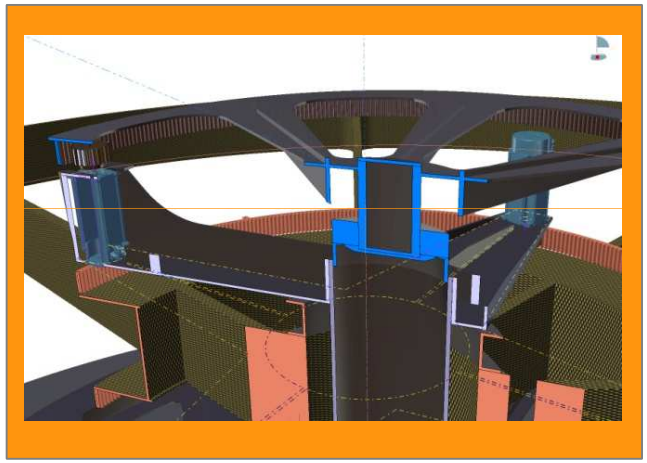
Step 1 – Base design: completed.
Our team has done the necessary research and developed specific studies. operational testing were made with real and recording telemetry flights, which have provided us with valuable information to align the project parameters.

In relation to this, we have also undertaken studies on different flight paths, planning a "different YO-YO" cycle, one of the archetypes that substantially differs from other projects under study.





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Flight Test

The flight tests were a "test bench" that allowed us to validate the logic of KGM1 project. Much work you will have to do starting at Step 2, but we have created and developed a telemetry system, a fundamental element considering the importance of the physical simulation of highly non-linear subsystems, difficult to simulate in calculation.

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Step 2 – Design: to start.

For this stage we believe it will be appropriate to create a more organic structure to the project. E 'therefore necessary to tie him to a productive entity that financially supports, as well as regional funding, national or European, is a leading brand with international credibility, it can set up and manage the industrial architecture able to industrialize and market the project.

Step 2 technical provides :

- From ideas to "feasible concept"
- "Wing" prototype
- Software-Hardware
- tracking device
- Flight est
- Electronics upgrades
- Full feasibility study
- Small generator prototype

Step 2 management include:

- Entrepreneurial approach
- Partner e Investors
- Creating corporate plan
- Backstage documentation
- Communications setting
- Creation of the logo / brand
- Patents

Step 3 and 4 : Even if have already sketched, it is premature to expose them because may change depending on how it will evolve Step 2.

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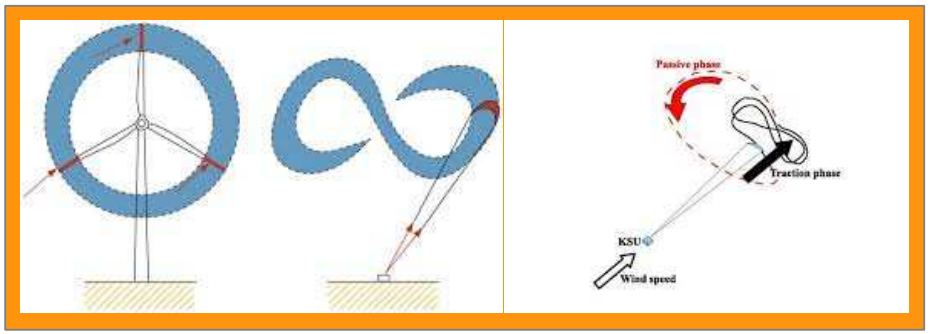
KGM1 born as an industrial robot, which in the final phase, will work in a completely automated manner, act in the generation of electricity by pulling it out by high-altitude winds through wings specially designed.



It will look like "Ground jan - Monotethred" (ground generator with one single cable) that the "active phase" of an alternating cycle, said "YO-YO", will generate electricity from the wing traction, carrying the cable from a coaxial drum to a motor-generator positioned on the ground.

And (only) with the energy accumulated inside, will pull down the wing, rewinding the cable into the "passive phase".

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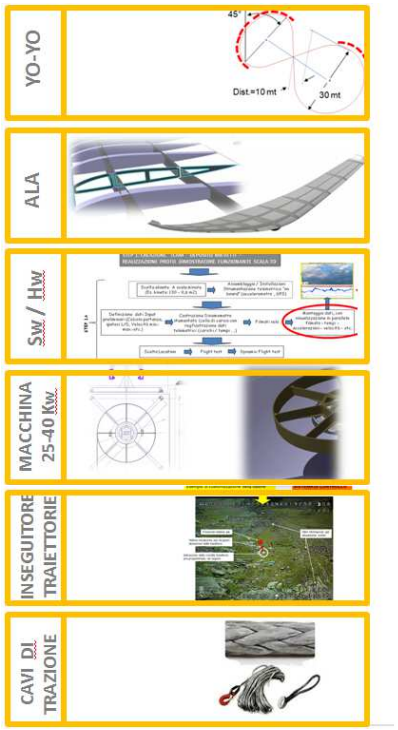
Insights

For all further details with regard to KGM1 project please refer to the technical reports, availables on request.



Considering that the KGM1 project is under development, all reports should be considered as CONFIDENTIAL DOCUMENTS.

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summary in conclusion

The Step1 we have achieved has fully confirmed the theories of our project, as previously written, now it needs a "home" bigger, a structure of a certain size in order to achieve the objective of creating a prototype of small size, fully functional in order to go on the market in a credible way and achieve the Airborne Wind Energy business.

We're going to face the stage perhaps more complex, namely the search for public capital and partners, starting from a "gambling" with a project yet to be proven, that asks an apparent strong funding for starting. The world seems will spend 48 trillion dollars in the next two decades for the energy market, must increasingly away from oil and derivatives, "the game could be worth the candle" ...

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Contacts

For any information, insights request, request technical documentation, or just for a chat on the topic AIRBORNE WIND ENERGY please contact Marco Ghivarello.

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