

# PROJECT ALTER EOLIA

*Another breath !*

## EXECUTIVE SUMMARY

Contest winner

« INNOV'UP 2012 »

France



*Our turbine is protected by Patent in Brazil,*

*BR INPI : 20 2013 0155 44 1 0000221304370369 GRU - inventor Hugues Boyenval*

*The global demand for energy is exponential, generally turns to proximity solutions (independently or self-consumption).*

*Renewable energy rating. In a few years I have seen the failure of "micro wind turbines" (machine less than 3kW). Whatever the level of quality, the size of these machines entails a short life.*

*The customer is not satisfied in terms of profitability. For these two reasons, I decided to design a medium sized wind turbine, durable, cost-effective, modular which can meet global proximity demand, in town or country, connected to the network or not, ALTEREOLIA will be part of tomorrow's solutions.*

*Hugues BOYENVAL*

*BSB ENGINEERING*



Our project involves the creation of a company "**BSB Engineering**" which will develop a range of machines constituting mini power plants which can be located close to the user "**ALTEREOLIA**". These mini power plants will supply electrical power, compressed air, cold, fresh or drinking water. They are modular and can be installed on the roofs of buildings in town or in the bush.

The turbine design has been specially designed to be simple, solid and durable. The lifetime is estimated at 30 years and power generation will be one of the most economical in the world (even without public aid). There will be no cost of energy transmission and very low maintenance.

Our customers are businesses, communities, condominiums and isolated villages. Whether or not connected to the public network. The demand is global, enormous and rapidly expanding.



We can adapt to any kind of application in terms of power or functionality as our stacked turbines are independent from each other

For remote and off-grid users, we have provided an innovative and original storage solution. Instead of storing the energy (battery) we store the energy source (wind) through a compressor that will produce compressed air and can be returned to power



A small turbine model was created. It showed us a total silence of operation, no vibration and startup speed by low wind. Today we need financial partners to develop a prototype (scale 1) that we will use to demonstrate the power. This research phase is expected to last 18 months and cost approximately \$ 1million. Subsequently, the development of the network of production and distribution cost about \$ 3 million. The numerous requests of potential customers that we have had suggests to us that we can fund the following easily with first sales.





## OUR TEAM



**1**



**2**



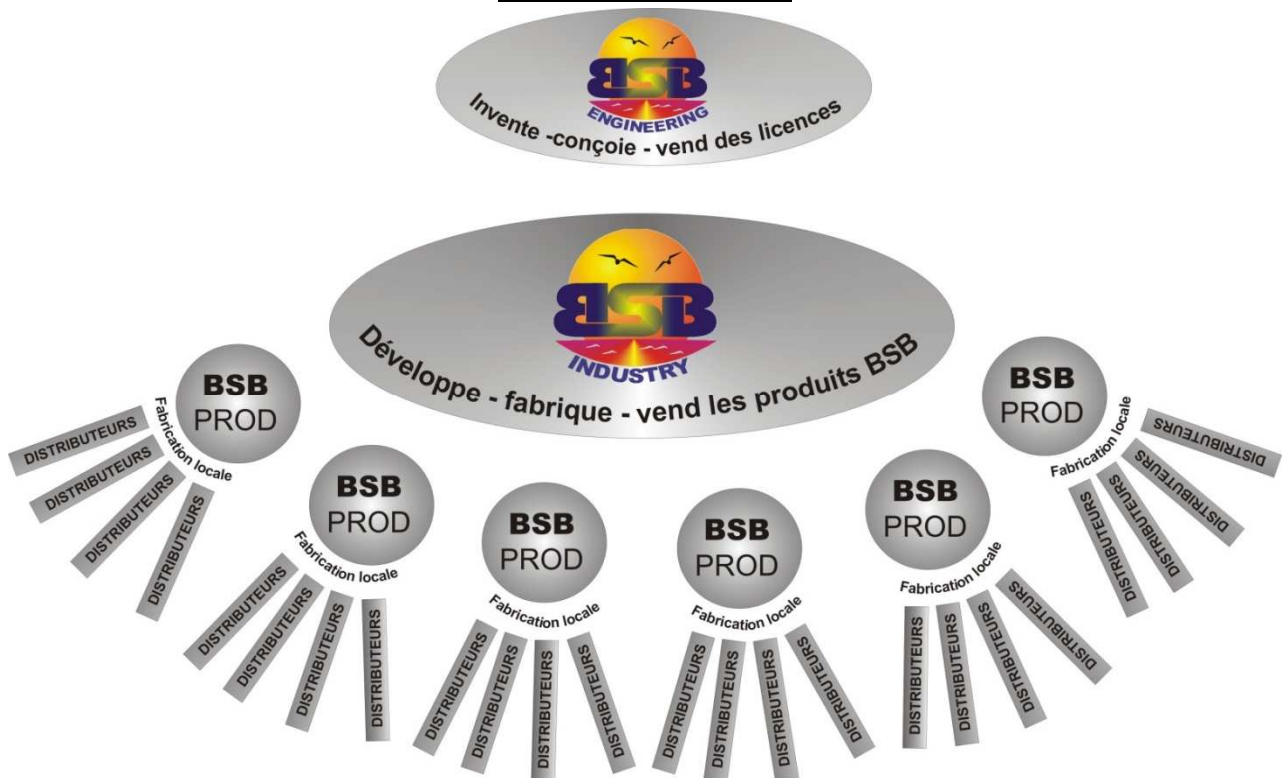
**3**



**4**

- 1- Hugues Boyenval:** French, 55, holds an executive MBA is the project leader and inventor of the concept. It will be the future president of the companies "BSB Engineering" and "BSB Industry".
- 2- Jean Christophe de Lustrac:** French Engineer "Arts et métiers", runs a consultancy business creation "CEPAGES". He has a long history as an industrial manager. He is currently in charge of the search for financial partners. He will be the future leader of "BSB Prod Europe".
- 3- Jean Marie Lambert:** Belgian living in Brazil for over 30 years, holds a PhD in international law and current leader of "BRASEOLICA LTDA." This business will be our future "BSB Prod South America".
- 4- Julio Cesar Faleiro:** Brazilian living in China for over 10 years. Electronics Engineer (Sophia Antipolis France) has also followed a course in Mandarin (Xiamen University-China). He currently runs a commercial agency import / export in Guangdong and Hong Kong. He is responsible for developing our project in China and Asia. Fluent Brazilian, French, Chinese, English

## BUSINESS MODEL



We plan to create an engineering company "BSB Engineering" which will manage the project development and intellectual property rights, an Industrial Society "BSB Industry" which will be in charge of industrial development and several local production companies "BSB Prod" whose "BrasEolica" part, closer to local markets and dealers.

## **FINANCIAL STRUCTURE and FINANCIAL REQUIREMENTS**



### **1 : BSB ENGINEERING – Financial requirement : \$ 1 million**

This company has the following characteristics:

- Active : right global use of inventions "Hugues Boyenval"
- Shareholders:
  - Hugues Boyenval : 70%
  - Investors: 30%
- Turnover generated by
  - The sale of licenses to dealers / distributors
  - The sale of the license to " BSB INDUSTRY "
  - Royalties related to sales of wind turbines by dealers
  - Royalties from " BSB INDUSTRY "



### **2 : The industrial company « BSB Industry » - Financial requirement : \$ 3 millions**

This company has the following characteristics:

- Shareholders:
    - BSB Engineering: 70%
    - Investors: 30%
  - Turnover generated by
    - Selling benefit study BSB Engineering
    - The sale of wind turbines
    - The sale of the production licenses for production companies
    - Royalties related to sales of wind turbines by production companies
    - The sale of "outsourced " non-members (electronic and generating map)
- Possibly renting or principle of wind energy sales

Planning: Priming and development of ALTEREOLIA Project						
N°	Action Steps	Financial year 1	Financial year 2	Financial year 3	Financial year 4	Financial year 5
1	Création BSB Engineering					
2	Création BSB Industry					
3	Verification plans					
4	Tender					
5	Reception quotes					
6	Manufacture proto turbine					
7	Control torque					
8	Testing torque					
9	Design of the alternator					
10	Testing power / validation					
11	Design of the Compressor					
12	Testing compresseur					
13	Mecatronic Design					
14	Expansion / deposits patent					
15	Mounting Braseolica					
16	Machine démo BrasEolica					
17	Creation BSB Prod 2					
18	Manufacture 90 machines					
19	Creation BSB prod 3					
20	Manufacture 160 machines					
21	Creation BSB Prod 4					
22	Manufacture 280 machines					
23	Creation BSB Prod 5					
24	Manufacture 460 machines					
25	Commercial approach					

*The holder and inventor of **ALTEREOLIA** project, "Hugues Boyenval", is now fully prepared to cede the rights of license globally. Do not hesitate to contact us for conditions.*