BUSINESS PLAN

1. **Locations of the investment:**
LOS ANGELES, ROME, INDIA

2. ***Previous work experience of the applicants:***

Name and Surname	Detail of the most important work and educational experiences gained
Stefano Amoroso	**Chartered Accountant, CEO of Nides Srl. Economist with a degree from Bocconi University in Milan. National and international experience manager. Passionate about computer science.**
Mohammad Abu Snober	**Computer engineer, Technical Director of Nides Srl. PhD in smart tech and cloud computing**
Fabio Massimo Zanzotto	**Professor of Computer Engineering at the University of Tor Vergata, PhD in artificial intelligence with experience in Natural Processing Language (NPL) and in Machine Learning (ML).**

Table 1

3. ***Project proposal***

Description of the initiative

Nides Eolico is a predictive software and an innovative hardware that increases the production of energy derived from the wind. The problem is that the frequent failures and operational interruptions of wind turbines take a long time to be solved.

In addition, each wind turbine produces an average of 1500 data per hour of operation, which makes it difficult to make reliable predictions for entire wind farms, each one of them include several wind turbines.

The consequence is that wind energy production companies have a very high incidence of operational and maintenance costs. According to research conducted by the United Nations, about 32% of the cost of energy production is absorbed by O&M operations.

Our solution consists of a real-time predictive analysis made through the most modern Machine Learning and Artificial Intelligence solutions for the software part, which are connected to an innovative micro-controller (a particular group of microprocessors) of our invention. The result of this intelligent and combined software and hardware solution is a system capable of making a precise predictive analysis in real time on wind machines, to prevent breakdowns before they occur.

Without replacing the existing SCADA (Supervisory Control And Data Acquisition) monitoring systems, our invention improves the efficiency of Operational and Maintenance (O&M) activities.

We reduce O&M costs by at least 20%, increasing productivity by 3%.

Incur expenses

The costs for the realization of the microcontroller prototype are of $ 5,000, to which must be added the expenses for registering a temporary patent valid both in the United States of America and in Europe, of the cost of $ 13,000. The tests will be conducted in the field, in an already existing wind farm, with the collaboration of University staff of "Università di Tor Vergata di Roma", based in Rome, with which we have an agreement.

This test will cost about $ 80,000 and will last for 2 months.

In the development and large-scale production phase of our intelligent solution, it will be necessary to provide for the recruitment of a sufficient number of qualified collaborators, the production costs of the hardware devices, the marketing and management costs useful for the development of the company. All these expenses are reported in detail in the financial tables reproduced in the following sections.

Development prospects

The growing demand for electricity in the world is going hand in hand with the "green" conversion of the supply and electricity production system.

In 2019, after two years in which they were overtaken by fossil fuels, it is expected that the production of energy from renewable sources will grow more than that produced using non-renewable sources. Investments are going hand in hand, and those relating to renewable sources will again predominate, as has been the case from 2010 to 2016.

In particular, within the various renewable sources, wind power is destined to grow more than all the others, due to its enormous availability and presence in every corner of the world, as well as on the seas.

On the hardware side, the growing demand for safety and reduction of fatal accidents has led to greater use of advanced driver assistance systems (ADAS) and vehicle on-board networks. Moreover, the growing attention to the implementation of low energy consumption solutions both in the process and in the discrete industries will promote the sustainability of the production of increasingly intelligent and predictive microcontrollers.

The market drivers of the future will be the following:

     a) Increase the penetration of smart grid systems in each sector.

     b) Increasing demand for medical devices and the automotive industry.

     c) Emergence of the Internet of Things (IoT).

Electrical networks include numerous components, such as wires, switches and transformers; smart networks add digital communication and remote control features. Smart grids ensure the facilitation of two-way communication by enabling end-user energy management, minimizing power outages and transporting the required amount of electricity. In this context, the production of intelligent micro-controllers is the best solution for the development of smart grids.

As regards the situation of the global micro-controller market, the global economic recession has led to a decrease in microcontroller average sales prices and an increase in competition in the sector, which favors the emergence of innovative but low-cost solutions, such as our.

The market share of micro-controllers is expected to increase within the total micro-processor market.

Table 2: SWOT analysis competitors-our company

Strengths (strenghts of the competitors)	*Weaknesses (weaknesses of competitors)*
- Large global companies. The main operators in the sector are Renesas Electronics Corporation, NXP Semiconductor, Microchip Technology, STMicroelectronics, Infineon Technologies and Texas Instruments. The first six participants accounted for over 85% of the overall market share in 2015. - Consolidated customers among the largest electricity companies in the world.	- Having concentrated on reducing costs and generating profits through economies of scale, the large microcontroller companies have invested very little in developing intelligent solutions. - If they decide to do so, the cost of putting together a multidisciplinary and competent team like ours is greater than the immediate benefits they would derive from it. So it is rather unlikely that they will decide to invest in this field in the short term.
Opportunities (opportunities for a new company)	*Threats (any threats to the company being established*
- We are the first to have designed and implemented an intelligent and integrated solution (hardware and software) for the renewable energy market, and in particular for the wind sector. - Our knowledge of both artificial intelligence tools and microcontroller hardware design, and finally the great experience related to the operation of the machines, i.e. turbines and wind turbines, makes our company unique and difficult to imitate.	- The greatest risk is that the renewable energy market will experience a new stalemate, after the encouraging recovery in recent months, which would make it more difficult to find customers willing to invest. Even if, precisely thanks to the decline in the demand for renewable energy, the exact opposite could occur. - Another risk, actually rather remote, is that there is a global economic recession that blows up any large-scale investment project.

Innovative factors

Our main innovative factors are the implementation of artificial intelligence on tiny microcontrollers, creating a neural network which reproduces the functioning of the brain and therefore is projected to be adaptive, i.e. learns and analyzes environmental conditions, and to be able to respond to new, previously unseen condition.

We want to improve the production of wind energy not boosting the production of more powerful machines, but cutting useless and not productive costs.

Our solution will make possible to innovate at a reasonable price, in so helping especially the SME that are the ones most in need of innovation but have few funds available.

Also Public Administration will be able to

DETAIL OF EXPENSES TO BE SUPPORTED WITH THE FINANCING REQUIRED
(IN US DOLLARS)

Expense items	AMOUNT NECESSARY	AMOUNT REQUIRED
CONSTITUTIONAL EXPENSES: to establish the American headquarters of the company		
1 Company incorporation in USA system	2,000	2,000
OPERATING EXPENSES		
1 Telephony and mobile internet	1,250	1,250
2 Electricity and gas	1,200	1,200
3 Administrative management fees	30,000	30,000
4 Banking account management costs	800	800
PRODUCTION COSTS		
1 Advanced materials for prototypes and sales	100,000	100,000
2 Cost of industrial production	322,500	322,500
3 Promotion and advertising costs	60000	60000
CONSULTING SERVICES		
1 Specialized consultancy services for the development and implementation of the project	40000	40000
2 Purchase of services provided in cloud computing, SAS and system integration	20000	20000
STAFF COSTS	422250	422250
INDIRECT COSTS AND OTHER CHARGES		
Cost of the guarantee on advance		
TOTAL COSTS	**1000000**	**1000000**

REVENUE FORECASTS

Sales goals		Forecast		
		1° Fiscal year profit	2° Fiscal year profit	3° Fiscal year profit
Product/ microcontroller service	Quantity No.	**86,200**	**103,450**	**124,130**
	Unit Price €	**14.5**	**14.5**	**14.5**
	Turnover	**1,250,000**	**1,500,000**	**1,800,000**
Product/artificial intelligence software consulting service	Quantity No.	**15**	**24**	**43**
	Unit Price €	**250,000**	**250,000**	**250,000**
	Turnover €	**3,750,000**	**6,000,000**	**10,750,000**
Total turnover		**5,000,000**	**7,500,000**	**12,550,000**