



Business Opportunities in the Convergence Regions at BIAT

Naples, 10-12 December 2014





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Innovation is a way for Italian companies to approach international markets and a growing number of studies highlight a strong connection among the companies productivity and profits and their level of internationalization and innovation.

On the other hand, for SMEs the interaction with research institutes and universities is essential to access innovative networks and can be a tool for internationalization as well.

The “BIAT - Innovation and High Technology Lab”, represents a new international format, created to facilitate exchange innovation between Italian companies and foreign counterparts. BIAT also focuses on universities and clusters.

BIAT offers this opportunity to SMEs, research centres, technological parks and start-ups of the four Italian Convergence Regions (Calabria, Campania, Apulia and Sicily), so that they can present their innovation excellence and establish international agreements such as transferring of expertise, patents assignment and foreign direct investment attraction.

I believe that the Export South Plan, to be launched in Naples at the Conference on 10th December 2014, will provide some extremely significant opportunities to all the companies taking part.

Carlo Calenda
Italian Deputy Minister for Economic Development



I am especially pleased to welcome our international guests to the wonderful and historic venue of Naples' *Stazione Marittima*, which will host the first edition of BIAT, the Innovation and High Technology Lab, featuring new international cooperation opportunities for innovative southern Italian enterprises.

BIAT is the latest addition to the Italian Trade Agency's *Export Sud* Plan, a comprehensive project that envisages an ambitious set of activities designed to benefit enterprises based in the four so-called "Convergence" southern Italian Regions - Campania, Apulia, Calabria and Sicily. Through a targeted array of initiatives, *Export Sud* makes available tools and resources that will enable firms to benefit fully from opportunities and expand successfully in the international marketplace.

The Italian Trade Agency has significantly boosted its promotional activities, in response to the momentous change we are experiencing on the fast-moving world trade and economic scene. This is all the more true in the field of advanced technologies, and the BIAT initiative addresses just these: aerospace, nano- and biotech, new materials, renewable energy, environment, ICT, mechanical engineering, and more. Selected enterprises based in the "Convergence" Regions will have the opportunity to share experiences and information and meet with prospective partners from some of the world's pace-setting markets, including the US, Canada, France, Sweden, Germany, Austria, the UK, Japan, Israel, China, the UAE and Russia.

BIAT - is the newest and, I should say, one of the more sophisticated and novel initiatives we have put into place for this purpose. I am certain that, thanks also to our partners - Confindustria, the "Convergence" Regional Governments and *Campaniain.Hub* - but, above all, to the participating companies themselves, BIAT will help everyone to reap the benefits that Italy's creativeness and flair for innovation can offer.

Riccardo Maria Monti
President ICE - Italian Trade Agency



BIAT - Innovation and High Technology Lab, created under EU Cohesion Action Plan, is a pilot project designed by ICE - Italian Trade Agency to enable the enterprises and research systems of Italy's so-called Convergence Regions - Campania, Calabria, Apulia and Sicily - to help them express their full potential in innovation and excellence.

Indeed, the Convergence Regions host some of Italy's most important technological and industrial districts, of outstanding level even in the European context.

BIAT especially focuses on the development of international partnerships in the field of aerospace, nano-biotechnology, ICT, environment, renewable energy and mechanical devices.

The companies and research groups of these four Regions, with their strong entrepreneurship and innovation capacity, can provide a noteworthy contribution to domestic growth.

They are now widening their business horizons into the European Union and the Third Countries, where a potential demand for their knowledge and skills can be easily found.

The appointment in Naples will allow to promote their placing on suitable markets, and/or the transfer of innovative products and services or high technology and intangible assets - specifically patents - by matching commercial and technology supply with demand between start-ups, innovative SMEs, business networks, universities, technology parks and hosted foreign counterparts.

The ICE-Agency is committed to full speed in this innovative project.

Roberto Luongo

CEO & Managing Director ICE - Italian Trade Agency

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Aerospace



ALENIA AERMACCHI SPA - 1

Project Leader

Viale dell'Aeronautica
80038 Pomigliano d'Arco (NA)

CAMPANIA

Employees: more than 499

Turnover: more than 25 mln €

Export: more than 15 mln €

Status: LARGE COMPANY

Contact: Claudio Voto (DAC Technical Expert)

Telephone: +39 0823623191

E-Mail: segreteria@daccampania.com

Web site: www.daccampania.com



Project Proposal

CERVIA - Innovative and Advanced Methods for Certification and Verification

Description of the innovation project:

CERVIA will develop innovative design methods, that will allow a meaningful improvement of the verification and certification process.

The methods will include toughness properties, behaviour in dynamic conditions (mainly crashworthiness). A specific activity will be dedicated to the lean engineering techniques, and in this environment the issues of design optimisation from an environmental point of view (green engineering) will be investigated. All these activities will allow to exploit the opportunities offered by the availability of powered Hardware and Software, making feasible, with affordable costs, the utilization of HPC (High Performance Computing) techniques.

IP Protection Level:

Ongoing activities to submit intellectual property protection application.

State of development:

CONCEPT

Industrial application:

Commercial Aviation

Market segment:

The market for civil aircraft is expected to grow over the next 20 years, reaching approximately 56.700 units with a value of more than \$ 2.500 Bln.

In this area a new turboprop aircraft in the 92 seats range is being designed, it can complement and build on the success of the ATR family.

Advantage factor:

The use of virtual methods of aircraft certification is much lower than would be possible, especially compared to the rapid progress of hardware and software.

The activities planned under the CERVIA project are aimed at the development and validation of existing or absolute novel methodologies

Commercial challenge:

Reduction in terms of production costs [20%], reduction in weight, introduction of new materials and innovative architectures.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

ALENIA AERMACCHI SPA - 2

Project Leader

Viale dell'Aeronautica
80038 Pomigliano d'Arco (NA)

CAMPANIA



Employees: more than 499

Turnover: more than 25 mln €

Export: more than 15 mln €

Status: LARGE COMPANY

Contact: Claudio Voto (DAC Technical Expert)

Telephone: +39 0823623191

E-Mail: segreteria@daccampania.com

Web site: www.daccampania.com

Project Proposal

FUSIMCO - Metallic Composite Hybrid Fuselage

Description of the innovation project:

The primary objective of FUSIMCO project is the development of the conceptual phase and the initial definition of the innovative design of fuselage structures made in hybrid metal/composite for aeronautical applications, and the definition of the related manufacturing processes.

IP Protection Level:

Ongoing activities to submit intellectual property protection application.

State of development:

CONCEPT

Industrial application:

Commercial Aviation

Market segment:

The market for civil aircraft is expected to grow over the next 20 years, reaching approximately 56.700 units with a value of more than \$ 2.500 Bln.

In this area a new turboprop aircraft in the 92 seats range is being designed, it can complement and build on the success of the ATR family.

Advantage factor:

The main goal is the introduction of innovative architectural solutions and the related processes of production/assembly of regional aircraft with turboprop propulsion: the reduction of the overall weight of the structures, reducing the number of components.

Commercial challenge:

Reduction in terms of production costs [20%], reduction in weight, introduction of new materials and innovative architectures.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

ALENIA AERMACCHI SPA - 3

Project Leader

Viale dell'Aeronautica
80038 Pomigliano d'Arco (NA)

CAMPANIA

Employees: more than 499
Turnover: more than 25 mln €
Export: more than 15 mln €
Status: LARGE COMPANY

Contact: Claudio Voto (DAC Technical Expert)
Telephone: +39 0823623191
E-Mail: segreteria@daccampania.com
Web site: www.daccampania.com



Project Proposal

SCAVIR - Advanced Configurations Studies for an Innovative Regional Aircraft

Description of the innovation project:

The overall objective of the research project is the identification and testing of innovative technologies and processes for the design and implementation of a future regional aircraft on the market.

The project also aims to define the future advanced ATM systems requirements (SESAR / NextGen) in order to be able to operate in the future market scenario; the future Turboprop aircraft will be supplied also by an advanced customer logistics support system.

IP Protection Level:

Ongoing activities to submit intellectual property protection application.

State of development:

CONCEPT

Industrial application:

Commercial Aviation

Market segment:

The market for civil aircraft is expected to grow over the next 20 years, reaching approximately 56.700 units with a value of more than \$ 2.500 Bln.

In this area a new turboprop aircraft in the 92 seats range is being designed, it can complement and build on the success of the ATR family.

Advantage factor:

Aerodynamic model optimization by using both analytical (CFD) and WTT campaign to ensure high aerodynamic efficiency in both cruise and low speed conditions, for instance:

- ▶ Emissions and cost reduction;
- ▶ Short takeoff and landing distances to ensure maximum market capture.

Commercial challenge:

Reduction in terms of production costs [20%], reduction in weight, introduction of new materials and innovative architectures.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

ALENIA AERMACCHI SPA - 4

Project Leader

Viale dell'Aeronautica
80038 Pomigliano d'Arco (NA)

CAMPANIA



Employees: more than 499

Turnover: more than 25 mln €

Export: more than 15 mln €

Status: LARGE COMPANY

Contact: Claudio Voto (DAC Technical Expert)

Telephone: +39 0823623191

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Web site: www.daccampania.com

Project Proposal

STEP FAR - Development of Eco-Compatible Materials and Technologies, of Drilling and Trimming Processes and of Robotized Assembly

Description of the innovation project:

Innovative processes which will be developed in this project are laser drilling and cutting of aluminum alloys, and drilling via machining, using collaborating anthropomorphic robots, of hybrid aluminum/composite stack-ups and their assembly. In addition materials and processes with low environmental impact (elimination / reduction of hazardous substances from the painting process and energy-saving products used: water, detergents, paints, thinners) will be selected and developed for the treatment of aircraft surface to ensure protection from aggressive factors comparable or higher to that offered by currently used materials and processes and in compliance with the certification requirements of aeronautics bodies.

IP Protection Level:

Ongoing activities to submit intellectual property protection application.

State of development:

CONCEPT

Industrial application:

Commercial Aviation

Market segment:

The market for civil aircraft is expected to grow over the next 20 years, reaching approximately 56.700 units with a value of more than \$ 2.500 Bln.

In this area a new turboprop aircraft in the 92 seats range is being designed, it can complement and build on the success of the ATR family.

Advantage factor:

- ▶ Development of innovative technologies that improve the time/cost of manufacturing/assembly of aircraft structural parts;
- ▶ Improvement in terms of efficacy and/or environmental sustainability;
- ▶ Improvement in terms of time/cost of assembling fuselages in hybrid composite/aluminum.

Commercial challenge:

Reduction in terms of production costs [20%], reduction in weight, introduction of new materials and innovative architectures.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

ALENIA AERMACCHI SPA - 5

Project Leader

Viale dell'Aeronautica
80038 Pomigliano d'Arco (NA)

CAMPANIA

Employees: more than 499
Turnover: more than 25 mln €
Export: more than 15 mln €
Status: LARGE COMPANY

Contact: Claudio Voto (DAC Technical Expert)
Telephone: +39 0823623191
E-Mail: segreteria@daccampania.com
Web site: www.daccampania.com



Project Proposal

SIPROP - Technologies for Design and Manufacturing of Airplane on Board Systems

Description of the innovation project:

The project falls within the context of studies for the development of regional aircraft using highly innovative technologies, in order to gain competitive advantages in the products and industrial processes. In particular, the project addresses the design and integration of advanced on-board systems for innovative regional aircraft. The project will find its natural application in the development of a new aircraft family. This initiative will allow Alenia Aermacchi to create favorable conditions to gain a significant share of the regional aircraft market by developing and launching new products.

IP Protection Level:

Ongoing activities to submit intellectual property protection application.

State of development:

CONCEPT

Industrial application:

Commercial Aviation

Market segment:

The market for civil aircraft is expected to grow over the next 20 years, reaching approximately 56.700 units with a value of more than \$ 2.500 Bln.

In this area a new turboprop aircraft in the 92 seats range is being designed, it can complement and build on the success of the ATR family.

Advantage factor:

Development of solutions that allow overall improvement in aircraft performance, with reference to both the transport capacity (payload) and an increase in the operating range reached by the aircraft.

Commercial challenge:

Reduction in terms of production costs [20%], reduction in weight, introduction of new materials and innovative architectures.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

C.A.M.A. SCARL - CONSORZIO ATITECH MANUTENZIONE AERONAUTICA SCARL

Project Leader

Via Aeroporto di Capodichino
80144 Napoli (NA)

CAMPANIA



Employees:

Turnover:

Export:

Status: SME

Contact: Claudio Voto (DAC Technical Expert)

Telephone: +39 0823 623191

E-Mail: segreteria@daccampania.com

Web site: www.daccampania.com

Project Proposal

MAVER - Maintenance Aids Viability for Enhanced Results

Description of the innovation project:

The project aims to develop an innovative set up for a very flexible Maintenance Organization (MRO) able to switch operations quickly from regional to wide bodies aircraft and vice versa. The project plan analyzes in a real environment how to implement a new Lean model. The new model relies on original applications of emerging technologies in various applicable fields and exercises the leverage on a multitude of cost effective applications. The new model well adapts to independent MRO, antithetic of big one-stop facilities, and the research project is used itself to study the integration into the MRO business of new readiness and sustainment services in order to enlarge market opportunities.

IP Protection Level:

Patent application to be submitted.

State of development:

CONCEPT

Industrial application:

Maintenance, Repair and Overhaul (MRO)

Market segment:

According to the latest official forecasts (IATA), the global market for Maintenance, Repair and Overhaul (MRO) is expected to grow by 3.2% per year over the next 10 years and reach a value of \$ 58 Bln in 2019.

Advantage factor:

This project aims to produce knowledge that is capable of being translated into innovative processes that meet the high standards demanded of reliability and safety of products, accelerate the pace of production, raise productivity and economic efficiency of enterprises.

Commercial challenge:

The validity of the project is related to the following results:

- ▶ Increased investment in research into the cabin interior equipment and systems integration;
- ▶ Strengthening the build-up of engineering capability and progress of know-how as well as state of the art;
- ▶ Re-engineering and streamlining of operational processes of maintenance;
- ▶ Business design approach and development of MRO readiness & sustainment services.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING



Via Spagna, 240/242
87036 Rende (CS)

CALABRIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: from 75.000 to 250.000 €

Status: SME

Contact: Letizia Nicoletti (CEO)

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Web site: www.cal-tek.eu

Project Proposal

Advanced Perception Processes for Space Exploration

Description of the innovation project:

The technology embodies a rigorous engineering process throughout the development of cognitive robotic agents, including models of the system architecture and requirements, and analysis/definition of a verification process suitable for the proposed robotic agents. The proposal aims at developing non-linear brain dynamics to be embodied into cognitive robotic agents to endow them with advanced, real-time perception processes for space exploration. This will be achieved by brain-like computing which uses Cellular Neural Networks and non-linear Partial Differential Equations. Hence, the main goal is to mimic the brain's ability to perceive as humans and to build brain processes in a chip using a CNN-PDE modelling tool. The novelty of this approach is that coupled functions can be implemented in a hardware, via discrete off-the shelf components or fabricated as VSLI chips. The proposal needs to involve University of Calabria's experts.

IP Protection Level:

No invention patent has been applied for.

State of development:

MODEL

Industrial application:

Aerospace

Market segment:

For its wide-ranging science and technology, for its methodological and technological innovations, the project will be of high international level, and a high economic level is foreseen.

Advantage factor:

The advantage of the proposal will be achieved by brain-like computing which uses Cellular Neural Networks (CNNs) and non-linear Partial Differential Equations (PDE). Moreover, a strong interdisciplinary approach (psychology plus engineering) will be the basis of this project. The impact can be significant on different levels: an integration of methods, tools and conceptual approaches across the involved area, will contribute to a significant advancement in robotic perceptual processes; skills will be strengthened to produce an industrial application in the field.

Publications and Customer References:

- ▶ Bilotta E., Pantano P. (2010) Cellular Automata and Complex Systems: Methods for Modelling Biological Phenomena. IGI Global: NY;
- ▶ Bilotta E., Cutrì G., Pantano P. (2006). Evolving robot's behavior by using CNNs, Proc. The Ninth International Conference on the Simulation of Adaptive Behaviour (SAB'06) - from animals to animats 9, 25 - 29 September 2006, CNR, Roma, Italy, Lecture Notes in Artificial Intelligence, 631-639;
- ▶ Bilotta E. and Pantano P. S. and Staino A. and Vena S., "Computing with non linear Dynamics: a CNN approach" Infinity - Infinite and Infinitesimal in Mathematics, Computing and Natural Sciences, Cetraro, 17-21 May 2010.

Proposal of cooperation agreement:

COMMERCIAL CONTRACT, PARTNERSHIP

Via Maiorise snc
81043 Capua (CE)

CAMPANIA

Employees: from 100 to 499
Turnover: from 5 mln to 15 mln €
Export: from 5 mln to 15 mln €
Status: RESEARCH INSTITUTE

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Project Proposal

Improved Coding Technologies for Aerial Imagery

Description of the innovation project:

Commercial video/imagery coding systems currently employed in aerial imagery applications do not rely on some peculiarities in terms of scene 3D model and correlation among successive frames. In particular, the observed scene is static, the camera movement is dominant, the 3D scene is approximately known, camera position and orientation can be obtained from the navigation system. These considerations led CIRA to develop novel motion imagery encoding technologies that can reduce the computational effort of video processing and can improve the rate-distortion curves. The developed technology is ideal to optimize the resources on satellite data links, in scenarios in which motion imagery has to be transmitted from flying platforms.

IP Protection Level:

Already developed solution: Technology Readiness Level (TRL) = 5 (component validation in relevant environment); IPR Status: Not Patented, Published (see references).

New solution under development (expected better results): TRL = 3 (proof-of concept); IPR Status: Not Published.

State of development:

PROTOTYPE

Industrial application:

Aerial Remote Sensing, Aerial Video Surveillance, especially from Unmanned Aerial Systems

Market segment:

Reference Market: High Altitude Unmanned Aerial Vehicles (UAV).

Potentially Interested Actors: UAV Producers, Payload Producers for Aerial Remote Sensing or for Aerial Video Surveillance, SW/HW Producers for On Board Image Processing, ICT Big Companies interested in UAV Fleet Development Programs.

Advantage factor:

Advanced Motion Imagery Coding Tools: Increased Processing Speed, Reduced Power Consumption, Improved Decoded Image Quality, Full Compatibility With Existing Standard Decoders.

Commercial challenge:

UAVs equipped with this technology needs less power consumption and/or less data-link resources at the same decoded image quality. Saved channel capacity can be used to improve sensor resolution, increase the number of sensors or save money for satellite data link usage. This technology can be a tool to optimize the channel capacity of the satellite data link used by high altitude UAVs. The commercial challenge is to intercept companies that are investing in these leading edge technologies.

Publications and Customer References:

- ▶ C. V. Angelino, L. Cicala, M. De Mizio, P. Leoncini et al: Sensor aided H.264 Video Encoder for UAV applications, Picture Coding Symposium, PCS 2013.
- ▶ C. V. Angelino, L. Cicala & others: A sensor aided H.264 encoder tested on aerial imagery for SFM, IEEE Int.Conf. on Image Processing, ICIP 2014.

Proposal of cooperation agreement:

KNOW HOW TRANSFER, R&D PROJECT FINANCING

CIRA SCPA

CENTRO ITALIANO RICERCHE AEROSPAZIALI - 2



Via Maiorise snc
81043 Capua (CE)

CAMPANIA

Employees: from 100 to 499
Turnover: from 5 mln to 15 mln €
Export: from 5 mln to 15 mln €
Status: RESEARCH INSTITUTE

Contact: Carlo Russo (Business opportunity, Head)
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Project Proposal

Leading Edge Morphing Device

Description of the innovation project:

Morphing architecture aimed at modifying the geometry of the airfoil leading edge zone, this way producing high lift and preserving the laminar flow (drag reduction).

The architecture is constituted by two main subsystems: the first subsystem produces the deformation of the skin to fit a target morphed shape; the specific motion of the subsystem elements contributes to alleviate the stress level of the skin, this way preventing from structural collapse events. The second subsystem is constituted by an actuator and by a kinematic chain linking the actuator itself to the first subsystem; the kinematic chain was designed to amplify the actuator transmitted forces as the aerodynamic load increases.

IP Protection Level:

Already developed solution: Technology Readiness Level (TRL) = 5 (component validation in relevant environment); IPR Status: the European Division intends to grant the application. Patent application: "Device for modifying the airfoil geometry", patent Id: 12425175.2.

State of development:

PROTOTYPE

Industrial application:

Control Surfaces of Aircrafts

Market segment:

Reference Market: Military and civil aircraft.

Potentially Interested Actors: Aircraft industries, Advanced materials manufactures.

Advantage factor:

Preservation of the wing laminar flow; enhancement of the wing aerodynamic efficiency at several flight regimes, reduction of the weight of the actuation architectures (elimination of the conventional nacelles).

Commercial challenge:

Aircraft equipped with the proposed technology are characterized by a large adaptivity to the different flight regimes; this produces an enlargement of the flight envelope, with benefits in terms of cost reduction.

Proposal of cooperation agreement:

KNOW HOW TRANSFER, R&D PROJECT FINANCING

Via Maiorise snc
81043 Capua (CE)

CAMPANIA

Employees: from 100 to 499
Turnover: from 5 mln to 15 mln €
Export: from 5 mln to 15 mln €
Status: RESEARCH INSTITUTE

Contact: Carlo Russo (Business opportunity, Head)
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Web site: www.cira.it

Project Proposal

Robotic Systema for the Manufacturing of Anisogrid Composite Structures

Description of the innovation project:

The patent refers to a robotic system for the wet deposition of composites. The head impregnates and winds a single tensioned tow while the deposition eye rotates indefinitely. A separate device impregnates and controls a set of separated parallel tows which are wound on a rotating mandrel. The mandrel is moved by a rotobasculating positioner. This system is aimed at the winding of complex shapes, i.e. with planar, single and double curvature surfaces, open or closed, even with two rotation axes (T or Y shapes). It is perfectly suitable for interlaced Anisogrid Structures, both on closed cylindrical shapes (cones and cylinders with separate hoops and helices) and on open portions of double curvature surfaces (pin winding).

IP Protection Level:

Italian patent No. IT0001397218 released 4/1/2013.

State of development:

PRODUCT

Industrial application:

Aeronautics, Space, Automotive

Market segment:

Airplane manufacturers, launchers manufacturers.

Advantage factor:

The state of the art concurrent technologies introduce imperfections and dummy parts in the manufacturing of hoop ribs in anisogrid structure winding, due to the parallel shapes. More generally they are not suitable for complex shapes.

Commercial challenge:

To activate in Italy the production of Composite Anisogrid Structures for Space and Aeronautical applications.

To transfer the technology in automotive applications.

Publications and Customer References:

F. De Nicola, G. Totaro, C. Vitiello, "Sistema per la Deposizione di materiali compositi in Wet Winding con rotazione infinita dell'occhio e con distribuzione parallela di supporto".

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, KNOW HOW TRANSFER, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING

CIRA SCPA

CENTRO ITALIANO RICERCHE AEROSPAZIALI - 4



Via Maiorise snc
81043 Capua (CE)

CAMPANIA

Employees: from 100 to 499

Turnover: from 5 mln to 15 mln €

Export: from 5 mln to 15 mln €

Status: RESEARCH INSTITUTE

Contact: Carlo Russo (Business opportunity, Head)

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Project Proposal

Adaptive Automatic Landing

Description of the innovation project:

Fully adaptive autonomous landing system starting from any point of three dimensional space, based on the use of DGPS or EGNOS (or any Satellite Based Augmentation receiver) and Laser/Radar Altimeter sensor units. Main features of the system are: on line landing trajectory re-planning, full autonomy from pilot inputs, weakly or not instrumented landing runway, ability to land starting from any point in space and autonomous management of failures and/or adverse atmospheric conditions.

IP Protection Level:

No patent application has been filed.

State of development:

PROTOTYPE

Industrial application:

Aerospace – Unmanned Aerial Vehicles Fixed Wing

Market segment:

General Aviation.

Advantage factor:

Use of SBAS GPS system up to touch down. Accounts for Performance Limitations of the Aircraft (Failures); High Touch Down Precision also in the face of adverse atmospheric conditions.

Commercial challenge:

Additional feature for Unmanned Aerial System integrators that can also be used in emergency cases.

Publications and Customer References:

De Lellis E., Di Vito V., Marrone C., Ciniglio U., Corrado F., 'Flight Testing of a Fully Adaptive Algorithm for Autonomous Fixed Wing Aircrafts Landing', Conference Infotech@Aerospace 2012, 19 - 21 June 2012, Garden Grove, California, AIAA 2012-2502.

Proposal of cooperation agreement:

KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

CIRA SCPA

CENTRO ITALIANO RICERCHE AEROSPAZIALI - 5



Via Maiorise snc
81043 Capua (CE)

CAMPANIA

Employees: from 100 to 499
Turnover: from 5 mln to 15 mln €
Export: from 5 mln to 15 mln €
Status: RESEARCH INSTITUTE

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Project Proposal

On-Line Mission Replanner

Description of the innovation project:

SW application to be integrated in an Unmanned System Ground Control Station that supports remote pilot or ground operators in performing a mission change upon new destination set by the pilot or by automatically managed events, like vehicle failures. The SW automatically detects the event and, based on some pre-defined rules, generates a new mission flight plan optimized with respect to pre-defined criteria that can be visualized on the Ground Control Station graphic interface. The new flight plan is generated online during the flight mission and it avoids the terrain, threats, bad weather conditions, no-fly zones and traffic, while accounting for current vehicle maneuvering capabilities, datalink coverage and mission operation area.

IP Protection Level:

No patent application has been filed.

State of development:

PROTOTYPE

Industrial application:

Aerospace – Unmanned Aerial Vehicles Fixed or Rotary Wing

Market segment:

General Aviation.

Advantage factor:

Very fast and low computational effort algorithm, based on sound mathematical principles. Accounts for Performance Limitations of the Aircraft or of its critical systems. It can be used for obtaining traffic separation and also in urban areas (if an urban and elevation map of the area is known).

Commercial challenge:

Additional feature for Unmanned Aerial System integrators that can also be used in emergency cases. It relieves the remote pilot or ground operators from manually performing flight plan changes during unforeseen situation.

Publications and Customer References:

G. Morani, F. Corrado, V. Di Vito, E. De Lellis, 'On-Line Trajectory Generation with Vehicle Constraints and Forbidden Areas', Proc IMechE Part G: Journal of Aerospace Engineering 227(2), 2012.

Proposal of cooperation agreement:

KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

CIRA SCPA

CENTRO ITALIANO RICERCHE AEROSPAZIALI - 6



Via Maiorise snc
81043 Capua (CE)

CAMPANIA

Employees: from 100 to 499
Turnover: from 5 mln to 15 mln €
Export: from 5 mln to 15 mln €
Status: RESEARCH INSTITUTE

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Web site: www.cira.it

Project Proposal

ASHRAM - Ash & Sand Route Airspace Monitoring

Description of the innovation project:

Encounters between aerosol and jet planes in flight could have inauspicious consequences. ASHRAM consists of a hardware/software solution concerning risks caused by volcanic ash and desert sand while jet planes are flying. It aims to represent a powerful tool dedicated to Air Traffic Control and airliners. ASHRAM accomplishes three main tasks: alert, monitoring and forecasting. Processing data provided by an existing satellite and ground based network of sensors, the system is able to monitor airspace sectors polluted by aerosol and produce an alert for those planes, whose risk to encounter an aerosol cloud is imminent. Concerning scenario analysis and decisional support, a forecasting module is a suitable and lean solution.

IP Protection Level:

No patent application has been filed.

State of development:

CONCEPT

Industrial application:

Air Traffic Control (decision making support), Civil Aviation

Market segment:

This application addresses the whole public and private civil aviation market worldwide.

Advantage factor:

ASHRAM's Key features are: no need to develop a new technology, technology transfer, remote management, low maintenance costs, easy to upgrade, it is an automated service.

Commercial challenge:

A competitive advantage lies on exclusive service supply: a single provider will offer such a solution. The return on the investment arises from services supply contracts, licences and/or subscriptions.

Publications and Customer References:

"Computational procedure for location sensor network monitoring volcanic ash" – Conference "ISOLDE 2014".

Proposal of cooperation agreement:

KNOW HOW TRANSFER, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING

CNR RESEARCH NATIONAL COUNCIL - INO NATIONAL INSTITUTE OF OPTICS



Via Campi Flegrei, 34
80078 Pozzuoli (NA)

CAMPANIA

Employees: from 100 to 499

Turnover:

Export:

Status: RESEARCH INSTITUTES

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Project Proposal

Use of Coherent Infrared Sources for Non-Destructive Testing (NDT) and Safety

Description of the innovation project:

The optical techniques for non-destructive testing (NDT) are based on the phenomenon of interference. The radiation is projected on the object of interest and the reflected light is recombined and processed by extracting the phase maps, and then the information on the surface morphology of the same. The ability to use infrared sources, then with wavelengths of the order of 10 μm , allows the application of these techniques on large surfaces filtering the noise vibrational environment, and other constraints (i.e. dark room laboratory) typical of when visible laser light is employed.

IP Protection Level:

No patent as yet – 2 patents pending on this technology.

State of development:

PROTOTYPE

Industrial application:

Non-destructive testing of materials and structures of aerospace interest; Homeland-security for detecting live people in fire-scenes

Market segment:

SMEs, big companies.

Advantage factor:

Several EU research centers are working on issues of non-destructive optical systems for aerospace applications. The use of coherent infrared wavelength allows to overcome a series of problems linked to environmental vibrations that restrict such techniques to light sources in laboratory use.

Commercial challenge:

The realization of a “turn-key” system for nondestructive optical testing of large surfaces.

Publications and Customer References:

Locatelli M. et al., “Imaging live humans through smoke and flames using far-infrared digital holography”, Optics Express Volume 21, Issue 5, 11 March 2013, Pages 5379-5390.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER



SS 7 Appia Km 706+030 c/o Cittadella della Ricerca
72100 Brindisi (BR)

PUGLIA

Employees: from 50 a 99

Turnover: from 2,5 mln to 5 mln €

Export: from 75.000 to 250.000 €

Status: CONSORTIUM

Contact: Silvio Pappadà (Senior researcher with the function of project manager)

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Project Proposal

Induction Welding Equipment to Join Conductive Composite Materials and Related Joining Method

Description of the innovation project:

The patented equipment is a new machine for continuous induction welding of thermoplastic carbon reinforced composite materials. In detail, the object of the patent is the automated and controlled surface cooling system, which allows an optimized temperature distribution within the joining. In short, with the patented system it is possible to overcome a number of physical and technological limits of the traditional induction welding technique, thus allowing the manufacture of joinings with very high performances in a completely automated and repeatable manner.

IP Protection Level:

The Italian patent was requested and obtained for the fundamental claims (TO2013A000367). The patent extension at European level was requested the 07th May 2014 (application number 14167453.1).

State of development:

PRODUCT

Industrial application:

Aerospace sector

Market segment:

The value of the aerospace sector in Europe is 34,2% of the worldwide value, equal to about \$ 700 Bln, and it is one of the few sectors in constant growth. In this sector, composite materials play an increasingly important role, because of the need for weight and consumption reduction.

Advantage factor:

The patented cooling and control system allows the manufacture of joinings with very high performances in a repeatable and economic manner, thus ensuring a valuable contribution to the exploitation of thermoplastic composite materials in the aerospace sector.

Commercial challenge:

One of the main objectives in the sector of composite materials for aerospace is the development of economical and reliable technologies, which allow high production rates, especially for the manufacture of complex structures which require joinings. The exploitation of induction welding, which completely fulfill these needs, allows a strong competitive advantages for both equipment resellers and composite components manufacturers.

Publications and Customer References:

- ▶ S.Pappadà, A.Salomi et al., "Finite element simulations to support continuous induction welding of PPS-Carbon Composites", SEICO 13, Paris, March 2013;
- ▶ S.Pappadà, A.Salomi et al., "Application of induction welding to the fabrication of a stiffened composite", SAMPE Europe SEICO 14, Paris, March 2014.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE



SS 7 Appia Km 706+030 c/o Cittadella della Ricerca
72100 Brindisi (BR)

PUGLIA

Employees: from 50 a 99

Turnover: from 2,5 mln to 5 mln €

Export: from 75.000 to 250.000 €

Status: CONSORTIUM

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Web site: www.cetma.it

Project Proposal

Numerical-Experimental Method to Study the Viscous Behaviour of Ceramic Materials

Description of the innovation project:

The invention relates to the development of a numerical-experimental methodology to study the viscous behavior of ceramic materials during the sintering process and accurately determine the trend of the material viscosity as a function of temperature. This method consists of an ad hoc experimental test configuration able to solve the problems concerning the conventional tests and obtain reliable and accurate Experimental results. The other element of the methodology developed consists in the numerical simulation of the developed to determine the material viscosity as function of temperature. The method is applicable as well to study all the materials, that during a process exhibit shrinkage and viscous deformation at the same time.

IP Protection Level:

The European patent (Application Number 11425153.1) was published the 9th January 2013 (Publication Number EP 2 543 985 A1) and it is in the process of approval by the EPO (European Patent Office).

State of development:

Methodology

Industrial application:

Aerospace sector; Mechanics sector

Market segment:

The developed methodology is widely used in all companies that manufacture turbine blades in both the aviation industry and for energy production plants as well as in all the companies interested in the methodology for determining the viscous properties of the materials.

Advantage factor:

The numerical-experimental methodology, object of the present invention, has solved the adhesion problem of conventional tests and helps to determine the actual trend of the material viscosity.

Commercial challenge:

Cetma intends to offer interested companies the methodology developed as a service of experimental characterization and numerical simulation to determine the viscous properties of the materials.

Publications and Customer References:

P. Bene, D. Bardaro, "Numerical-experimental method to study the viscous behaviour of ceramic materials", Journal of the European Ceramic Society, 34 (2014)2617-2622.

Proposal of cooperation agreement:

KNOW HOW TRANSFER

COSTRUZIONI AERONAUTICHE TECNAM SRL

Project Leader

Via Maiorise
81043 Capua (CE)
CAMPANIA



Employees: from 50 a 99
Turnover: from 15 mln to 25 mln €
Export:
Status: SME

Contact: Claudio Voto (DAC Technical Expert)
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Web site: www.daccampania.com

Project Proposal

TABASCO - Low Cost Technologies and Manufacturing Processes for Advanced Aircraft Composite Structures

Description of the innovation project:

TABASCO research program focus is on low technologies and manufacturing processes for General Aviation (GA) airframe structures. Small airline companies, pilot school, public companies and private users appreciate aerodynamic shapes and features of new composite aircrafts. But in this scenario new certification and operational problems arise due to composites, so that an analytic and experimental study is the unique approach needed to sustain and point out the effective role of low cost composite processing.

IP Protection Level:

Patent application to be submitted.

State of development:

CONCEPT

Industrial application:

General Aviation

Market segment:

Tecnam has seen a considerable increase in aircraft delivered thanks to the constant innovation of product, guaranteed by huge investments in R&D.

Advantage factor:

The aim of the project is to identify materials with mechanical and physico-chemical features satisfactory in terms of performance, but also new production processes that could provide a cost-containment in support of the development of new aircraft in the General Aviation segment.

Commercial challenge:

This project will give the possibility to use in large-scale lightweight materials made using the most advanced manufacturing technologies capable to obtain the benefits already applied on the aircraft of large load capacity even for a product of smaller capacity and lower value and, therefore, more oriented to the lowering of production costs.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING



Via del Fiumicello, 7
80142 Napoli (NA)

CAMPANIA

Employees: more than 499
Turnover: more than 25 mln €
Export: more than 15 mln €
Status: LARGE COMPANY

Contact: Orazio Manni (Unit Manager)
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Web site: www.dappolonia.it

Project Proposal

FLY-BAG2 - Advanced Technologies for Bomb-Proof Cargo Containers and Blast Containment Units for the Retrofitting of Passenger Airplanes

Description of the innovation project:

FLY-BAG2 aim is to develop innovative solutions based on novel lightweight materials and structural concepts for the mitigation of the effects of an onboard blast and improve aircraft survivability. The aim is to exploit the knowledge gathered in the previous project FLY-BAG FP7 to develop new devices for both cabin and cargo environments and to enlarge the experimental validation of the new concepts including full scale tests on retired aircrafts. Research aspects to be addressed include the correlation between explosive charge and location with baggage filling percent in the ULD, the effect of pressurization, or the effects to the aircraft structures and the passengers.

IP Protection Level: Patent granted:

EP2492217 A1: "Entirely textile-based, lightweight, and blast resistant cargo container system and manufacturing method thereof". The system FLY-BAG2 is based on proprietary knowledge of the project partners.

State of development:

PROTOTYPE

Industrial application:

Protection of Civil Aircrafts from on-board explosion

Market segment:

The FLY-BAG2 concept is easily adaptable to any scenario were a relatively small amount of explosive can cause an extensive damage. The first and most important field of application is means of transport as airplanes, trains, underground metros or ships.

Advantage factor:

The FLY-BAG2 approach is based on the development of retrofitting solutions for the mitigation of on-board explosions. The proposed blast mitigation and retrofitting solutions will be developed to be easily implemented on existing aircrafts without the need to modify their main structures.

Commercial challenge:

The project can have a wide impact on the whole European Aeronautic sector by contributing in raising the level of safety onboard passenger airplanes. This will positively affect the visibility of the companies using the FLYBAG2 concepts, as customers will be keener to choose an airline with higher safety standards. Even low cost companies will be attracted by FLYBAG2, as it will enable them to prove wrong their "low cost equals low safety" reputation at the price of a small investment.

Publications and Customer References:

Website: www.fly-bag2.eu

- ▶ ATRS 2014 Worldwide Conference, Bordeaux, July 2014;
- ▶ Project presentation/stand at TRANSEC 2014 exhibition, London, December 2014;
- ▶ Contact with TV channels: Tango Film GmbH, Discovery Channel, South & browse GmbH, Maximus film GmbH, Euronews.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT



Via A. Murri, 2
72023 Mesagne (BR)

PUGLIA

Employees: from 100 to 499

Turnover: from 15 mln to 25 mln €

Export: from 2,5 mln to 5 mln €

Status: LARGE COMPANY

Contact: Marco Perillo (CEO)

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Web site: www.enginsoft.it

Project Proposal

Numerical Procedures for the Integrated Design of Composite Complex Structures in Aerospace Industry

Description of the innovation project:

The innovative procedure proposed allows to integrate several numerical tools already distributed (commercial software ANSYS) focused on the effective design and optimization of complex structures in aerospace industry. The numerical procedure allows to optimize the shape of the structure through a topological study, then defining composite material properties and building the whole structure through a "Concurrent Design" approach. This procedure allows to face both product and manufacturing process issues.

IP Protection Level:

Can not be patented. Innovative technological procedure.

State of development:

PROTOTYPE

Industrial application:

Aerospace sector

Market segment:

Technical offices involved in the design of primary structures in aerospace sector.

Advantage factor:

The tool allows to manage several aspects during the design of primary structures in aerospace, facing at the same time product and technological aspects.

Commercial challenge:

The main advantage is the possibility to drive several design phases.

Publications and Customer References:

A paper concerning this technology will be presented during the event "International CAE Conference 2014" that will be held in October in Pacengo (VR).

Proposal of cooperation agreement:

LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, KNOW HOW TRANSFER

GEVEN SPA

Project Leader

Località Bosco Fangone - Zona ASI
80035 Nola (NA)

CAMPANIA



Employees: from 100 to 499
Turnover: more than 25 mln €
Export:
Status: LARGE COMPANY

Contact: Claudio Voto (DAC Technical Expert)
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Web site: www.daccampania.com

Project Proposal

IMM - Interiors with Multifunctional Materials

Description of the innovation project:

The need is to develop solutions which can guarantee the use of seats “crashworthy” and cladding panels to the inside of the cabin and cargo compartments of high performance vibro-acoustic, thermal and fire resistance without implying an unacceptable increase in their weight.

The characteristics of the final products are related to the development of:

- ▶ a seat “crashworthy light-weight”;
- ▶ a panel to be used for the coating of the interior cabin;
- ▶ a panel to be used for the interior lining of the cargo, which can allow an increase of the levels of security.

IP Protection Level:

Patent application to be submitted.

State of development:

CONCEPT

Industrial application:

Commercial Aviation

Market segment:

The market for civil aircraft is expected to grow over the next 20 years to about 56.700 units with a value of more than \$ 2,500 Bln. It is maintaining its considerable importance with a positive growth, the sector of commuter in which the project IMM intends to fit itself.

Advantage factor:

The IMM project intends to introduce new materials, advanced technologies, innovative configurations, alternative processes to achieve those targets in the field of Interiors.

Commercial challenge:

The objectives of the research project affect about two thirds of the overall cost management of civil aircraft: in fact, plan and carry an element of Interiors lighter leads to a beneficial effect on fuel consumption and to a reduction of the total mass of the aircraft which are calculated as a function of airport taxes and navigation, with further influence also on the maintenance costs, which decreases with decreasing the weight of the components and the parties to verify.

Publications and Customer References:

References: Boeing Company, Alenia Aermacchi, Costruzioni Aeronautiche Tecnam S.r.l., ATR, Embraer, etc.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

Via E. Nicolardi, 180
80131 Napoli (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Luigi Abbruzzese (Business Developer Manager)

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Web site: www.iemlab.com

Project Proposal

HESP&T - High Efficiency Signal Processing and Treatment

Description of the innovation project:

This research is on signal treatment techniques (high efficiency signal analysis) that allows investigation on system and mechanism failures and reliability. Company's product is able to efficiently predict system/component failure in critical conditions. It is designed for dimensioning, verifying and validating structures and/or systems; particularly in the field of Structural Health Monitoring (SHM), Noise vibration and Harshness (NVH). Fields of application: aeronautics, automotive, naval, rail, oil & gas.

Case studies: on-line structures monitoring, flight test validation, laser and friction stir welding joints validation, engine cylinder faults, gear box faults and optimization, engine shafts dimensioning, weight saving (critical systems), etc.

IP Protection Level:

At this time the results and the algorithms are patent pending in Italy; the company is planning to applying for the international patent. There are two patent request reference numbers: NA2012A000007 and NA2013A000018. This product is the natural evolution of research activity.

State of development:

PRODUCT AND PROTOTYPE IMPLEMENTATION

Industrial application:

System Validation Equipment

Market segment:

This research is directed to: aeronautics, automotive, naval, rail, oil & gas.

The company expects the following market response in about three/five years (Gain from inv. – ROI):

Aeronautics: 3,5 € Mln - 53% | Automotive: 0,5 € Mln - 48% | Naval: 2 € Mln - 57% | Rail: 2 € Mln - 39%
Oil & Gas: 1 € Mln - 35%.

Advantage factor:

This research brings a new approach to signal treatment; the conventional approach applies filters and is limited in sampling rate because of the elaboration time.

The method used doesn't apply any filters (no risk of eliminating useful information) and is capable of elaborating more complex signals.

Commercial challenge:

This research is now at his first step: the development of the main algorithm and procedure. Now it is possible to complete a full elaboration and analysis.

The company strongly believes that its target is very wide and its technology is now ready to go through the product specialization phase. It plans to devote its greater initial efforts to aeronautics then going on towards automotive, naval, rail and oil & gas sectors.

Once the first contract (0,3 € Mln) will be secured the company will be able to develop all the other steps. Publications and Customer References: This research started years ago from the intuition of Prof. Niola and Prof. Quaremba. Papers written by Prof. Niola on this subject may be find at the following link:
<http://bit.ly/WIIFO1>

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via Napoli, 141 - P.zzo Tecnocity
80013 Casalnuovo di Napoli (NA)

CAMPANIA

Employees: from 20 to 49

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

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Project Proposal

LLMS RFID - Software for the Marking and Traceability of Components Using Passive RFID Systems

Description of the innovation project:

The developed software solution allows the marking of aircraft components through the use of UHF tags according to standard ATA Spec 2000. This type of solution is already used by Airbus. All component data (PN, SN, weight, etc.) are automatically recorded during the marking phase in a dedicated memory bank. For configuration management and tracking purposes, the software exports data to the enterprise server. It can also interface with barcode and QR code. RFID technology provides real-time value chain visibility within the manufacturing plant and throughout the service life of the component, including maintenance, repair and overhaul.

IP Protection Level:

RFID system doesn't require patents. RFID system is nowadays a consolidated technology. In 2009 Airbus has required its suppliers to introduce RFID systems. Both for the software and hardware aspects it had been developed from 2009 to 2013 to meet the requirements imposed by international standards.

State of development:

PRODUCT

Industrial application:

Aerospace: Original Equipment Manufacturers, Airways, Maintenance Repair & Overhaul

Market segment:

If you consider the internal aviation market only (manufacturers and maintenance) it is possible to reach the breakeven point. Considering the international market to which the Lead Tech aspires, the return statement of investment would be remarkable with production and human resources increasing.

Advantage factor:

Easy to use, competitive price, intuitive and user-friendly interface, data synchronization, most supported reader, support for barcode and QR code. In order to be competitive, LT will apply an aggressive price policy.

Commercial challenge:

The manufacturers of similar solutions, currently on the market, can be counted on one hand. The opportunity to present itself to an international market, promoting a solution that is viable and will be increasingly in demand in the years ahead, is Lead Tech's major challenge, both from the commercial and technology point of view. This can be the possibility to show the know how and the Italian excellence in a new and growing market.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT

MBDA ITALIA SPA

Project Leader

Via Giulio Cesare, 105
80070 Bacoli (NA)

CAMPANIA



Employees:

Turnover:

Export:

Status: LARGE COMPANY

Contact: Gennaro Russo (DAC Technical Expert)

Telephone: +39 0823 623191

E-Mail: segreteria@daccampania.com

Web site: www.daccampania.com

Project Proposal

TELEMACO - Enabling Technologies and Innovative Electronic Scanning Systems in Millimetre and Centimetre Bands for Avionic Radar Applications

Description of the innovation project:

The developed software allows the marking of aircraft components through the use of UHF tags according to standard ATA Spec 2000. This type of solution is already used by Airbus. All component data (PN, SN, Weight, etc.) are automatically recorded during the marking phase in a dedicated memory bank. For configuration management and tracking purposes, the software exports data to the enterprise server. It can also interface with barcode and QR code. RFID technology provides real-time value chain visibility within the manufacturing plant and throughout the service life of the component, including maintenance, repair and overhaul.

IP Protection Level:

RFID system doesn't require patents. RFID system is nowadays a consolidated technology. In 2009 Airbus has required its suppliers to introduce RFID systems. Both for the software and hardware aspects it had been developed from 2009 to 2013 to meet the requirements imposed by international standards.

State of development:

PRODUCT

Industrial application:

Aerospace: Original Equipment Manufacturers, Airways, Maintenance Repair & Overhaul

Market segment:

If you consider the internal aviation market only (manufacturers and maintenance) it is possible to reach the breakeven point quickly. Considering the international market to which the Lead Tech aspires, the return statement of investment would be remarkable with production and human resources increasing.

Advantage factor:

Easy to use, competitive price, intuitive and user-friendly interface, data synchronization, most supported reader, support for barcode and QR code. In order to be competitive, Lead Tech will apply an aggressive price policy.

Commercial challenge:

The market for defense systems is experiencing a period of rapid globalization with an expansion into foreign markets compared to the domestic customer. Innovations achieved with this project will increase the sales capacity of MBDA in the current market and will represent a significant achievement at the international level that will generate a significant competitive advantage, as well as to enable it to enter another adjacent market.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING



Piazza Gabriele D'Annunzio, 15
80125 Napoli (NA)

CAMPANIA

Employees: from 3 to 9

Turnover: from 500.000 to 2,5 mln €

Export:

Status: SME

Contact: Laura Lecce (Sole Administrator)

Telephone: +39 0812392156

E-Mail: laura.lecce@novotech.it

Web site: www.novotech.it

Project Proposal

Composites Manufacturing with Automated Fiber Placement (AFP) Technology

Description of the innovation project:

The interest in multifunctional materials is constantly growing and their introduction is changing significantly the design philosophy. However, this growth appears to be delayed because of two main reasons, the first one related to the need to deepen the issue from the scientific point of view and the second one linked to the poor reproducibility of the components as they require very skilled staff, besides very high rates and manufacturing costs. For this reasons this Project is aimed to develop and manufacture multifunctional composite materials through the use of an Automated Fiber Placement system combined with advanced design methods of Draping, Formability and Composite Warpage Prediction. The AFP machine of Novotech is able to place fiber reinforcements on moulds or mandrels automatically and use a number of separate small width tows of thermoset or thermoplastic pre-impregnated materials or dry fibers to form complex geometries of composite layups. Hence, the Fiber Placement system herein proposed presents the features needed to overcome the constraints mentioned above by making the process repeatable, reliable, and a consequent lower cost and higher quality of the product.

IP Protection Level:

No patent as yet. Development of Multifunctional Materials using Automated Fiber Placement (AFP) is a new field of industrial research. From this Vision, Novotech's to invest in these technologies.

State of development:

PROTOTYPE

Industrial application:

Industrial Engineering and Aerospace

Market segment:

The development and consolidation of a new generation of technically high performance and aesthetically appealing composite materials makes the final product particularly attractive for the industrial world in general, given the multiplicity of potential applications.

Advantage factor:

An automated manufacturing process based on the use of anthropomorphic robotic equipment allows innovative use of alternative materials and the industrial application of multi-functional structures.

Commercial challenge:

A technological advancement like this will improve the currently adopted layering concepts (deposition of the fibers) currently adopted in terms of efficiency and feasibility of complex geometries having an impact both on recurring and non-recurring costs.

Publications and Customer References:

IAPD. (2010) Thermoplastic composites for aerospace. The IAPD Magazine.

S. Béland, High performance thermoplastic resins and their composites: Noyes Data Corp., 1990.

K. E. Tessnow, J. G. Hutchins, D. G. Carlson, and M. J. Pasanen, "Low-cost thermoplastic helicopter tailboom development," 1994.

Proposal of cooperation agreement:

KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING



Area Industriale "Calaggio" snc
83046 Lacedonia (AV)

CAMPANIA

Employees: from 20 to 49
Turnover: from 5 mln to 15 mln €
Export: from 75.000 to 250.000 €
Status: SME

Contact: Aquilino Carlo Villano (CEO)
Telephone: +39 082785938
E-Mail: info@pec.omi-mf.it
Web site: www.omi-mf.it

Project Proposal

Auxiliary Power Unit (APU) Development for Regional or Narrow Body Aircraft

Description of the innovation project:

The activity plans to develop an innovative version of existing APU produced in Russia by AEROSILA; in particular, the teamwork wants to study technologies capable of improving the environmental performance and - at the same time - to reduce the cost and weight of the system. The ultimate purpose is to obtain certifications according to EASA standards for a technologically competitive product.

IP Protection Level:

There are no Patent applications as yet because the project concerns the development of an innovative version of existing APUs, already produced in Russia by AEROSILA in Stupino (Moscow).

State of development:

PRODUCT

Industrial application:

Civil Aviation Aircraft for Regional and Narrow Body categories (ATR, Embraer, Bombardier, Airbus A319 - A321, Sukhoi Superjet)

Market segment:

The APU has applications in regional and narrow body aircraft. It covers a significant market share (over 50% of aircrafts sold). Currently in the Western market there are only three competitors. The main Russian aircraft are equipped with APUs produced by AEROSILA.

Advantage factor:

The company will experience a significant technological leap forward, moving from being an aerostructure manufacturer to a "certified equipment supplier". The new know-how will enable the development of additional products.

Commercial challenge:

The Russian market is already using AEROSILA products; the Eastern and South American markets tend to adopt Russian products. So in this context, technological innovation and western certifications contribute to business success.

Publications and Customer References:

See the reference applicable regulation: CS-APU Regulation.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT

Via Giovanni di Giovanni, 14
90139 Palermo (PA)

SICILIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Antonio D'Argenio (CEO)

Telephone: +39 091580305

E-Mail: info@panoptes.it

Web site: www.panoptes.it

Project Proposal

mT-Panoptes

Description of the innovation project:

This product derives from a mixture of heterogeneous competences: advanced use of drones, electronics, mechanics, GIS, thermography, photogrammetry and knowledge of photovoltaic sector. mT-Panoptes is a system for the quick detection of failures in PV Plants using small drones. It is composed by a two channel sensor (thermal, visible) and an acquisition and post processing SW. It operates detecting thermal anomalies (hot spots): key plant elements (cells, modules and arrays), when working improperly, become hot and can be identified with aerial thermography. Once detected, these elements are automatically located on a plant map. The map and a series of sheets describing each anomaly constitute a final report which is automatically generated by the system. mT-Panoptes generates a considerable time and cost saving if compared to ground inspections or traditional aerial surveys.

IP Protection Level:

No patent as yet. IP protection policy is based on NDA subscriptions which are regularly signed before any information exchange.

State of development:

PRODUCT

Industrial application:

Aerospace, Renewable Energy

Market segment:

O&M of PV plants, small drones service companies. The company has a distribution agreement in FR and it is defining agreements for USA, BE, IL, ZA, IND and JP. It has sold 4 units. 2014 sales target is about 20 units with a turnover of more than 300k €. Each day the company receives about 10 info requests.

Advantage factor:

PV plant drone aerial thermography is spreading but there are no solutions integrating a HW, operating procedures, acquisition and processing SW, automatic generation of results. All the existing solutions are generic and not tailored on PV plants. Data spatialization is rare if not absent.

Commercial challenge:

Current I.P. policy is based on know-how protection. The company does not plan any other short term developments, in line with the decision to market the product. An advanced version of mT-Panoptes (2015) will extend its use to HV aerial Power Lines. The company has already developed other prototypes of multi-sensors for small drones.

Publications and Customer References:

- ▶ Flir-Panoptes-FLIR Tau core helps to identify anomalies in solar plants (<http://goo.gl/D4cVmE>).
- ▶ Already established International Agreements: ADRONES SARL - Microdrones France - Bordeaux, France (National Distribution Agreement).
- ▶ Ongoing National Distribution Agreements: Amped On Solar LLC / Aerial Diagnostic LLC - Florence (NJ) USA; Droneworx - Bruxelles (BE); FineSensing Corporation - Funabashi, Chiba JP.
- ▶ Awards: UK TRADE & INVESTMENT - BRIGHT FUTURE IDEAS AWARD (November 2010).

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING

Via Fienile 1
80013 Casalnuovo di Napoli (NA)
CAMPANIA

Employees: from 20 to 49
Turnover: from 2,5 mln to 5 mln €
Export: less than 75.000 €
Status: SME

Contact: Massimiliano Canestro (Vice President)
Telephone: +39 0810155611
E-Mail: m.canestro@smsengineering.it
Web site: www.smsengineering.it

Project Proposal

NCMs - Non Conformity Management System

Description of the innovation project:

NCMs Non Conformity Management System is a Software Application, Cloud Based, for the management of non-compliance in Aerospace and Aviation Industry: with NCMS customers can establish the process for identifying, documenting and analyzing nonconformities and mitigating their impacts by implementing corrective and preventive actions. This procedure is applicable to all corrective and preventive actions that are related to non-conformities in products, services and audit results. Any corrective action taken to eliminate the causes of actual non-conformities is appropriate to the magnitude of the problem whilst also being in proportion to the risks presented by the non-conformity.

IP Protection Level:

Non Conformity Management System is a cloud software solution without patent. The solution is a project developed over the last 30 months, started in the 2011 when the company pursued a R&D program, beginning experimental activities for the development of a prototype software program in Cloud.

State of development:

PRODUCT

Industrial application:

Aviation and Aerospace sector

Market segment:

NCMs has been developed for small and medium-sized enterprises typical of the Italian territory, while its competitors have developed solutions for large and very large enterprises and are not structured. SMS Engineering sales Aviation and Aerospace target: 300 SMEs.

Advantage factor:

Key innovations

- ▶ Cloud
- ▶ Management of nonconformity from Suppliers to Customers
- ▶ Paperless
- ▶ Predictive: the analysis of defects can prevent the causes

Aviation and Aerospace Industry can have "More Business with Less IT", can evolve into a trade-off between low-cost arbitrage and added value QoS.

Commercial challenge:

- ▶ Paperless, eliminates the use of paper documents and allows a reduction in consumption, waste with a lower impact on the environment;
- ▶ Cloud technology enables an energy saving: move business applications to the cloud, energy use and their carbon footprint is reduced by at least 30%;
- ▶ A predictive technology, improves the monitoring of the process and the quality of work;
- ▶ A Non Conformity Management System, allows a reduction of non-compliance and consequently of the costs, improving the Quality.

Publications and Customer References:

Proof Of Concept in Finmeccanica Group in Italy

- ▶ Software installed and used in DEMA Aviation Industry
- ▶ ISO AS/EN 9100: Control of Nonconforming Product and Corrective Action/Preventive Action
- ▶ BOEING D-13709-4: Requirements for Obtaining Materials Review Board
- ▶ ALENIA -IAY G05C.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via Provinciale Pianura, 2 Zona Ind. San Martino int.23
80078 Pozzuoli (NA)

CAMPANIA

Employees: from 10 to 19
Turnover: from 500.000 to 2,5 mln €
Export: from 500.000 mln to 2,5 mln €
Status: SME

Contact: Francesco Maria Monti (Marketing & Sales Manager)
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E-Mail: info@tsd-space.it
Web site: www.tsd-space.it

Project Proposal

Multi-Ocular Smart System - Suite of 3 Cameras and a High-Performance Processing Unit for Visual Navigation (HPVN)

Description of the innovation project:

The MOSS project, carried out by TSD and co-financed by the Italian Space Agency, has allowed to develop a compact and high-performance suite for vision-based navigation. MOSS is a highly modular and flexible system that can be used in different configurations by combining the following parts:

- ▶ Multi-ocular Camera provided with three fixed lenses;
- ▶ CMOS Monocular Camera provided with one fixed lens;
- ▶ CCD Monocular Camera integrated with motorized lenses;
- ▶ High-performance Processing Unit for Visual Navigation (HPVN).

IP Protection Level: TSD is currently considering applying for an International Patent. MOSS is a proprietary system entirely designed and developed by TSD and based on proprietary solutions and technologies.

State of development:

ENGINEERING MODEL

Industrial application:

Space

Market segment:

- ▶ Landing
- ▶ Rovering (navigation and panoramic view)
- ▶ Rendez-vous manoeuvring
- ▶ In Orbit Servicing
- ▶ Debris Removal

The three cameras allow far-range functionalities for target identification, medium range for tracking and manoeuvring, close range for approaching and docking.

Advantage factor:

Very low SWAP (Size, Weight And Power) very high performances in terms of real time data throughput, real time stereometry, availability in two versions:

1. full ITAR-free and with radiation tolerance of at least 30 Krad
2. subject to ITAR and with radiation tolerance of at least 100 Krad.

Commercial challenge:

Vision-based navigation can be considered as a major enabling technology in support of the autonomy requirements of space applications such as:

- ▶ Exploration missions (landers, rovers, etc.)
- ▶ In-Orbit Servicing Applications (like Satellite Inspections, Rendezvous, Docking etc.)
- ▶ Formation-Flying Missions
- ▶ Debris removal

All these missions are considered very important both by Space Agencies around the world and by Commercial companies acting in the service of big Telecom Satellites.

Publications and Customer References:

TSD has just started the process of presentation of the System and the immediate results have been:

- ▶ interest for application in a very important institutional scientific mission (on a lander);
- ▶ interest for a telecon' satellite in orbit servicing mission.

A paper has been approved for the IAC 2014 in Toronto.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, KNOW HOW TRANSFER, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

TELESPAZIO SPA

Project Leader

Via Emanuele Gianturco, 31
80146 Napoli (NA)

CAMPANIA



Employees: more than 499
Turnover: more than 25 mln €
Export:
Status: LARGE COMPANY

Contact: Gennaro Russo (DAC Technical Expert)
Telephone: +39 0823 623191
E-Mail: segreteria@daccampania.com
Web site: www.daccampania.com

Project Proposal

MISTRAL - Air-Launchable Micro-SaTellite with Reentry Capability

Description of the innovation project:

The primary objective of the MISTRAL is to develop a multi-purpose air-launchable 20-30 kg class micro-platform with reentry capability. This approach decouples the use of the platform from the availability and intrinsic limitations of any ground launch base, providing to system with high flexibility with respect to a specific mission and guaranteeing short time to use. In terms of innovation in processes, products and services, the platform will be characterized by the use of new ultralight alloys and polymers, green materials & technologies, advanced coatings and health monitoring system thanks to sensors placed inside the structures.

IP Protection Level:

Ongoing activities to submit intellectual property protection application.

State of development:

CONCEPT

Industrial application:

Space and Carriers

Market segment:

The success of the program can lead to the development of a production scale and commercialization of a class of micro-satellites at a very competitive price market, regardless of the configuration and types of possible use for which it will be deployed.

Advantage factor:

The MISTRAL project plans to develop a micro-platform multi-use space, equipped with a small re-entry capsule, able to adapt to a wide variety of uses. It falls within the framework of the role that Italy has long been pursuing in the field of atmospheric re-entry.

Commercial challenge:

MISTRAL is expected to develop a market based on new applications, such as:

- ▶ Recovery of samples
- ▶ Scientific Space Missions
- ▶ Observation Mission at low altitudes
- ▶ Map Atmospheric Mission

This project allows to capture high-level know-how, content and technology capabilities, capacity for system engineering and system integration.

The project enables the provision of technological knowledge transferable to other sectors such as Aviation, Astrophysics, Marine, Rail, Automotive.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

Biotechnology & Nanotechnology



Via del Mare, 3
91021 Campobello di Mazara (TP)

SICILIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Giulia Passanisi (Product Manager)

Telephone: +39 0916615633

E-Mail: info@abielbiotech.com

Web site: www.abielbiotech.com

Project Proposal

Recombinant Collagenases for Cell Therapy and Regenerative Medicine

Description of the innovation project:

Advanced therapies in tissue engineering and regenerative medicine are based on the use of cells, that are transplanted into patients. These cells need to be extracted from the donor tissue or organ. To extract these cells, it is necessary to treat the organ with specific enzymes: collagenases. Common collagenases are natural products that present limits in terms of lot-to-lot reproducibility and purity and do not always allow to obtain a high number of living cells, limiting regenerative medicine success. Abiel produces innovative collagenases, prepared in laboratory by DNA recombinant technology, which are highly stable, reproducible and pure, overcoming these limits.

IP Protection Level:

- ▶ Italian patent: granted: RM 2009 A000661, Priority date: 15/12/2009.
- ▶ PCT (WO 2011/073925A2) publication date 23 June 2011: granted in USA, close to approval with endorsement of claims related to the invention of chimeric recombinant collagenases in other countries.
- ▶ EPO (Application 10818077.9-1410): ongoing approval.

State of development:

PRODUCT

Industrial application:

Regenerative Medicine and Cell Therapy

Market segment:

Collagenases find application in regenerative medicine and cell therapy market (\$6 bln), especially for stem cells isolation, in all research and hospital centres. Other collagenases' markets are the wound care segment (\$9 bln) and the dermocosmetic sector (cellulitis, \$3 bln).

Advantage factor:

Recombinant collagenases overcome the limits of reproducibility and purity of the common collagenases, allowing to optimize cell extraction and to obtain a high number of living cells, to make regenerative medicine protocols standardized and reproducible in all research laboratories and hospitals.

Commercial challenge:

Abiel is ready for commercialization worldwide via direct sales and distributors of its recombinant collagenases. With a fast internationalization, Abiel could step from a lab-scale production up to an industrial production, to enter all the market segments and to extend its pipeline with R&D projects. Abiel has already attracted partners' and potential customers' worldwide interest and has the potential to grow and give a strong impact on the Sicilian and Italian biotech area.

Publications and Customer References:

Abiel is a partner of the Diabetes Research Institute of Miami, for the development of a protocol for the isolation of pancreatic islets for transplantation in diabetic patients with the use of recombinant collagenase. Abiel collaborates with many other centers in Europe and in the USA for the development of protocols for the isolation of cells from various biological tissues.

Abiel is also engaged in several projects with companies and research institutes based mainly in Spain, Portugal and Ireland under the Programme for Research and Innovation Horizon 2020.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, LICENSING AGREEMENT, VENTURE CAPITAL FINANCING

Viale Ennio, 82
70010 Valenzano (BA)

PUGLIA

Employees: from 3 to 9

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Massimo Papale (Scientific and technical director)

Telephone: +39 0805574298

E-Mail: apuliabiotech@legalmail.it

Web site: www.apuliabiotech.it

Project Proposal

Design of a Diagnostic Kit for Complement-Related Renal Diseases

Description of the innovation project:

Atypical hemolytic-uremic syndrome (aHUS), or glomerulonephritis such as C3-glomerulopathy show mutations affecting the Complement system (CS). Genotype-phenotype correlations may predict renal recovery and transplant outcome in these patients. At present twelve genes are known to be involved in Complement-related renal diseases. The aim of this project is to set up a genetic test for the diagnosis of this class of diseases, covering all these genes and taking advantage of a modern next generation sequencing (NGS) MiSeq Desktop Sequencer (Illumina). The NGS protocol has been already standardized and successfully applied to a restricted number of patients. Validation on large cohorts is currently ongoing.

IP Protection Level:

No patent as yet.

State of development:

MODEL

Industrial application:

Molecular diagnostics

Market segment:

The incidence of aHUS is about 6/100000/year in children and 2/100000/year in adults. In Italy, this would translate in to about 3-4000 patients per year. The kit could be also applied to already transplanted patients, or CKD patients at risk of membranoproliferative glomerulonephritis, or HUS recurrence.

Advantage factor:

Currently, the genetic screening of complement-related renal diseases requires several months. This rapid and cost-effective genetic test based on real-time PCR, covering all presently known disease-related genes, would undoubtedly revolutionize the diagnostics of this class of diseases.

Commercial challenge:

The developed test would require one or two days from the arrival of the sample and would not require any advanced instrumentation since it is based on real-time PCR. It would be useful, for example, to suggest the administration of specific therapies against the over-activation of the CS for those patients who are ready for a renal transplant. Additionally, it would allow extending genetic counselling to the other components of the families.

Publications and Customer References:

The project has been developed by Apuliabiotech s.c.ar.l. in collaboration with "Morgagni" molecular lab at Dept. of Emergency and Dept. of Organ Transplantation of the University of Bari and the Molecular Medicine Laboratory at Dept. of Surgery and Medical Sciences of the University of Foggia.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER

BEFORPHARMA SRL

Via San Francesco D'Assisi, 51
70056 Molfetta (BA)

PUGLIA

Employees: Up to 2

Turnover: from 500.000 mln to 2,5 mln €

Export: from 250.000 to 500.000 €

Status: START-UP

Contact: Roberto La Forgia (Legal Representative)

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Web site:

Project Proposal

International Network as a New Model for Biotechnological Radiopharmaceuticals Innovation Promotion

Description of the innovation project:

In the last few years a growing clinical request of radiopharmaceuticals, among which the biotech ones, has been observed, with increase of investments in this field. The main difficulty is represented by the lack of specific technical competency and guidelines knowledge: BFP works in such field as highly qualified GxP services supplier. The innovation is represented by the modality of services supply: once Customer has reached the adequate quality standard through the services supplied by BFP, he will become partner of a network where scientific, technological and economic resources will be shared for the achievement of common R&D objectives. A software platform will allow to share knowledge and results. BFP will be the hub of the network.

IP Protection Level:

Being a new model of business organization and connections within the market the idea is not object of patent. The results of the R&D activities developed within the network will be patented.

State of development:

PARTNERSHIP BEING DEFINED

Industrial application:

Radiopharmaceutical sector

Market segment:

BFP addresses its services both to the international and national market. The international market is represented by biotech radiopharmaceutical multinationals and facilities; the national and local market is also represented by nuclear medicinal department of public and private hospital.

Advantage factor:

Being part of the network is a way to obtain an high quality standard and, at the same time, to benefit from the sharing of resources, self-supporting R&D activities. This represents an alternative model to the multinational one. Furthermore the partners can sell their competence within the network.

Commercial challenge:

To take part into the network is a competitive advantage for BFP and for the Partners. The sharing of resources can facilitate the achievement of R&D objective and the commercialization of new biotech radiopharmaceuticals; such objectives would be difficult to achieve for small companies that operate in this field or for emerging companies having not enough experience. The network is also an interesting container for multinational companies wishing to outsource R&D activities.

Publications and Customer References:

BFP is collaborating with COMECER Spa, a world leader company in the field of nuclear medicine, specialized in the design and manufacture of high technology system for radiopharmaceuticals production; with the PTTMED, an Iranian company operating in the biomedical field; with the Luminary Gulf, a Dubai company that operates in the field of molecular imaging and radio metabolic therapy.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING



Piazza Trento,2
95128 Catania (CT)

SICILIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: from 75.000 to 250.000 €

Status: SME

Contact: Antonio Scalia (CEO)

Telephone: +39 3355322202

E-Mail: antonio.scalia@calietra.com

Web site: www.calietra.com

Project Proposal

Lava Stone Eco Process

Description of the innovation project:

Calietra has implemented a new technology for the nano functionalization of large lava surfaces with active photo and chemio active materials. Using an Italian synthesis technology : Parnasos® , titania anatase and silver nano-crystals are deposited and fixed on the surface and in the pore cavities.

An innovative CO2 laser technique is used to enhance the aesthetic and functional characteristics of stone surfaces. Large sheets of lava stones are produced with high depollution and anti bacterial activity for indoor and outdoor applications in safe buildings and environments. The combination of these two technologies permits a high customization of high tech products with innovative and striking aesthetic features.

IP Protection Level:

Patent application has not been submitted. The product has been certified by Colorobbia Italia.

State of development:

PRODUCT

Industrial application:

Building, Interior design

Market segment:

Calietra is a leader in the processing and manufacturing of Etna lava stone, satisfying quality, eco-friendliness and innovation requirements and offering designers, architects, engineers a wide range of finishes, from raw lava stone to coated ceramic and laser design, also allowing customizability.

Advantage factor:

The combination of nanotechnology in the coating of lava stone with a new concept of energy transfer on surfaces via CO2 laser, gives the possibility to obtain new products with great flexibility in terms of industrial production, customization, aesthetic and innovative projects.

Commercial challenge:

The development of innovative products and technologies in the construction sector, increasingly oriented towards sustainable and high quality solutions. The need for architects and designers to challenge their creativity and aesthetic sense.

In this context, Calietra transforms a natural resource into a technologically advanced product, offering also the possibility of customizing the material for surfaces, façades, indoor and outdoor cladding, interior design.

Publications and Customer References:

Calietra is now collaborating with Colorobbia Italia, whose Scientific Director is Eng. Baldi.

- ▶ Tobaldi, Tucci, Baldi; Photocatalytic activity for exposed building materials. Journal European Ceramic Society 2008;
- ▶ Blosi, Albonetti, Gatti, Baldi: Au,Ag and Au-Ag nanoparticles: microwave-assisted synthesis in water and applications in ceramic and catalysis. NANOTECH 2010.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT

SS 7 Appia, Km. 636
74016 Massafra (TA)

PUGLIA

Employees: from 100 to 499

Turnover: from 15 mln to 25 mln €

Export: less than 75.000 €

Status: LARGE COMPANY

Contact: Cesare Tinelli (Managing Director)

Telephone: +39 0998807723

E-Mail: info@castigliasrl.it

Web site: www.castigliasrl.it

Project Proposal

Bioactive Compounds

Description of the innovation project:

The invention is a new type of fertilizers and technical products dedicated to agriculture, made up with organic compounds and microorganisms, dedicated to crop protection and nutrition.

Microorganisms are fabricated through a fermentation process and then combined with organic compounds in several formulations.

IP Protection Level:

No patent as yet.

State of development:

MODEL

Industrial application:

Agriculture

Market segment:

Turnover is estimated at around 5 Mln €, referring to the whole Italian market of fertilizers and technical products which is estimated in 1.000 Mln €.

Advantage factor:

The invention is aimed to improve the market value of organic fertilizers and compounds by means of the stimulating and protective properties of microorganisms in order to get a new line of technical products with a wider application range.

Commercial challenge:

The invention is an absolute novelty in the Italian market and it allows to create a completely new market segment.

Publications and Customer References:

Studies are in progress due to Eng. Giuseppe Bobbiesi of Technelep Srl in cooperation with Evergreen Italia Srl, Acqua e Sole Srl, Ente Nazionale Risi, University of Milano and University of Pavia.

Proposal of cooperation agreement:

COMMERCIAL CONTRACT

CENTRO NAZIONALE PER LE RISORSE BIOLOGICHE



Via Trabucco, 180
90146 Palermo (PA)

SICILIA

Employees: Up to 2

Turnover: from 250.000 to 500.000 €

Export:

Status: CONSORTIUM

Contact: Donato Bonifazi (Rimedri's Project Manager)

Telephone: +39 3936698076

E-Mail: info@cnrb.it

Web site: www.cnrb.it

Project Proposal

RIMedRi - Clinical-Biological Integrated Regional Network for Regenerative Medicine

Description of the innovation project:

The proposed product is represented by a network of organizations operating in synergy with each other and shall be implemented through a process of data integration and harmonization of methodologies which results in an enhancement of the scientific value of collections of biological materials. Also, the definition of coordinated planned actions aims at the production of specific products on the Healthcare Market or on the Institution that can promote Regenerative Medicine.

The network key tool for interoperability is the platform that serves participating biobanks and institutions characterized by strong heterogeneity. By accessing platform information related to their biological samples, partners will have access to increasing amounts of clinical data on biological samples that fit quality standards and that come from research centers that are able to collect, transport, process them and store them by using shared quality standard procedures. For this reason, a particularly innovative aspect of the initiative is to reach the goal of setting up a system of quality management of the network in order to gain the UNI EN ISO 9001:2008 certification.

IP Protection Level:

No patent as yet.

State of development:

TESTING MODEL OF WEB-BASED IT PLATFORM CONFORMING TO THE UNI EN ISO 9001:2008 STANDARDS

Industrial application:

Market Health, Biomedical Research with applications to Regenerative Medicine

Market segment:

Biobanks, Research Institutions, Biological Resource Centers, well established Network of Biobanks and research institutions. The product can be positioned in the local, national and international market.

Advantage factor:

Innovative operational tools for interoperability based on a common quality-oriented approach.

Commercial challenge:

The organizational model, as well as the IT tool for interoperability, can be placed on the health care market and industrial research as it can be sold to groups of scientific institutions who want to set up a network (regional, national and international).

Publications and Customer References:

- ▶ Paper to be submitted to the Biopreservation and Biobanking Journal: "Methodologies for the interoperability of the Integrated Clinical-Biological Biobank Network for Regenerative Medicine (RiMedRi)".
- ▶ Partnerships with Belgian Universities (University of Leuven and University of Antwerp) are now being envisaged.

Proposal of cooperation agreement:

KNOW HOW TRANSFER

Via Michele Titone, 23/29
90129 Palermo (PA)

SICILIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Giuseppe Di Maria (General Manager President & CEO)
Telephone: +39 091422295
E-Mail: info@drsistemasrl.com
Web site: www.drsystemsrl.com

Project Proposal

Direct Multifunctional Digital X-Ray System

Description of the innovation project:

The digital X-ray medical equipment consists in the integration of 4 types of equipment in a single device which, at the current state of the art, are separate. It is a digital non-invasive, active medical device, dedicated to general human body tests. The equipment has a digital detector for direct acquisition of X-ray images (Flat Panel Detector - Direct Radiography) which is able to show the X-ray images directly on the touch-screen monitor, located on the Control Console Unit. It is also able to deliver a max power out put of up to 40 kW-400 mA-125 Kv with a power supply of 230V a.c. through a "Save Energy" device called Capacitor Battery System. Recommended for all General radiology purposes and stretcher first aid.

IP Protection Level:

Patent filed on 10.12.2008 n. PA2008U000019 at the Chamber of Commerce of Palermo n.0000269379 - class code: A61N; Corresponding certificate of patent subsequently granted by the MISE National Patent Office - 28-07-2011.CE marking is pending and expected to be concluded by the end of Sept 2014.

State of development:

CE MARKING PENDING (expected to be concluded by the end of September 2014)

Industrial application:

Product Direct Digital Radiology (D.R. - Direct Radiography), Teleradiology-Telemedicine

Market segment:

Commercial and manufacturing companies also abroad. Sales forecasts between 2015 and 2017 can be estimated at 35 devices, yielding an expected average annual turnover of 2100K € approximately.

Advantage factor:

Integration of 4 different devices in one; it means reduction of installation costs due to "PLUG AND PLAY" system; costs reduction from additional flat panel-detector, the device works with only one; manufacturing costs reduction because the system is compact.

Commercial challenge:

INTEGRON 4 DR, has been conceived, designed and built to be competitive in terms of value for price rate on international markets, especially emerging countries but also domestic market. The availability of industrial property rights makes the company attractive to potential investors with whom common strategies can be adopted such as partnerships for commercial exploitation of the patent and the INTEGRON4DR™ trademark.

Publications and Customer References:

- ▶ UIBM (Italian Patent and Trademark Office): confirms patent registration;
- ▶ INVITALIA: this patent has been selected after a national tender for his development;
- ▶ University of Palermo, departments of: Mechanics, Informatics, Electrical Measurements-EMC, Imaging Diagnostic - Radiology Institute.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, CERTIFICATION FOR EXPORT, IPR ASSIGNMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

DETOXIZYMES SRLS



Via Nicola Romeo, 28
80125 Napoli (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export:

Status: SME

Contact: Elena Porzio (Partner)

Telephone: +39 0816132561

E-Mail: info@detoxizymes.com

Web site: www.detoxizymes.com

Project Proposal

Development and Production of Enzymatic Systems for Environmental Decontamination and Safety of Human Health

Description of the innovation project:

The goal of the project is the development of innovative enzymes with high stability for the safety of human health and the environment. The proposed technology is based on the use of innovative enzymes with high stability for:

- ▶ the cleaning of the pesticide residues from fresh foods (fruits and vegetables);
- ▶ the detoxification of stocks of obsolete pesticides;
- ▶ the development of "smart" antimicrobial formulations.

The strength of the proposal is to use the same enzymes for the three markets identified. These enzymes are stable either because they come from extremophilic microorganisms or because it is possible to stabilize them by protein engineering.

IP Protection Level:

- ▶ Manco G. and Rossi M. Patent request NA2003A000031 03/06/2003 Italian Patent Released 2008;
- ▶ Mandrich L, Merone L, Porzio E, Rossi M and Manco G. NA2007A000005 16/01/2007 Italian patent Released 2009;
- ▶ Mandrich L. and Manco G. NA2009A000008 Italian patent Released 2013.

State of development:

PROTOTYPE

Industrial application:

Biotechnology sector

Market segment:

The target markets are:

- ▶ decontamination of fruits and vegetables from pesticide residues (new market);
- ▶ destruction of stocks of obsolete pesticides, a problem of the third world countries;
- ▶ containment of biofilm formed by pathogenic microorganisms in water and food industrial plants.

Advantage factor:

The advantage factor of these enzymes is the high stability either because they come from extremophilic microorganisms or because it is possible to stabilize them by protein engineering. Stability is an advantage compared to the systems now in use based on enzymes highly perishable and very expensive to produce.

Commercial challenge:

The high stability of these enzymes represents an important competitive advantage because the final product has a long shelf-life, a low cost for production and stability in various conditions (organic solvents, coadiuvants) used in biotechnological devices.

Publications and Customer References:

"Thermostable esterase 2 from Alicyclobacillus acidocaldarius as biosensor for the detection of organophosphate pesticides" Febbraio F, Merone L, Cetrangolo GP, Rossi M, Nucci R, Manco G., Anal Chem. 2011 Mar 1; 83(5):1530-6. doi: 10.1021/ac102025z. Epub 2011 Feb 2. PMID: 21288018.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT, PARTNERSHIP

Via San Marco, 21
84062 Olevano sul Tusciano (SA)

CAMPANIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Cosimo Fasulo (General Director)
Telephone: +39 0828621453
E-Mail: info@olevanoil.it
Web site: www.olevanoil.it

Project Proposal

Natural Cosmetics based on Extravirgin Olive Oil and Extract

Description of the innovation project:

Natural cosmetics based on extravirgin olive oil and extracts, OGM, specifically indicated for sensitive and dry skin.

IP Protection Level:

Registered Trademark.

State of development:

PRODUCT

Industrial application:

Pharmaceutical-Chemical

Market segment:

The pharmaceutical cosmetics channel is nearly 1,800 Mln euro, accounting for nearly 19% of the total sales of all cosmetics on the market. This confirms that consumers have greater confidence in pharmacies and recognize then more specialized service and care compared to other distribution channels.

Advantage factor:

100% made in Italy cosmetics. Promotion of a product of Italian excellence, such as extra virgin olive oil, which can be used in the formulation of high quality cosmetics.

Commercial challenge:

Reasonable product cost, benefit for all those who are in need of cosmetics based on natural active ingredients and who suffer from dry skin, dermatitis, itching, redness.

Publications and Customer References:

L. Bosco, C. Fasulo, R. A. Satriano, E. Simonelli. "Analysis of the effectiveness of a new cosmetic line based on olive oil and leaf extract from Olevano sul Tusciano".

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT

Via Eremo al Santuario, 75
89124 Reggio Calabria (RC)

CALABRIA

Employees: from 3 to 9

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Giuseppe Oppedisano (Director)

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E-Mail: oppedisano@idelivery.it

Web site: www.idelivery.it

Project Proposal

Site-Specific Nano-Technological Carrier allowing to Vehicle the Active Principle through the Follicular Site

Description of the innovation project:

Development of a site-specific nanocarrier for cosmetic and pharma application, which is able to deliver the active agent at maximum concentration level directly to the follicular site and, improves the passage through the stratum corneum. Nano tech innovation for pharmaceutical and cosmetic topical usage:

Cosmetic:

- ▶ Hair-loss
- ▶ Hair-removal

Pharmaceutical:

- ▶ Hair loss
- ▶ Hair loss in particular age/condition (intolerance, childhood, pregnancy etc)
- ▶ Acne or other glandular dysfunction
- ▶ Skin cancer
- ▶ Folliculitis

IP Protection Level:

No patent as yet.

State of development:

PRODUCT

Industrial application:

Pharmaceutical and Cosmetics

Market segment:

It is important to highlight that the innovation can be integrated in a broad range of products (i.e. hair loss, folliculitis and cancer skin). The care industry for boldness is equal to a volume of 7 Bln per year.

Advantage factor:

The nano carrier is non-toxic, biocompatible, with the inherent ability to co-vehiculate substances with chemical-physical opposite characteristics (hydrophilic, lipophilic, amphiphilic). The site-specific nano-carrier increase both care efficacy and efficiency.

Commercial challenge:

To fully grasp the potentiality of the current innovation is important to highlight the value that nano carriers are having in the cosmetic and pharmaceutical markets. Nano carriers are becoming source of competitive advantage for the companies operating in the reference industry, this is even more true for the luxury market sector.

The 35 to 45% of newly launched products will incorporate such systems. Interest in delivery systems among luxury cosmetic and pharma makers is also on the rise.

Publications and Customer References:

The innovation is not patented yet, therefore to protect the intellectual property the scientific results about the project are not published.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING

Via Eremo al Santuario, 75
89124 Reggio Calabria (RC)

CALABRIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Giuseppe Oppedisano (Director)
Telephone: +39 3349182403
E-Mail: oppedisano@idelivery.it
Web site: www.idelivery.it

Project Proposal

Nanocarrier for the Treatment of Thyroid Cancer

Description of the innovation project:

The present innovation provides a liposome comprising a PEG-PDP-TSH component. The liposome has the form of a small unilamellar vesicle and has a nanometric size. The liposome of the invention can be loaded with a thyroid disease drug, in particular gemcitabine, and is suitable for the intracellular delivery of a substance to a cell expressing TSHR. This liposome can be used in the treatment of a thyroid gland disease, in particular thyroid neoplasia. This invention also provides a pharmaceutical composition comprising the liposome, in particular for intravenous administration.

IP Protection Level:

The product has already been patented.

State of development:

PRODUCT

Industrial application:

Pharmaceutical, Drug Delivery System for Cancer application

Market segment:

The target market for this innovation is the one related to the thyroid cancer therapy. In fact, the polymeric nano carrier is able to increase care's selectivity and efficiency. Thyroid carcinomas represent approximately 1.5% of malignant neoplasia and are the most frequent type of endocrine cancer. Mortality is estimated at approximately 8-10% and may be higher, when considering subclasses of more aggressive tumours.

- ▶ Number of New Cases and Deaths per 100,000: The number of new cases of thyroid cancer was 12.9 per 100,000 men and women per year. The number of deaths was 0.5 per 100,000 men and women per year. These rates are age-adjusted and based on 2007-2011 cases and 2006-2010 deaths.
- ▶ Lifetime Risk of Developing Cancer: approximately 1.1% of men and women will be diagnosed with thyroid cancer at some point during their lifetime, based on 2008-2010 data.
- ▶ Prevalence of this cancer: in 2011, there were an estimated 566,708 people living with thyroid cancer just in the United States.

Advantage factor:

The product was extensively tested in in vivo and in vitro studies. Data show the effectiveness of the innovation, which is able to increase in the specific targeting of TSH-Pegylated liposomes towards TSHR-expressing cells. Company's findings show the benefit of the use of its nanocarriers for selectively delivering a cytotoxic drug against TSH receptor expressing cancer cells obtaining valid effects with lower dosage presumably associated with less systemic cytotoxicity.

An improvement of the intratumoral delivery will allow a reduction both of the drug dose and of the exposure time of the whole organism to drugs. Moreover, the toxicity of an antitumoral drug will be further reduced by its specific targeting to particular neoplastic cells (an antigen selectively expressed on the surface of the tumor).

Proposal of cooperation agreement:

KNOW-HOW TRANSFER, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING

Via Eremo al Santuario, 75
89124 Reggio Calabria (RC)

CALABRIA

Employees: from 3 to 9

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Giuseppe Oppedisano (Director)

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E-Mail: oppedisano@idelivery.it

Web site: www.idelivery.it

Project Proposal

Polymeric Carrier of the Poliaspartamide with Bisphosphonates for Pharmaceutical Delivery System Applications

Description of the innovation project:

This invention provides molecules alternatives in which the bisphosphonate group is not conjugated to contrast means (diagnostic application), but with multifunctional biocompatible polymers (treatment application); this in order to:

- ▶ Obtain carrier systems able to conjugate with other molecule (drugs) directly targeting the bone;
- ▶ Serve themselves, where the bisphosphonate is linked to the polymer by ties hydrolysable in vivo, such as macromolecular pro-drugs of bisphosphonates directing it to the bone.

IP Protection Level:

The product has already been patented.

State of development:

PRODUCT

Industrial application:

Pharmaceutical, Drug Delivery System

Market segment:

The target market for the product is the one related to the bone cancer therapy. In fact, the polymeric nano carrier is able to increase the drug deliver on the target.

According to statistics:

- ▶ Lifetime Risk of Developing Cancer: Approximately 0.1 % of men and women will be diagnosed with bone and joint cancer at some point during their lifetime, based on 2008-2010 data.
- ▶ Number of New Cases and Deaths per 100,000: The number of new cases of bone and joint cancer was 0.9 per 100,000 men and women per year. The number of deaths was 0.4 per 100,000 men and women per year. These rates are age-adjusted and based on 2007-2011 cases and 2006-2010 deaths. However, metastatic cancer to the bone (cancers that start in other organs yet spread to the bone) are far more prevalent and will occur in up to one-half of the estimated that will die of some form of cancer annually.

This invention can be used in both cases, increasing therefore care's efficiency for bone cancer.

Advantage factor:

The experimental data show an excellent capacity of the polymeric carrier to direct end localize into the bone tissue for extended periods.

Commercial challenge:

The experimental data obtained, show that the presence of molecules bearing bisphosphonate groups conjugated to PHEA gives the corresponding copolymers the capacity to target and localize for long times at the level of the bone tissue, constituting in this way an efficient mean for specifically directing drugs to bones.⁵⁶

Proposal of cooperation agreement:

KNOW-HOW TRANSFER, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING

Via Eremo al Santuario, 75
89124 Reggio Calabria (RC)

CALABRIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Giuseppe Oppedisano (Director)
Telephone: +39 3349182403
E-Mail: oppedisano@idelivery.it
Web site: www.idelivery.it

Project Proposal

Niosomes Freeze-Dried Powder Use in Treatment of Respiratory Pathologies

Description of the innovation project:

The present invention refers to niosomes and in particular to its freeze-dried powder form, used especially for the respiratory pathologies treatment. In particular, this proposal refers to niosomes, surfactant-based vesicular structures, as carrier system. Niosomes are vesicular structures made of a bilayer of non-ionic surfactant molecules which contains an aqueous nucleus. Such structures have different features: hydrophilic molecules which can be entrapped in the aqueous nucleus and hydrophobic substances that can be connected to the bilayer.

IP Protection Level:

The innovation has already been patented.

State of development:

PRODUCT

Industrial application:

Pharmaceutical, Drug Delivery System at a bronchial level

Market segment:

The value of the Chronic Obstructive Pulmonary Disease (COPD) global market is currently expected to reach \$11.3 Bln (\$15.6 Bln by 2019).

Advantage factor:

The nano vesicles containing the drug have proven to be particularly stable over time and show increased biocompatibility (MTT tests have been carried out). Compared to drugs administered as aqueous suspension, niosomes have proven to be able both to interact with cellular structures (human bronchial fibroblasts) and to facilitate the drug's injection into the cytoplasmic compartment of the human bronchial fibroblasts. The innovative features of the invention are linked to the possibility of obtaining a stable and easy-to-dose freeze-dried powder of such carrier/BDP. Freeze-drying of vesicular structures, which encapsulates drugs, increases the physical and chemical stability of the formulations, since it drastically reduces the aggregation of vesicles issue and that of the loss of encapsulated drugs (leakage).

Commercial challenge:

The possibility of having a formulation in a solid phase rather than in a liquid one represents a great advantage. Among the innovative features of the invention the are: the drug delivery (for example: beclomethasone dipropionate via niosomes at pulmonary level) and freeze-drying of the niosomal vesicles intended for pulmonary administration. Both of these features result in substantial and significant improvements compared to current treatments.

Proposal of cooperation agreement:

KNOW-HOW TRANSFER, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING

IRCCS CASA SOLLIEVO DELLA SOFFERENZA



FONDAZIONE
CASA SOLLIEVO DELLA SOFFERENZA
OPERA DI SAN PIO DA PIETRELcina
SAN GIOVANNI ROTONDO

Viale Cappuccini snc
71013 San Giovanni Rotondo (FG)

PUGLIA

Employees: more than 499

Turnover: more than 25 mln €

Export: from 75.000 to 250.000 €

Status: LARGE COMPANY

Contact: Alessandra Lisini (Executive Assistant - Grant Officer)

Telephone: +39 3666511648

E-Mail: segreteria.scientifica@operapadrepio.it

Web site: www.operapadrepio.it

Project Proposal

ISBReMIT - Institute for Stem-cell Biology, Regenerative Medicine and Innovative Therapies

Description of the innovation project:

The Institute for Stem-cell Biology, Regenerative Medicine and Innovative Therapies will be the first factory of GMP neural stem cells in Europe. Among others, ISBReMIT will host Stemgen SpA, a company engaged in the the research and development of innovative oncological therapies with a focus on gliomas and GBMs; www.stemgen.net.

ISBReMIT will host several laboratories and facilities focused on pathophysiology, genetic and epigenetic control, and proteomic studies on somatic stem cells, fostering advanced studies on the role of somatic stem cells in the impairment of tissue integrity, cellular ageing and in the pathogenesis of degenerative diseases, the genomics and molecular mechanisms of which will be further studied through experimental models of iPS, autologous induced pluripotent stem cells. With an animal facility implementing translational protocols in regenerative medicine, a GMP cell factory will produce pharmaceutical grade stem cells to be used in clinical trials approved by the Italian Medicines Agency (AIFA).

State of development:

PRODUCT

Industrial application:

Red Biotechnologies

Market segment:

For information on the business plan and objectives, refer to the project website. A new version of the same will be issued in October. Varied conditions may apply to existing partnerships, consortia and networks (e.g. for public-owned, non-profit and strategic industrial partnerships).

Advantage factor:

ISBReMIT is built between the existing laboratories and the hospital, facilitating the transferability "from bench to bedside".

The plus factor is the concentration of a whole validated process on one site: from stem cell production to animal modelling, to proofs of concept and therapy on humans.

Commercial challenge:

- ▶ Developing, renting and providing with Scientific know-how, services and facilities;
- ▶ Biomarkers and personalized anti-tumor therapies;
- ▶ Development of Phase I and II clinical trials (validation, registration, exploitation);
- ▶ Development of methods and protocols in biotechnology (commercialization);
- ▶ Development of services related to the establishment of biobanks.

Publications and Customer References:

The significance of the ISBReMIT/Stemgen partnership is well summarized here:

- ▶ <http://www.stemgen.net/index.php/healthcare-news/publications/>
- ▶ <http://www.stemgen.net/wp-content/uploads/2013/11/pubblications.pdf>

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING

Via dei Gigli, 21
70026 Modugno (BA)

PUGLIA

Employees: from 100 to 499
Turnover: from 5 mln to 15 mln €
Export: from 5 mln to 15 mln €
Status: LARGE COMPANY

Contact: Pietro Larizza (R&D Manager)
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Web site: www.masmecbiomed.com

Project Proposal

Automated Systems for Interventional and Diagnostical Procedures

Description of the innovation project:

Masmec S.p.A.'s products are:

- ▶ SIRIO: navigation system for percutaneous interventional procedures such as biopsy and thermal ablation to reach even deep or subcentimetric target lesions;
- ▶ OMNIA: liquid handling workstation for DNA and RNA purification and extraction. It automatically performs different protocols for molecular diagnostic, research or forensic genetic laboratories.

IP Protection Level:

Masmec S.p.A. has already patented its products.

- ▶ SIRIO:
No. Italian Patent: BA2002A000049;
No. European Patent: EP2233099 (A2);
- ▶ OMNIA No. Patent: TO2013A000756.

State of development:

PRODUCT

Industrial application:

Health Sector

Market segment:

General Hospitals, Private clinics, Public and Private Analysis Labs, Public and Private Research Labs, Universities.

Advantage factor:

Masmec's products represent an innovation in biotechnology, interventional and diagnostical sectors. The company's products come from more of 30 years of experience in automation and robotics sectors.

Commercial challenge:

Masmec's products come from continuous R&D phases, supported by collaboration with Hospitals, Research Centers, and Experts in the field. Each product is carefully planned in order to fulfill every clients' demands.

Publications and Customer References:

Masmec's products are mentioned in the following papers:

- ▶ "Percutaneous lung biopsy: comparison between an augmented reality CT navigation system and standard CT-guided technique", Int Journal of Computer Assisted Radiology, 2013;
- ▶ "Percutaneous lung biopsies: performance of an optical CT-based navigation system with a low-dose protocol", Eur. Radiology, 2013.

Partnerships with Russia are now been finalized; contacts with Saudi Arabia, Turkey and Eastern Europe have been initiated.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT

Via Cappuccini, 1
71013 San Giovanni Rotondo (FG)

PUGLIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Fabrizio Gelain (President)

Telephone: +39 3296866896

E-Mail: info@nanomed3d.com

Web site: www.nanomed3d.com

Project Proposal

Functionalized Nanostructured Scaffold for the Regeneration of Chronic Spinal Cord Injuries (SCI)

Description of the innovation project:

Nanomed3D has already patented and published amazing results obtained by using self-assembled nanostructured scaffolds for the regeneration of contusive chronic spinal cord injuries in rats. Company's platform technology makes use of electrospinning and self-assembling, two of the major techniques from Nanomedicine. After significantly restoring the behavioural functions in treated animals and the pre-existing cytoarchitecture of the injured spinal cords in rats the company aims now to test its medical device in mini-pigs to complete pre-clinical experiments. This will allow Nanomed3D to start clinical experimentation in the near future.

IP Protection Level:

Nanomed3D owns an exclusive license from the University of Milan-Bicocca and a proprietary patent application owned solely by Nanomed3D.

State of development:

PROTOTYPE

Industrial application:

Regenerative Medicine

Market segment:

The main market is the regeneration of SCI. In the US, spinal cord injuries cost \$40.5 Bln annually. 1.275.000 US citizens suffer from paralysis caused by SCI. Each SCI patient will be willing to pay \$30.000 for an effective treatment. The cost of medical devices will be less than \$1.000.

Advantage factor:

The proposed medical device is fully synthetic, reproducible and customized in 12 years of animal testing for the regeneration of chronic SCI. It doesn't have any biological components. The results are unmet in any other chronic SCI therapy.

Commercial challenge:

At present there is no effective treatment for chronic spinal cord injuries: as the first to commercialize an effective product, the company will rise to a multinational level, not to mention that the present technology may also be applied to nerve transections and to the regeneration of Colon and other tissues.

Publications and Customer References:

Gelain Fabrizio, 2011. "Transplantation of nanostructured composite scaffolds neuro-prosthetics results in tissue reconstruction, axonal regeneration and neurological recovery in the chronically injured rat spinal cord." ACS Nano 5(1): 227-236.

Proposal of cooperation agreement:

VENTURE CAPITAL FINANCING

Via Vigili del Fuoco Caduti in Servizio, 14
70026 Modugno (BA)

PUGLIA

Employees: from 3 to 9

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Giovanni Vendola (CEO)

Telephone: +39 0809751306

E-Mail: segreteria@plasmapps.com

Web site: www.plasmapps.com

Project Proposal

Plasma Processes for Bio-Assay Development

Description of the innovation project:

Tailored surface properties represent a powerful tool to engineer surface interactions with the surrounding environment. Plasma technology offers an alternative tool in the process of surface finishing of materials, allowing the tuning surface properties for materials used in biomedical science. Plasma chemistry is a green nanotechnology working without solvents and with minimal use of reagents that allows the modification of chemical-physical surface properties of materials, to tailor biocompatibility, and to improve mechanical, chemical and optical properties. The project is based on the realization of bio-cell assay by means of plasma technology. It is possible to realize surface patterning by synthesizing cell adhesive and cell repulsive domains. Cell assays are used as procedure in medicine, biology, for assessing or measuring the presence, amount and functional activity of a target entity which can be a biochemical substance or a cell in an organism or organic sample.

IP Protection Level:

No patent as yet.

State of development:

PROTOTYPE

Industrial application:

Biomedical sector

Market segment:

Bio-cell-Assays are highly commercially demanded as they have become a routine part of modern medical, environmental, pharmaceutical, forensic and many other businesses at various scales from industrial to curbside.

Advantage factor:

Plasma technology uses dry processes and small amount of reagents. It is an eco-compatible nanotechnology that can be easily transferred to industrial scale with reduced process costs.

Commercial challenge:

Plasmapps expects to boost its income and increase the market share of the rapidly growing market of biomedical and life sciences, by supplying a "green process" in compliance with the new environmental guidelines.

Publications and Customer References:

Paper published in collaboration with the University of Bari: Sardella, Liuzzi, Comparelli, Depalo, Striccoli, Agostiano, Favia and Curri: "Functionalized luminescent nanocrystals on patterned surfaces obtained by radio frequency glow discharges" Nanotechnology 24 (2013) 145302 (11pp).

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT



Via Vigili del Fuoco Caduti in Servizio, 14
70026 Modugno (BA)
PUGLIA

Employees: from 3 to 9

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Giovanni Vendola (CEO)

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E-Mail: segreteria@plasmapps.com

Web site: www.plasmapps.com

Project Proposal

Plasma Processes for Rubber

Description of the innovation project:

Tailored surface properties represent powerful tool to engineer surface interactions with the surrounding environment. Plasma technology offers an alternative tool in the process of surface finishing of materials tuning surface properties used in automotive, aerospace and biomedical fields. Plasma chemistry is a green nanotechnology working without solvents and with minimal use of reagents that allows the modification of chemical-physical surface properties of materials in order to improve mechanical, chemical and optical properties. This project is based on the realization of a plasma process for protecting rubber gaskets and items from corrosive substances attacks. Thanks to this treatment, for example, it is possible to make rubber more resistant to fuels or other aggressive additives.

IP Protection Level:

Patent application will shortly be submitted.

State of development:

PROTOTYPE

Industrial application:

Automotive, Aerospace, Biomedical, Hydraulic

Market segment:

The project finds applications in the field of automotive, aerospace, biomedical, but also for hydraulic engine.

Advantage factor:

Plasma technology uses dry processes and small amount of reagents. It is an eco-compatible nanotechnology that can be easily transferred to industrial scale with reduced process costs.

Commercial challenge:

Plasmapps expects to boost its income and increase the market share of the rapidly growing market of rubber items consumer (automotive, aerospace, biomedical, etc.), by supplying a "green process" in compliance with the new environmental guidelines.

Publications and Customer References:

Paper published in collaboration with the University of Bari: "Advances Plasma Technology" Riccardo d'Agostino, Pietro Favia, Yoshinobu Kawai, Hideo Ikegami, Noriyoshi Sato, Farzaneh Arefi-Khonsari (2005) Wiley-VCH.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT

Via delle Saline, zona Torretta
76016 Margherita di Savoia (BT)

PUGLIA

Employees: from 3 to 9

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

Contact: Antonio Lopizzo (CEO)

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Web site: www.salineitalia.it

Project Proposal

Biosalt

Description of the innovation project:

Topical use cosmetics through the improvement of osmotic process of sodium chloride, improved by several excipients.

IP Protection Level:

The prototype has been realized and the patent application has been registered.

State of development:

PROTOTYPE

Industrial application:

Cosmetic Sector and Beauty Products

Market segment:

In 2013, the industrial sector of the Italian cosmetics industry continued to mark an exception in Italian manufacturing: production went up, by 2.6%, with a turnover of approximately 9,3 Mln €.

Advantage factor:

The company expects in five years to have a turnover of 40 Mln € with a total enterprise value that is close to 80 Mln €. The project is possible through export increase.

Commercial challenge:

Unlike chemical cosmetics, this solution offers a natural osmosis process that increases the tone of the materials and carries the active ingredients of the product.

Publications and Customer References:

Theoretical and empirical study, on the use of salt by Dr. Di Terlizzi.
Project tablet presses-mixer, Engineer Vitrano.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, VENTURE CAPITAL FINANCING

Via per Pandi, 3
72100 Brindisi (BR)

PUGLIA

Employees: from 20 to 49
Turnover: from 2,5 mln to 5 mln €
Export: from 500.000 mln to 2,5 mln €
Status: SME

Contact: Francesco Micali (Head of Technology)
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Web site: www.nanotech.tctsr.it

Project Proposal

Patented Technology for the Engineering and Production of Metal Oxide Nanoparticles and Heat Transfer Nanofluid for Advanced Materials and Innovative Fluids Development

Description of the innovation project:

- ▶ Plant and method for nanoparticles generation. This patented Technology refers to the production of metal oxide nanoparticles less than 20 nm in size that can be used as anticorrosive, thermo conductive, photo catalytic and thermo catalytic additives. Such Nanoparticles are obtained by controlling the process conditions and particularly Pressure, Temperature and residence time of the reagents during the reaction.
- ▶ Nanofluids for engine cooling applications. Nanofluids developed and formulated by TCT are characterized by high heat transfer capability and suspension stability. In particular that technology has been patented for specific applications such as high-performance engine coolants.

IP Protection Level:

- ▶ International patent: PCT/IT2011/00361 - 28/10/2011: Plant and method for nanoparticles generation;
- ▶ International patent: PCT/2013/000127 -23/01/2012: Nanofluids for engine cooling applications.

State of development:

PRODUCT

Industrial application:

Advanced Materials & Coatings and Engine coolants

Market segment:

For nine years relevant investments in the USA and EU have been oriented on research and testing of applications of such products in fields such as painting, coating, pharmaceuticals, and advanced materials. The market feedback expectations should be extremely positive.

Advantage factor:

TCT has patented a system for industrially producing metal oxide nanoparticles less than 20 nanometers in size, phase and morphology controlled. Additional patents refer to the formulation of Heat Transfer Nanofluids for high performing cooling systems.

Commercial challenge:

Metal Oxide Nanoparticles are suitable and already used in painting, coating, pharmaceuticals, and advanced materials.

Heat transfer nanofluids for engine cooling applications considerably benefit the exhaust valve temperature reduction, thanks to the high thermal conductivity of the nanofluid.

The wide application fields put nanoparticles and heat transfer nanofluids in competitive positions.

Publications and Customer References:

G. Colangelo, E. Favale, A. de Risi, D. Laforgia. Results of experimental investigations on the heat conductivity of nanofluids based on diathermic oil for high temperature applications, Applied Energy 97, 2012 (828-833). On the Cooling of Electronics with nanofluids, Journal of Heat Transfer Vol. 133, May 2011.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, CERTIFICATION FOR EXPORT, IPR ASSIGNMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via Per Monteroni, snc c/o Complesso Ecotekne,
Dip.to Ingegneria dell'Innovazione
73100 Lecce (LE)

PUGLIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

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Web site: www.typeone.it

Project Proposal

Highly Innovative Technique for Producing Type I Collagen from Animal/ Fish Tissues and Bio-Inspired Collagen-Based Products

Description of the innovation project:

There are many properties of collagen (especially type I) that make it a very attractive substance for various medical application (regenerative medicine, plastic and cosmetic surgery, wound dressing), such as: weak immunogenicity, resistance to proteolysis, optimal biomimicking, etc.

TypeOne has developed a novel technique (based on proper organic acid/alkaline buffer treatments) for extracting and purifying type I fibrillar collagen from various animal sources (equine, bovine and fish), which allows to preserve the unique biological properties of the protein and make it particularly suitable for healthcare and advanced therapies.

IP Protection Level:

Since the collagen extraction method has only recently been optimized by the R&D unit of the company, and is still under investigation, intellectual property is currently under development.

State of development:

PROTOTYPE

Industrial application:

Biomedical, Pharmaceutical and Cosmetic application

Market segment:

The forecasts for the collagen demand growth trend in the EU market are surprising. Within the next 5 years, collagen demand will undergo an exponential increase, shifting from 300 M€ of 2015 (25 tons) to about 500 M€ of 2020 (40 tons), mainly driven by the healthcare and medical sectors, cosmetics and toiletry.

Advantage factor:

Many investigations have been made into the extraction of collagen from animal and fish tissues. The start-up found a very simple technique that may be used on various animal tissues (especially skin), and allows to produce high yields of native soluble collagen and insoluble collagen at a competitive cost.

Commercial challenge:

The main opportunity offered by the innovative technology herein proposed is that it has been customized by the company, to be adopted in treating animal sources coming from the local area/farm (i.e. equine tendon, fish skin), which: are TSE-free, do not have any religious implication (for prospective entry in the Asian market), are weakly immunogenic themselves, allow for full control of the supply-chain and give a 'territorial mark' to the initiative.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, SUB-CONTRACT AGREEMENT, VENTURE CAPITAL FINANCING



Via Corso Umberto I, 40
80100 Napoli (NA)

CAMPANIA

Employees: more than 499
Turnover: more than 25 mln €
Export: from 75.000 to 250.000 €
Status: UNIVERSITY

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Web site: www.unina.it

Project Proposal

New Therapeutic Strategies in Stroke and Other Neurodegenerative Disorders

Description of the innovation project:

The goals of the present proposal are:

- ▶ to establish a technical platform for the rapid prototyping of the new molecular entities identified in preclinical studies;
- ▶ to discover new druggable targets by using in vitro and in vivo models of Stroke and neurodegeneration;
- ▶ to establish commercial and scientific relationship with companies interested in the clinical development of the prototypes.

Available expertises: Molecular and Cellular Pharmacology; Cellular and Molecular Toxicology, Clinical Pharmacology, Electrophysiology and Microfluorimetry and video imaging. Surgical and genetic animal models for neurological disorders such as Stroke, Parkinson's Disease, Alzheimer's Disease and Amyotrophic Lateral Sclerosis.

IP Protection Level:

The Proposer is an expert in preclinical studies aimed to identify new molecular targets involved in the pathogenesis of neurological diseases as testified by the 2 patent applications filed for new molecules useful for treating stroke and neurodegenerative disorders: FI2006A000225, PCT/EP2011/071252.

State of development:

MODEL

Industrial application:

Pharmaceutical industry and Biotech companies

Market segment:

Considering the annual direct and indirect costs for neurological disorders worldwide, the possible financial return is enormous. The real segment is represented by companies working in the field. The secondary segment is represented by patients affected by the mentioned neurological disorders.

Advantage factor:

The benefits obtained from this proposal are related to the development of innovative molecules for the treatment of those diseases affecting the Nervous System that are still considered a Medical need due to the lack of efficacy of the treatment available as: Cerebral Ischemia, ALS, AD and PD.

Commercial challenge:

The investment in the business venture aimed at developing new molecular entities and to identify new druggable targets for the treatment of cerebral ischemia and neurodegenerative diseases such as AD, PD and ALS may represent a guarantee of the financial return resulting from prototyping and sale of the molecules identified by all those pharmaceutical and biotech companies interested in developing the prototypes that will have the opportunity to foster research projects of high innovative value.

Publications and Customer References:

- ▶ Molinaro P. et al., "Neurounina-1", Mol Pharmacol. 2013 Jan; 83(1):142-56. doi: 10.1124/mol.112.080986. Epub 2012 Oct 11.
- ▶ Cuomo O. et al., "Antithrombin reduces ischemic volume, ameliorates neurologic deficits, and prolongs animal survival in both transient and permanent focal ischemia", Stroke, 38:3272-3279, 2007.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

Piazza Tancredi, 7
73100 Lecce (LE)

PUGLIA

Employees: more than 499

Turnover:

Export:

Status: UNIVERSITY

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Web site: www.unisalento.it

Project Proposal

Immuno-Functionalized Polymer-Based Conformal Coatings Applied to Cells

Description of the innovation project:

Immuno-functionalized polymer-based conformal coatings are applied to cells or aggregate of cells for immuno-protection upon transplantation. The conformal coating allows a small infusion volume and retains cell functionality, while the localized delivery of an immunorelevant molecule enhances the immunoprotection offered by the polymer coating itself and eliminates the need for systemic immunosuppression. The proposed immuno-protection of transplanted cells finds application in the treatment of several autoimmune and metabolic diseases, for example in the transplantation of pancreatic islets for the treatment of Type I diabetes, a devastating disease affecting over 200 Mln people worldwide.

IP Protection Level:

A provisional application (confidential content) has been recently filed to the United States Patent and Trademark Office. A complete and non-provisional application, claiming benefit of the filing date of the provisional one, will be filed within one year.

State of development:

MODEL

Industrial application:

Pharma/Medical devices

Market segment:

The proposed technology, related to cell encapsulation, targets the broader field of tissue engineered products. In the overall market of tissue engineering (about 500 Blns \$ in 2015), companies focusing on cell therapy are expected to show sales volume of 10-50 Mlns \$/year each.

Advantage factor:

With respect to current cell encapsulation strategies, the company's approach represents a versatile platform for the localized delivery of a double therapy, consisting of an immunologically relevant molecule and transplanted cells, which can simultaneously deliver therapeutic proteins (e.g. insulin).

Commercial challenge:

The modulation of the structure of the polymer coating and the controlled delivery of an immunorelevant molecule make the technology versatile and highly competitive, showing promise for impact on several cell-based therapies. For example, the use of the technology to immuno-protect functional pancreatic islets would represent a breakthrough in the treatment of Type I diabetes, where long-term graft survival and insulin independence are yet to be obtained upon islet transplantation.

Publications and Customer References:

Several research articles by the team involved in the development of the technology are in preparation.

Proposal of cooperation agreement:

LICENSING AGREEMENT, VENTURE CAPITAL FINANCING

Piazza Tancredi, 7
73100 Lecce (LE)

PUGLIA

Employees: more than 499

Turnover:

Export:

Status: UNIVERSITY

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Web site: www.unisalento.it

Project Proposal

Nanosilver-Based Antibacterial Treatments

Description of the innovation project:

The process is based on the surface modification of the substrates through the photo-reduction of a silver precursor and the in situ synthesis/deposition of silver nanoparticles on the surface of the material. The ease, the versatility and the low-cost aspect are some distinctive features of the process. Moreover, the antibacterial materials produced are characterized by an excellent adhesion of the coating to the substrate and by long-term antibacterial capability against Gram positive and Gram negative bacteria and also fungi.

IP Protection Level:

Patent pending: A. Sannino, M. Pollini, A. Maffezzoli, A. Licciulli "Antibacterial surface treatments based on silver clusters deposition" WO 2007074484 A2.

State of development:

PRODUCT

Industrial application:

Technical Textile

Market segment:

According to the latest estimation, the technical textiles market for 2015 is estimated at 60 Bln U.S. \$; assuming that about 20% can be related to the nanotechnology field, the value market will reach 12 Bln U.S. \$ in 2015.

Advantage factor:

The process parameters can be properly defined in terms of cost/effectiveness ratio and antimicrobial properties expected. Another advantage is related to the possibility to transfer the process on industrial scale and to integrate the silver deposition on the traditional production process.

Commercial challenge:

The main strength of the technology is the possibility of carrying out by the companies interested to the technology the treatment directly on the surface of the materials or on the final products of interest.

Publications and Customer References:

- ▶ M. Pollini et. al. "Characterization of antibacterial silver coated yarns" J. of Mat. Sc.; Mat. in Med., Volume 20, Issue 11 , 2009 (2361-2366).
- ▶ M. Pollini et al. "Silver coated wool yarns with durable antibacterial properties". J. of App. Pol. Sci. Volume 125, Issue 3:2239-2244.

Proposal of cooperation agreement:

LICENSING AGREEMENT, KNOW HOW TRANSFER

Piazza Tancredi, 7
73100 Lecce (LE)

PUGLIA

Employees: more than 499

Turnover:

Export:

Status: UNIVERSITY

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Web site: www.unisalento.it

Project Proposal

Biomedical Devices with Antibacterial and Regenerative Properties for the Management of Complicated Wounds

Description of the innovation project:

A biomedical device with regenerative and antibacterial properties has been developed for the management of complicated wounds and the prevention of the infections associated. The wound dressing has been realized adopting silk fibroin because of its regenerative properties and nanosilver as broad-spectrum antimicrobial agent. The wound dressing developed offers the great advantage to promote the wound healing by improving the regeneration of the damaged tissues and the prevention of wound infections.

IP Protection Level:

Patent pending: A. Sannino, M. Pollini, A. Maffezzoli, A. Licciulli "Antibacterial surface treatments based on silver clusters deposition" WO 2007074484 A2.

State of development:

PRODUCT

Industrial application:

Biomedical devices

Market segment:

Recently, the European market of biomedical devices has been estimated at about 95 Blns euros, with more than 500,000 employers. 70% of the European total turnover is associated to Germany, France, UK, Italy and Spain.

Advantage factor:

When compared with other wound dressings, an advantage of this device is represented by the combination of regenerative and antimicrobial properties. Moreover, the silver nanocoating deposition allows the prevention from infections without affecting significantly the costs of the final product.

Commercial challenge:

The main strength of the device developed is the ease of its production and the cost/effectiveness ratio. In fact, the silk fibroin substrates are produced as in the traditional textile process and the silver deposition treatment is also performed by a low-cost silver deposition technology. The combination of antibacterial and regenerative properties is a very innovative aspect in the field of wound dressings.

Publications and Customer References:

- ▶ F. Paladini et.al "Antibacterial and antifungal dressings obtained by photochemical deposition of silver nanoparticles" J Appl Polym Sci 2014;
- ▶ F. Paladini et.al "In vivo testing of silver treated fibers for the evaluation of skin irritation effect and hypoallergenicity" J Biomed Mater Res B Appl 2013.

Proposal of cooperation agreement:

LICENSING AGREEMENT, KNOW HOW TRANSFER

Via Monteroni
73100 Lecce (LE)

PUGLIA

Employees: more than 499

Turnover:

Export:

Status: UNIVERSITY

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Web site: www.unisalento.it

Project Proposal

MENIR - Biometric Meniscus Replacement Using Regenerative Medicine Methods

Description of the innovation project:

In this project an engineered and biomimetic meniscus replacement, made of a natural polymer matrix seeded with cells, reinforced with bundles of aligned fibers, is proposed. The use of both fibers produced by electrospinning or bioresorbable fibers available on the market and used in surgery, will be evaluated. Initially, the fibers will provide a reinforcement for the scaffold, afterwards, will guide cells to produce collagen fibers of their own, in preferential and physiological directions. The natural shape of the meniscus, will be replicated using reverse engineering techniques: a mould will be fabricated by rapid prototyping technique starting from clinical images (TAC, RMN) elaborated in a CAD format.

IP Protection Level:

The proposed idea is at a preliminary research stage. In the future patent application for this technology with one or more applications will be submitted.

State of development:

CONCEPT

Industrial application:

Human Health and Biotechnologies

Market segment:

According to a new market report published by Transparency Market Research "Orthopedic Soft Tissue Repair Market " the global orthopedic soft tissue repair market was valued at USD 5.6 Bln in 2013 and is expected to grow at a CAGR of 7.2%, to reach an estimated value of \$ 8.5 Bln in 2019.

Advantage factor:

With respect to commercially available scaffolds (the present scaffold is: reinforced with aligned fibers and engineered with cells producing collagen fibers of their own, it can be "tailor-made" and customized to match the properties of a natural meniscus.

Commercial challenge:

Meniscal injuries affect 1.7 Mln people in the western world each year, primarily through sports injuries and ageing. The treatment of irreparable meniscal tears remains a major challenge for the orthopaedic community.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

Via Monteroni
73100 Lecce (LE)

PUGLIA

Employees: more than 499

Turnover:

Export:

Status: UNIVERSITY

Contact: Francesca Gervaso (Research fellow)

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Web site: www.unisalento.it

Project Proposal

Honeycomb - NOBIS NOvel Biphasic Substitute for osteochondral lesion treatment

Description of the innovation project:

A novel biphasic substitute made of an organic/inorganic material is proposed for repair of osteochondral lesion. The substitute is a 3D structure made of a polymeric scaffold partially penetrating into bioceramic scaffolds. The polymeric scaffold (i.e. collagen or chitosan) is characterized for its compatibility in vitro and in vivo as supporting material for engineering cartilage. The inorganic part is a porous scaffold in a resorbable bioceramics fabricated by sponge replica method supporting bone regeneration. To obtain a partial but strong interconnection between polymeric and bioceramic parts of the osteochondral substitute, a patented multi-step procedure was assessed that guarantees the perfect integration between the two scaffolds.

IP Protection Level:

Patent No.: PCT/EP2014/060264, F. Gervaso, F. Scalera, A. Sannino, G. Peretti, G. Fraschini, C. Domeneghini, A. Di Giancamillo, D. Deponti, Composite scaffold for tissue repair, n. 61/824,706. Submitted as US provisional on May 17th 2013 and extended as PCT on May 19th 2014.

State of development:

PROTOTYPE

Industrial application:

Human Health and Biotechnologies

Market segment:

Estimates of knee arthroplasties are 350,000 per year, with an expectation to increase owing to population growth and increased longevity. The potential market for advanced cartilage therapies is forecasted at 500,000 procedures with a value of \$ 1.5 Bln.

Advantage factor:

With respect to commercially scaffolds (i.e. Maioregen, Finceramica), the present scaffold is: more rigid and biomechanically integer, polymeric/bioceramic components are better kept together and are less likely to peel off, it is more fittable, it can be "tailor-made" and customized.

Commercial challenge:

The techniques for the repair of condral or osteocondral lesions are currently adopted in clinical practice. However, secure and standardized results have not been achieved yet.

On the other hand, the research in this field is very active for the huge number of patients of different ages affected by articular cartilage or osteochondral lesions. A valide, secure, and standardized technique would bring a worldwide strong impact.

Publications and Customer References:

Deponti D., Di Giancamillo A., Gervaso F., Domenicucci M., Domeneghini C., Sannino A., Peretti G.M. Collagen scaffold for cartilage tissue engineering: the benefit of fibrin glue and the proper culture time in an infant cartilage model Tissue Eng Part A. 2014 Mar; 20 (5-6):1113-26.

Proposal of cooperation agreement:

LICENSING AGREEMENT, VENTURE CAPITAL FINANCING

Environment



Viale delle Scienze, ed. 16
90128 Palermo (PA)

SICILIA

Employees: Up to 2

Turnover: from 250.000 to 500.000 €

Export: less than 75.000 €

Status: SME

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Project Proposal

Marine Environmental Restoration Method

Description of the innovation project:

The support allows a rapid and efficient positioning of *Posidonia oceanica* cuttings, ensures their establishment and growth, supports the natural dynamic development of the meadow reducing the rate of mortality and the impact on marine environment.

IP Protection Level:

Biosurvey has patented a biodegradable plastic support (bioplastic Mater-Bi) for the restoration of "*Posidonia oceanica* meadows" in the Mediterranean sea using a different method from those such as cheesecloths, plastic and metal grid and concrete frame.

State of development:

PRODUCT

Industrial application:

Environmental Recovering

Market segment:

Oil and Gas trenching, piping and marine environmental restoration. *Posidonia oceanica* Trasplanting.

Advantage factor:

The support allows a rapid and efficient positioning of *Posidonia oceanica* cuttings, ensures their establishment and growth, supports the natural dynamic development of the meadow reducing the rate of mortality and the impact on marine environment with low cost.

Commercial challenge:

The system allows to speed up and to significantly reduce cost of installation. Moreover, the system has an higher success rate than the solutions on the market today (up to 98%).

Publications and Customer References:

Transplantation assessment of degraded *Posidonia oceanica* habitats: site selection and long-term monitoring. Journal of Environmental Management, (submitted).

"Conservazione e gestione della naturalità degli ecosistemi marino-costieri. Il trapianto delle praterie di *Posidonia oceanica*", 34-39.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT



SP 6 Lecce-Monteroni, c/o DiSTeBA Campus Ecotekne
73100 Lecce (LE)

PUGLIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

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Web site: www.biotoxen.it

Project Proposal

Method Using Hemoglobin for Measuring the Toxicity of Environmental Matrices

Description of the innovation project:

Innovative colorimetric method for the measurement and evaluation of the toxicity of environmental samples based on the measurement of functional alterations of the hemoglobin molecule in response to different classes of contaminants in aqueous matrices such as water, elutriates, wastewater, etc. The amount of functional alteration of the hemoglobin molecule is proportional to the toxicity of the sample.

IP Protection Level:

Patent EPO 13425030.

State of development:

CONCEPT

Industrial application:

Environment

Market segment:

The invention may be of interest to Agri-food farms engaged in the quality certification of their products, to industrial Companies for the own-checking of waste waters coming from productive processes, to Companies engaged in environmental monitoring.

Advantage factor:

Strengths of the patent:

- ▶ Quick, simple, low cost method and without the use of living organisms, as strongly recommended by the EU;
- ▶ Ability to run "in situ" and without specialized staff.

Commercial challenge:

Alternative method using a biomolecule as detector of environmental toxicity deriving from chemical pollutants.

No use of living organisms (*Daphnia magna*, *Vibrio fischeri*), unlike products currently on the market.

Publications and Customer References:

Calisi A., Lionetto M.G., Sanchez-Hernandez J.C., Schettino T. (2011). Effect of heavy metal exposure on blood haemoglobin concentration and methemoglobin percentage in *Lumbricus terrestris*. *ecotoxicology*, vol. 20, p. 847-854, ISSN: 0963-9292.

Proposal of cooperation agreement:

LICENSING AGREEMENT



SP 6 Lecce-Monteroni, c/o DiSTeBA Campus Ecotekne
73100 Lecce (LE)

PUGLIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Trifone Schettino (President)

Telephone: +39 0832298668

E-Mail: info@biotoxen.it

Web site: www.biotoxen.it

Project Proposal

Analitical Method to Determine Toxicity of Environmental Samples due to Metal and Non Metallic Pollutants

Description of the innovation project:

The invention consists in an innovative method for the measurement of the degree of toxicity of environmental samples due to organic and inorganic chemical pollutants in a quick, simple, low cost and without the use of living organisms. The innovative idea at the basis of this method consists in measuring in vitro the degree of inhibition of the enzyme carbonic anhydrase as a means of detection 1) of the general toxicity of environmental samples, namely the toxicity due to the simultaneous presence in the sample of most chemical pollutants bioavailable which together may have additive effects and/or synergistic effects on biological systems, 2) the share of overall toxicity due to non-metallic compounds.

IP Protection Level:

PCT/IT2013/000205 patent granted.

State of development:

PROTOTYPE

Industrial application:

Agricultural and industrial sectors

Market segment:

The invention may be of interest to Agri-food farms engaged in the quality certification of their products, to industrial Companies for the auto-control of waste waters coming from productive processes, to Companies engaged in environmental monitoring.

Advantage factor:

Quick, simple, low cost method and without the use of living organisms highly recommended by EU. Ability to run "in situ" and without specialized staff.

Commercial challenge:

The main advantages of this invention, by an application point of view, are represented by its specificity toxicological, speed and low costs, features that make it suitable for routine applications.

This method responds to the continuing demand for screening methodologies reliable, sensitive, easy to use and low cost for environmental monitoring.

Publications and Customer References:

Lionetto M.G., Caricato R., Erroi E., Giordano M.E., Schettino T. (2005). Carbonic anhydrase based environmental bioassay. International Journal of Environmental Analytical Chemistry, Vol. 85, p. 895-903, ISSN: 0306-7319.

Proposal of cooperation agreement:

LICENSING AGREEMENT

BIOXIN

via Pigna 76/c
80128 Napoli (NA)

CAMPANIA

Employees: from 3 to 9

Turnover: from 250.000 to 500.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Alfredo Pagnotta (CEO)

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Web site:

Project Proposal

Biomonitoring DIOXIN

Description of the innovation project:

BIOXIN startup company has developed Biosensors to monitor pollutants in food, milk, water and human samples such as blood and urine.

IP Protection Level:

This Startup company already has an EU patent for environmental biomonitoring. Now BIOXIN has set up a protocol and condition for the use of BIOSENSORS for DIOXIN assay in human samples.

State of development:

PRODUCT

Industrial application:

Health and Nutrition

Market segment:

Biosensors in Italy are completely unknown. There are no competitors. The Biosensor could be used to test for dioxin content in food, milk and the environment. This product could be useful in food industries but also in human health.

Advantage factor:

The BIOSENSORS are sensitive as GC-MSS in use today. However they are cheaper than GC-MS, because of their engineered cell lines. Biosensors are very suitable to monitor dioxin contamination in food, environmental and human samples. It is useful for large scale analyses.

Commercial challenge:

Biosensors can be useful to monitor dioxins (PCBs) in not yet patented human samples. Human health could be an opportunity to increase the commercial challenge.

Publications and Customer References:

This startup was born from the joint-venture between the Belgium company BDs, working in the field of environment monitoring and a group of researchers from the University of Naples. The following publications used this system called CALUX to monitor dioxins contamination in human biological samples:

- ▶ Characterization of Estrogen and Androgen Activity of Food Contact Materials by Different In Vitro Bioassays (YES, YAS, ER? and AR CALUX) and Chromatographic Analysis (GC-MS, HPLC-MS). Mertl J, Kirchnawy C, Osorio V, Grininger A, Richter A, Bergmair J, Pyerin M, Washüttl M, Tacker M. PLoS One. 2014 Jul 7;9(7):e100952;
- ▶ Lin DY, Lee YP, Li CP, Chi KH, Liang BW, Liu WY, Wang CC, Lin S, Chen TC, Yeh KJ, Hsu PC, Hsu YC, Chao HR, Tsou TC. Combination of a fast cleanup procedure and a DR-CALUX® bioassay for dioxin surveillance in Taiwanese soils. Int J Environ Res Public Health. 2014 May 6;11(5): 4886-904;
- ▶ Addeck A, Croes K, Van Langenhove K, Denison MS, Afify AS, Gao Y, Elskens M, Baeyens W. Time-integrated monitoring of dioxin-like polychlorinated biphenyls (dl-PCBs) in aquatic environments using the ceramic toximeter and the CALUX bioassay. Talanta. 2014 Mar; 120:413-8;
- ▶ Addeck A, Croes K, Van Langenhove K, Denison MS, Elhamalawy A, Elskens M, Baeyens W. Time-integrated monitoring of polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDD/Fs) in urban and industrial wastewaters using a ceramic toximeter and the CALUX bioassay. Chemosphere. 2014 Jan; 94:27-35.

Proposal of cooperation agreement:

VENTURE CAPITAL FINANCING



SS 7 Appia Km 706+030 c/o Cittadella della Ricerca
72100 Brindisi (BR)

PUGLIA

Employees: from 50 a 99

Turnover: from 2,5 mln to 5 mln €

Export: from 75.000 to 250.000 €

Status: CONSORTIUM

Contact: Alessandro Marseglia (Senior Researcher -
Project Manager)

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E-Mail: info@cetma.it

Web site: www.cetma.it

Project Proposal

**PROWASTE - Efficient Utilization of Plastic Waste Through Product
Design and Process Innovation**

Description of the innovation project:

A small part of plastic waste sorting scrap is recycled to realize beams for urban/outdoor furniture. The low compatibility of the different polymers and the contamination by non-polymeric materials results in poor mechanical properties and over-dimensioned beams. The idea promoted by PROWASTE is to introduce longitudinal pultruded rods in the recycled plastic beam without substantial modification of the existing plants. The result is a significant enhancement of flexural stiffness and creep resistance, allowing to use thinner beams and to obtain lighter products, with greater aesthetic features than the actual recycled furniture.

IP Protection Level:

No patent application has been filed.

State of development:

PRODUCT

Industrial application:

Outdoor Furniture, Vineyard Beanpoles, Outdoor Flooring

Market segment:

The total European demand for recycled plastic lumbers is estimated in 70,000 tonnes and is valued at 70-80 € million, of which 20-30% were urban and outdoor furniture. The Recycled Plastic Lumber (RPL) market is receiving attention from the industry since it is an environment friendly product.

Advantage factor:

Resistance to UV, insect attacks, fungi, and waterproof, Does not rot, warp, crack, splinter or chip / does not stain, Resistance to vandals, Maintenance-free, Environment friendly/green material, Higher mechanical properties than traditional RPL.

Commercial challenge:

On the base of the application, customers may purchase products either for public or private use. The main customer groups are: Public sector, such as local authorities, municipalities, administrations, and other entities responsible for urban planning; Private sector, characterized by the large volumes of items requested and purchased; Private sector purchasing products destined for public use, such as cafés, schools, malls, stadiums and parks.

Publications and Customer References:

A. Greco, M. Frigione, A. Maffezzoli, A. Marseglia, A. Passaro, "A perspective on the prowaste concept: efficient utilization of plastic waste through product design and process innovation".

<http://ec.europa.eu/environment/eco-innovation/projects/en/projects/prowaste>.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, LICENSING AGREEMENT, KNOW HOW TRANSFER, COMMERCIAL CONTRACT



Via del Fiumicello, 7
80142 Napoli (NA)

CAMPANIA

Employees: more than 499
Turnover: more than 25 mln €
Export: more than 15 mln €
Status: LARGE COMPANY

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Web site: www.dappolonia.it

Project Proposal

XXL-REFRESH - a Modular System for Freshwater Transport Over the Sea

Description of the innovation project:

XXL-REFRESH is a modular flexible container for sea transport of freshwater that can be used both for regular supply of a small coastal community and as a quickly deployed supply means in response to natural disasters or drought periods. The cigar-shaped container is assembled by fast junction of several modular elements. The material consists in a reinforced technical textile, coated with food-approved impermeable coating. Modules are joined by high strength watertight zip fasteners. Once assembled, the container is lowered in the sea, filled with freshwater and towed by a tugboat to destination. Buoyancy is ensured by the hydrostatic balance between freshwater and seawater.

IP Protection Level:

No patent as yet. The key component of the system, a watertight high strength zip fastener, has been patented by the company's partner ZIPLAST.

State of development:

PROTOTYPE

Industrial application:

Freshwater supply for household, Civil and Industrial use

Market segment:

In Italy the market of water transport to small islands is worth 44 MI€ for a capacity exceeding 3 MI€/year. Other promising markets in the Mediterranean are Greek islands and Cyprus for seasonal supply; concrete opportunities for regular year-round service exist in South America and Persian Gulf.

Advantage factor:

XXL-REFRESH thanks to its modular structure couples the high capacity of a monolithic system with the easy handling of a train system. It has a competitive advantage both regarding costs and environmental impact. It is easily accessible for interior cleaning and sanitizing.

Commercial challenge:

Current prices for freshwater transport by tanker are around 8-13 €/m³ in Italy and 6-10 €/m³ in the Eastern Mediterranean. XXL-REFRESH's target is quite competitive being between 3 and 5 €/m³. This cost is higher than desalination.

Publications and Customer References:

- ▶ Article published in 2012 on Euronews, available at the following link: <http://www.euronews.com/2012/12/06/bags-of-water>;
- ▶ Paper: S. Ambrosetti et al., 2014 "Development of a modular reconfigurable waterbag for long distance freshwater transport over the sea: from concept to full scale demonstration", ICWRE International Conference.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING



Via Montegrappa, 133
96100 Siracusa (SR)

SICILIA

Employees: from 20 to 49
Turnover: from 5 mln to 15 mln €
Export: less than 75.000 €
Status: SME

Contact: Alessandro Dongu (Marketing Developer Manager)
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Web site: www.ecotecgroup.com

Project Proposal

Thermal Plasma Technology for Metals and Energy Recovery from Waste

Description of the innovation project:

Thermal plasma is constituted from a neutrally ionized, high-temperature gas (> 4,000-5,000 C). This makes the thermal plasma suitable for various applications, as the treatment of hazardous waste (the technology is included in the BAT). The extremely high temperatures allow the melting and encapsulation in a glassy matrix (vitrification) of dangerous inorganic components; at the same time, the organic components become gaseous and are transformed into simpler molecules, while the source eliminates the possibility of forming dioxins and furans. Ecotec has created a pilot plant with a mid-scale thermal plasma reactor, in order to test the plasma arc technology transferred on a wide variety of waste materials for metals and energy recovery.

IP Protection Level:

4 processes developed and patented, based on thermal plasma: Italian Patent No. 0001402125 28/08/2013; International Patent Pending; Italian Patent No. 0001404504 22/11/2013; International Patent Pending; Italian Patent Request No. RM2013A000205, 05/04/2013; International Patent Pending; Italian Patent Request No. RM2013A000380 28/06/2013; International Patent Pending.

State of development:

PROTOTYPE

Industrial application:

Ecotec Thermal plasma technology is available for companies/entities that intend to develop new processes for the treatment of industrial waste, especially related to the replacement of traditional technologies that are now obsolete for the exacerbation of sector legislation.

Market segment:

2 possible market segments: energy recovery from oil industry with the advantage to move from a disposal cost of about 300 €/t to a gain of 30 €/t; metal recovery from waste produced by non-ferrous metal industry with transition from an average disposal cost of 30 €/t to a gain of about 600 €/t.

Advantage factor:

For both market segments mentioned above, elimination of landfills.

Commercial challenge:

The patented invention may completely revolutionize the field of waste produced by the oil industry and non ferrous metal companies (aluminium).

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via Don Minzoni, 27
70044 Polignano a Mare (BA)

PUGLIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: START-UP

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Project Proposal

EggPlant - Not Wasting Life

Description of the innovation project:

EggPlant faces and solves two big environmental and social problems, wastewater disposal and pollution from traditional hydrocarbon-based plastics, by reusing wastewater as raw material to produce an ecofriendly, hi-tech and valuable product such as high-performance bioplastics through a zero waste process. EggPlant is based on a 2-phase process: a filtering technology as a first phase and a bacterial fermentation process as step 2. The filtering technology is adopted to separate all waste chemical components (sugar, polyphenols, etc.). The sugar components are then used to feed bacteria able to produce PHA bioplastics.

IP Protection Level:

In the process of filing a first patent application (expected by September 2014). A second patent application will be filed by the end of the year (December 2014).

State of development:

PROTOTYPE

Industrial application:

Aerospace, Biomedical, Advanced Electronics, Consumer Industry

Market segment:

EggPlant faces 2 different markets, bioplastics and waste disposal market. All these markets are big and growing markets. Bioplastics market value was 570,6M € in 2008 and will reach 1,1B € in 2015. Also organic waste disposal represents a growing market.

Advantage factor:

EggPlant offers a holistic valorization of waste through a zero waste process. Currently bioplastics are produced starting from food-related materials (eg corn, sugar cane, etc) and this implies an increasing in food costs; EggPlant solution makes possible the production of bioplastics starting from waste.

Commercial challenge:

EggPlant solution will help the conservation of our planet and will foster sustainable development based on the reuse of waste. EggPlant bioplastics will represent the only completely bio-derived and biodegradable biopolymer, representing a very promising business opportunity. The current challenge is related to process tuning in order to achieve a completely scalable, efficient and effective technology. Once at this stage of development, EggPlant will be ready for market.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, VENTURE CAPITAL FINANCING

FABER SRL

Via Parrocchia, 29
80146 Napoli (NA)

CAMPANIA

Employees: from 3 to 9

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

Contact: Massimo Mendia (Managing Owner)

Telephone: +39 0815645173

E-Mail: direzione@faberambiente.it

Web site: www.faberambiente.it

Project Proposal

New Generation of Reverse Vending Machines (RVM) for both Solid Items and Used Cooking Oil (UCO)

Description of the innovation project:

Faber proposes a new generation of low-cost high-performance reverse vending machines (RVM) for solid waste and used cooking oil (UCO). The machines can handle either single waste items, such as bottles, cans, etc, or typical household waste bags containing items of the same category. The developments lead to a low-cost but very effective way to control the quality and to sort the inserted items, producing waste fractions of very good quality and value. The sorting technologies have very low energy consumption, and the machines housing them can work with photovoltaic panels. The product design permits a wide variety of configurations ranging from schools, to supermarkets, street kiosks, up to large units for Municipal Collection Centers.

IP Protection Level:

New patents are under development. RVM with automatic sorting technologies applicable to single items, bags of single waste material and to UCO. The technologies supporting these new products are proprietary and exclusive, as can be seen from early patent literature exploration.

State of development:

PROTOTYPE

Industrial application:

Household Waste Recycling

Market segment:

The European RVM market comprises supermarkets and municipal centers. There are approximately 100,000 hypermarkets and 100,000 sizeable municipalities in existence. Assuming an average price of 10.000 € per unit, the European market is approx 2 Bls €. The company is also looking beyond Europe.

Advantage factor:

Low cost, effective, innovative and patentable solutions for solid and UCO quality control in street level RVM permit competitive positioning both in already developed European markets and in new markets in emerging countries.

Commercial challenge:

Hundreds of RVMs already installed. Based on the its experience and R&D the company is developing new units which can be made in several configurations in order to tackle the different market segments. The company aims at countries where solid waste separate collection is already well established, but also areas where it is just beginning to be implemented. Specific designs for emerging country megacities.

Publications and Customer References:

Developments are proprietary and have not been disclosed yet.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

ING. LINDA SCHIPANI SRL

Via Romagnosi 14
98122 Messina (ME)

SICILIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Linda Schipani (Director)

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Project Proposal

Plastics Luxury Bracelets made from Recycled Plastics

Description of the innovation project:

The invention applies to the realization of bracelets, of innovative design and environmental, social and aesthetic value, made from recycled plastic that takes the form and colors of shining crystals, the brightness of noble metals and the brilliance of precious stones. The method, for which the patent is pending, produces new outlines and dimensions based on the features of the plastic container utilized as raw materials and the accessories used to finish off and in closing to the choice of the precious metals to decorate. A technique that places value on the original shape form of the bottles and plastic containers, by cutting, assembly and decoration.

IP Protection Level:

Patent pending, Messina Chamber of Commerce - No. ME2014U000014 date 22-07-2014.

The patent method is relative to the realization of jewellery objects and fashion jewellery through the assembly of recycled plastics, industrial components and precious materials.

State of development:

PROTOTYPE

Industrial application:

Jewelry, Art & Design

Market segment:

The product is addressed to a high/medium target, the commercial value of the bracelets starts from a minimum of € 150,00 to higher values depending on the use of noble metals, semiprecious natural stones, precious and investment materials.

Advantage factor:

Innovation:

- ▶ use of the original design of a plastic bottle, without alteration of its original characteristics;
- ▶ makes it more resistant, safe and ergonomic;
- ▶ it is 100% eco-friendly;
- ▶ it draws value from poor materials encouraging to prevent plastic waste;
- ▶ makes a link between luxury and waste.

Commercial challenge:

The competitive advantages are linked to the artistic value of the invention and and the aesthetic value of the product. The object gains environmental and cultural value. The idea is also to develop a virtuous process encouraging create art and design from waste while preserving the environment, while creating social awareness for this issues.

Publications and Customer References:

The product was presented at the ITS 2014 contest, together with a more articulated artistic project, to the maison della femme of Pikine in Dakar during the Dak' Art 2014 to supply to the senegalese women ideas and prototype to create economy through waste and creativity.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT



Via Orabona, 4
70125 Bari (BA)

PUGLIA

Employees: from 3 to 9
Turnover: from 250.000 to 500.000 €
Export:
Status: SME

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Web site: www.lenviros.it

Project Proposal

CONTROLODOR&ODORTEL

Description of the innovation project:

The CONTROLODOR project has been designed to manage and control the odour nuisance by developing an integrated system that includes a basic tool: ODORTEL. It replaces the paper questionnaire used so far. ODORTEL consists of a system of communication / telephone reception of olfactory distress by the "sensitive receptor" using a telephone switchboard.

This system relies on the cooperation of citizens to report the presence of odorous events.

The CONTROLODOR implementation steps are:

- ▶ Identification and systematization of emission sources for the production process;
- ▶ Monitoring net work (Sensors, Odortel system, Electronic noses, etc.);
- ▶ Dispersion models;
- ▶ Implementation of a forecast system for odour levels;
- ▶ Research and identification of appropriate abatement systems.

IP Protection Level:

The Controlodor system and its "tool" Odortel are now being tested in the field in order to optimize the development of the whole system. The community trademarks CONTROLODOR and ODORTEL were registered in 2013.

State of development:

EXPERIMENTAL

Industrial application:

The project is intended for all industrial sectors that are at malodorous risk

Market segment:

CONTROLODOR&ODORTEL have been designed and realized in order to meet the needs of those plants subject to odour problems caused by their activities, but also to involve citizens subjected to malodorous risk as olfactory sensors. The value of the entire system is about 300.000 €.

Advantage factor:

Italian laboratories do not offer an integrated solution because they use conventional methodologies. Public regulations are converging toward the need to adopt integrated measurement systems that can evaluate all aspects of the problem. The proposal aims to fill this gap.

Commercial challenge:

The development of this technology was possible after reaching a high level of expertise in the field of environmental monitoring.

The commercialization of the invention will bring significant benefits because it would allow both real-time recording of malodorous events and alerting companies of the need to immediately implement appropriate corrective action. Accordingly, it would be a highly useful tool for the management of olfactory nuisance.

Publications and Customer References:

- ▶ L. De Gennaro, et al. Development of the CONTROLODOR system for monitoring sites osmogenic.
- ▶ L. De Gennaro, et al. A direct line with the general public systems for the digitization of signals.
- ▶ L. De Gennaro, et al. Integrated methodologies for the control of emissions of a landfill osmogenic.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL CONTRACT



Via Europa, 2
84091 Battipaglia (SA)

CAMPANIA

Employees: from 10 to 19

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

Contact: Ivano Esposito (CEO)

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Web site: www.megainweb.it

Project Proposal

Libera the Composter of Comunity

Description of the innovation project:

The electromechanical composter (LIBERA) is designed for most needs, small municipalities, communities, condominiums, restaurants, hotels, ski resorts, farmers' markets, etc.

The transformation process of organic waste into compost is known as composting. With the use of the electromechanical composter such transformation is accelerated, reducing the normal time of composting from 12 months to 60/90 days.

IP Protection Level:

At the moment there are no patents, but there is a patent application to be submitted.

State of development:

PROTOTYPE

Industrial application:

Environment and Waste Management

Market segment:

The intended market segment is very large: small towns, communities, condominiums, restaurants, hotels, ski resorts, farmers markets, etc. The real benefit is for the environment. The cost of the machine is € 50,000.00 and the return on investment is 5/8 years.

Advantage factor:

The few existing competitors only develop two-chamber machines, while this innovative process makes use of a third chamber to help optimize the process and obtain quality compost.

Commercial challenge:

Currently there are very few manufacturers in the world of electromechanical composters for community centers, and to date no one has yet used this new system, so the company does not have competitors; also, a new system is being developed to further improve the production capacity of the machine.

Publications and Customer References:

Today there are ongoing exchanges with ENEA Casaccia (Rome), who is following the progress, and particularly with Dr. Fabio Musmeci.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Bivio Aspro Zona Industriale Piano Tavola
95040 Belpasso (CT)

SICILIA

Employees: from 3 to 9

Turnover: from 250.000 to 500.000 €

Export:

Status: SME

Contact: Agata Di Stefano (Managing Director)

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Web site: www.twitter.com/PEV_Catania

Project Proposal Smart Light

Description of the innovation project:

The smart lighting device is an innovative electronic ballast designed for optimizing the efficiency of outdoor lighting such as SAP or similar. The device eliminates the power losses typical of ferromagnetic systems by ensuring energy savings of at least 20%, reducing fixed costs for the power input, allowing doubling the life of the lamps and reducing by 50% the maintenance costs. The system can work through the use of web-based type applications. The entire system is controlled in real time by using a device "Gateway" that collects the operating status of each lamp, it forwards this information to the management server through GPRS or Ethernet network and gives commands to the individual lamps on specific request of the operator.

IP Protection Level:

The proposed system has not yet been patented.

State of development:

PRODUCT

Industrial application:

Energy Saving, Environmental

Market segment:

The segment of the market is public street lighting and that of medium and large companies interested in saving energy and reducing maintenance and management costs of the company lighting.

Advantage factor:

The actual street lighting systems are inefficient. The use of the LED new technologies solves the problem of energy efficiency, however presents various issues: replacement of the light, high cost, generation of electronic waste, cold light.

The advantages factors of SMART LIGHT are:

- ▶ use of high efficiency devices (silicon carbide);
- ▶ use of carrier waves coupled with web technologies;
- ▶ real-time detection of the faults of each lamp;
- ▶ ability to predict the fault of each lamp;
- ▶ ability to act remotely on the plant;
- ▶ System management through smart phones and/or tablets.

Commercial challenge:

The new LED systems certainly solves the problems of energy efficiency but not those relating to the cost of replacing the entire ceiling, the lack of retrofitability in the historic centers, the quality of the light emitted, the recovery of the existing ceiling and thus, the generation of electronic waste type.

The proposed system allows to overcome all of this limits by introducing a device that improve substantially the total cost of ownership.

Publications and Customer References:

2011 International Conference of Information Technology- Optimum Design of Main Circuit for High-Power HID Lamps Electronic Ballast -ISBN: 978-0-7695-4522-6.

"For the Grid and Through the Grid: The Role of Power Line Communications in the Smart Grid," Proceedings of the IEEE June 2011.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE

Via Circumvallazione, 85/G
83100 Avellino (AV)

CAMPANIA

Employees: from 3 to 9

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Antonio Maccario (General Manager)

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Web site: www.protodesign-group.com

Project Proposal

Hybrid Pyrolysis and Gasification Process for Converting Waste

Description of the innovation project:

Belonging to garbage transformation and disposal sector, it allows transforming a generic garbage in a "clean" gaseous fuel, without pollutant substances as chlorine, sulfur, fluorine, heavy metals. It contributes to optimize the technical problems related to the disposal of all kind of garbage without extra energetic consumption beyond the electric energy needed for the rotating hoven of the pyrolyzer and of the auxiliaries.

Essential and innovative characters of the proposed solution: Loop and series use of pyrolyzer and gasifying device; Priority gasification of tar and char; No pollutant emissions in the environment, with a complete conversion in a clean gassy fuel and stabilized inert material containing the most noxious substances.

IP Protection Level:

European Patent: EP2295526 A1. European Patent EP2295526 A1, Applicant: ProtoDesign s.r.l., Inventors: A. Gimelli, P. Capaldi, Title: "Pyrolysis and Gasification Hybrid Process for the Conversion of General Waste in a Gaseous Fuel (a specific fuel from waste – RDF) with a Low Environment Impact". Simulation model implemented. Preliminary study phase passed (preliminary facility design and optimization phase). Process optimization phase ongoing. Need for a functional laboratory prototype equipped with sensors to validate the simulation model.

State of development:

MODEL

Industrial application:

Garbage transformation into gassy fuel easily exploitable in a modern thermal engine facility for the generation of electric power or in a system for the generation of heat energy. The system supplies a valuable alternative to modern cycles of garbage disposal which ends with incinerators

Market segment:

The residue garbage represents the 75% of the produced garbage. Although there are some solution to treat it, a renewed interest in alternative technologies for garbage disposal erase, mainly because of the inconveniences related to the incineration technology (solid slags and cinders).

Advantage factor:

It does not show atmosphere emission thanks to the circulation of the combustion products; the emissions are used as fuel in an internal combustion engine, producing only inert ashes. In terms of efficiency, from 1 kg of Urban Solid Waste it is obtainable until 0,65 kg of syngas.

Commercial challenge:

Value increased by an optimization analysis of the process and by a production costs quantitative analysis. Objectives: after a predictive numerical model, individuation and optimization of the process parameters to improve the system efficiency and minimize the costs; Individuation of the specifications of the most suitable tools for the patented process; preliminary design for the system prototype; prototype realization costs analysis; feasibility study(determination of the final system price).

Proposal of cooperation agreement:

LICENSING AGREEMENT, KNOW HOW TRANSFER

Via Verdi, 23
80055 Portici (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: from 75.000 to 250.000 €

Status: SME

Contact: Roberto Maria Longo (CEO)

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Web site: www.starlightitalia.com

Project Proposal Antifouling Method

Description of the innovation project:

Method for combating marine fouling on the out side of a construction submerged in water including a ship hull in which method is utilized a number of electro-mechanical vibration transducers mounted on the inside of such structure.

IP Protection Level:

Patent pending in Italy.

State of development:

PROTOTYPE

Industrial application:

Shipping and Deepsea

Market segment:

Although the ship newbuilding market continues to be in decline, the market for marine coatings benefitted from an increase in ship repair and maintenance.

Commercial challenge:

Device works on the principle of converting electrical energy into mechanical energy through a transducer. The transducer transmits ultrasonic vibrations that resonate through the hull of the boat and thus prevents the formation of biofilm on the hull. Ultrasonic vibrations also create cavitation effect below the water surface. Cavitation effect destroys the cells of microorganisms and stops them from adhering to the underwater part of the hull.

Publications and Customer References:

www.google.com/patents/US5496411

Proposal of cooperation agreement:

LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT



Via Claudio, 21
80121 Napoli (NA)
CAMPANIA

Employees: from 100 to 499
Turnover:
Export:
Status: UNIVERSITY

Contact: Domenico Pianese (Full Professor)
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E-Mail: bruno.montella@unina.it
Web site: <http://dicea.dip.unina.it>

Project Proposal

Innovative Technology for Urban Drainage Systems Rehabilitation

Description of the innovation project:

The purpose of the project is to patent a type of intervention, classified as a Best Management Practice, which aims to rehabilitate obsolete urban drainage systems. The project aims to realize of an original type of in-line detention tank, made by one or more modular elements which may be suitably connected to an existing drainage system. A few main advantages of the IP are: the reduction of sewers to be replaced, thus minimizing both the cost and the duration of the intervention, with consequent advantages on financial resources; reduced invasiveness of the installation (less interference with other facilities); high storage capacity; easy to transport and assemble on the building site due to the innovative materials used.

IP Protection Level:

No patent has already been granted nor have any international applications or patent filing activities been presented.

State of development:

MODEL

Industrial application:

Pipe companies, Water and Wastewater equipment manufacturing business

Market segment:

The IP is addressed to the market segment related to pipe companies, water and wastewater equipment manufacturing business. The proposed IP has a high commercial value and could be a leader facility in the field of water, wastewater and environmental engineering.

Advantage factor:

The advantage factors are: the reduction of sewers to be replaced, thus minimizing both the cost and the duration of the intervention; reduced invasiveness of the installation; high storage capacity; easy to transport and assemble on the building site due to the innovative materials used.

Commercial challenge:

Developing such an IP means to be on the market with an innovative product able to respond to the numerous technical demands of wastewater-environmental engineering. Together with the innovative detention tank system, the IP involves the marketing of a software conceived for the optimal positioning of such tanks in drainage systems. It consists not only of a technology but also of an appealing methodology in order to face most of the problems of existing urban drainage systems.

Publications and Customer References:

- ▶ Cimorelli et al., 2012. "Una tecnica per il posizionamento e il dimensionamento di vasche volano a servizio di reti urbane di drenaggio";
- ▶ Cimorelli et al., 2014. "Optimal positioning and sizing of detention tanks within urban drainage networks", Journal of Water Resources Planning and Management.

Proposal of cooperation agreement:

LICENSING AGREEMENT, KNOW HOW TRANSFER, COMMERCIAL CONTRACT

Piazza Tancredi, 7
73100 Lecce (LE)

PUGLIA

Employees: more than 499

Turnover:

Export:

Status: UNIVERSITY

Contact: Christian Demitri (Researcher)

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Web site: www.unisalento.it

Project Proposal

ANTARES

Description of the innovation project:

Inappropriate management of nitrate-based fertilizers in agriculture has resulted in an excess of nitrate (NO₃⁻) in soils which has led to:contamination of groundwater. The aim of ANTARES is to develop an innovative approach to denitrificate soils, by combining ion exchange technology, with the design of hydrophilic polymers, able to absorb, retain and create a liquid interface for the ion exchange process. A functionalized polymeric substrate will be designed with the aim of absorbing and retaining water in soils, while selectively sequestering NO₃ by exchange with alternative and safer fertilizing ions.

IP Protection Level:

No patent as yet. The research activity is in a preliminary stage. Protection of the technology with one or more applications (composition of matter and applications) will be envisaged.

State of development:

CONCEPT

Industrial application:

Enviroment and Agriculture

Market segment:

Agriculture and Crop Protection in Europe: 50 Billion €.

Advantage factor:

The aim of this project is to develop a specific device in combination with proper soil management strategies in order to enhance nitrate-N removal rate and capacity in agricultural and contaminated soils. No similar approaches are available on the market.

Commercial challenge:

Even if the prototype will be not put on the market, this could represent a useful platform for future work and stimulating discussions. The goal will be to find a company with the financial capability to invest on this task, under an agreement on the use of the intellectual properties (IP) generated by the project. An accurate IP analysis with a strong IP protection is fundamental challenge for the entire project.

Proposal of cooperation agreement:

KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

Information & Communication Technology



Via Popilia, 250/N
87100 Cosenza (CS)

CALABRIA

Employees: from 3 to 9
Turnover: from 250.000 to 500.000 €
Export: less than 75.000 €
Status: SME

Contact: Vincenzo D'Agostino (CEO)
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E-Mail: info@aiemonline.it
Web site: www.aiemonline.it

Project Proposal SMARHOUSE2YOU

Description of the innovation project:

This proposal, targeted at domestic users, is an innovative integration solution between an Energy Meter device and a CRM system, provided with small smart grid type monitoring and control capability (microgrid). The Energy Meter is able to read a two-way energy flow, both consumed and produced (from renewable sources), and other service quality data. It can also operate as an electrical loads manager and as an interface for optical reading peripherals, for water and gas traditional meters. Through the CRM it will be able to manage a range of information and to offer targeted support services and commercial offers. Hardware will be outsourced for production and internally assembled and tested; the CRM will be sold in SaaS (Software as a Service) mode.

IP Protection Level:

Patent procedure is ongoing. The hardware is fully developed and is in certification phase. The software is in developing phase. The company proposes a Customer Relationship Management (CRM) software, integrated with hardware equipment (Energy Meter), able to manage water, gas and electricity consumption.

State of development:

PROTOTYPE

Industrial application:

The production of the system, comprising analog, digital and power components, falls in the field of Industrial Electronics. It will also result in software developments in the Information and Automation fields. In addition, it can give impetus to the distributed micro-generation market.

Market segment:

The aim is to target the domestic market, by providing a complete and low cost product. Due to its versatility, it can be utilized by individual home users, maintenance companies and energy Trader/distributors. A preliminary commercial evaluation of the product is about 150,00 euro/p with markup of about 40%.

Advantage factor:

The Energy Meter communicates via GSM, RS485, wireless (Xbee/WiFi) and Ethernet and is equipped with a battery backup. Together with the CRM, main functions are: utility quality and continuity monitoring; energy use/production management; fault alarm; advanced interaction for customer satisfaction.

Commercial challenge:

The distributed generation model lately has received critical acclaim in the international political and scientific world through direct on-site energy production and the consequence will be the development of micro-grids for the intelligent management of energy flows. The system is a response to the expectations of the home users business. The holder of the exploitation rights would get huge economic benefits from large-scale production and extensive of sales.

Publications and Customer References:

- ▶ Thesis in Electrical Engineering: "Energy meter bi-direzionale wireless", Eng. C. ROSACE;
- ▶ Thesis in Electrical Engineering: "Prototipazione e sviluppi Energy Meter bi-direzionale", Eng. G. CORRADO;
- ▶ Thesis in Electrical Engineering: "Studio di problematiche di compatibilità elettromagnetica in riferimento ad un prototipo di energy meter", Eng. N. DENAMI.
- ▶ Testing for electromagnetic compatibility and electrical safety for CE marking at TesLab Ltd.; EMC testing and electrical safety checks for CE marking, at TesLab Ltd.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT



Via Parente, 10
81031 Aversa (CE)

CAMPANIA

Employees: Up to 2
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Beniamino Guida (CEO)
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E-Mail: info@aerit.com
Web site: www.aerit.com

Project Proposal X-DOM - a Low Cost Domotic Solution

Description of the innovation project:

This invention applies to the domotic sector. It refers to the introduction of basic domotic solutions, easy to install and low cost. With X-DOM, it is possible to easily control air conditioning systems, table lamps and to create simple security systems. X-DOM is composed of a "Master" module, the intelligent core of the system, "Slave" modules, placed in proximity of the systems and a smartphone/tablet software, used to control the whole system. Communication is on the electrical network, hence avoiding modification to the building in order to place dedicated communication bus. The production process involves external companies for the hardware assembly, while the software is built in-house.

IP Protection Level:

The patent application has not yet been submitted, because a deeper investigation into the protection of the idea is required. Specifically, the solution itself involves different already patented technologies, but which are integrated in an innovative manner.

State of development:

PROTOTYPE

Industrial application:

Intelligent remote management of home Electrical and Energy appliances and systems

Market segment:

The product is suitable for flat owners, interested in base domotic solutions without interest in technological details, with low financial resources. An X-DOM kit (1 Master and 3 Slaves and software for smartphone) will have a very affordable price.

Advantage factor:

The technologies involved are currently at the state-of-art, both referring to software and hardware aspects. Anyway, the product can be patented as "brevetto per modello di utilità", where suitable.

Commercial challenge:

The invention success on the market is clearly related to the urgent need to introduce basic domotic solutions, easy to install and cheap, by users without any skills in technology. The competitive advantage related to the launch on the market of the solution is clear, because the "domotics for all" concept is a brand new concept, specifically in emerging countries.

Publications and Customer References:

This invention was awarded during the "Creative Clusters – II Ed." competition, organized by the Campania Region and Campania Innovazione (at that time the project was named "SMARTDOM"), for more details see the link below: <http://bit.ly/1rN3GA2>.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, SUB-CONTRACT AGREEMENT, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING

ALBA PROJECT



Via Don Luigi Sturzo, 36
73100 Lecce (LE)

PUGLIA

Employees: Up to 2
Turnover: from 250.000 to 500.000 €
Export: less than 75.000 €
Status: SME

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Web site: www.albaproject.it

Project Proposal

Edil-Learning as Social Learning System for Building Sector

Description of the innovation project:

Alba Project presents a social collaborative e-learning platform specifically modeled and designed for the building and construction sector.

IP Protection Level:

Edil-learning is a registered trademark.

State of development:

PRODUCT

Industrial application:

Building

Market segment:

The building sector is a context in which a great variety of teaching, coaching and mentoring activities co-exist. Targets are: 1) architects or engineers; 2) contractors; 3) freshly-enrolled workers; 4) beginner craftspeople; 5) traders of building materials; 6) skilled workers; 7) unemployed people.

Advantage factor:

Edil-learning integrates: a Content Management System to manage learning materials; a Learning Management System to offer students e-learning support; a Web Conferencing Software to offer synchronous communication tools; a set of social media components to foster informal collaboration among peers.

Commercial challenge:

The company is going to replicate this experience in other critical areas, such as public administration and health-care, and to extend e-learning functionalities to provide mobile access, by implementing suited "mobile apps", and to support "just-in-time" course design and delivery.

Publications and Customer References:

1 paper accepted at Didamatica (Napoli-Italy, May 2014); 1 poster accepted at INISTA (Alberobello-Italy, June 2014); 1 paper accepted at EMET (Santorini-Greece, July 2014); 1 paper accepted at International Conference on Interactive Collaborative Learning (Dubai-United Arab Emirates, December 2014).

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via A. Volta 41
87036 Rende (CS)

CALABRIA

Employees: from 20 to 49
Turnover: from 500.000 to 2,5 mln €
Export: from 75.000 to 250.000 €
Status: SME

Contact: Ermelinda Oro (CRO)
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Web site: www.altiliagroup.com

Project Proposal MANTRA Price Intelligence

Description of the innovation project:

E-commerce is highly competitive. Prices of products change dynamically. To stay competitive, retailers have to monitor and capture competitor data, and respond in real-time. Gaining access to competitive intelligence about products and prices can lead to a better knowledge of market dynamics. This includes understanding customer loyalty and high-velocity price movement. MANTRA Price Intelligence enables to:

- ▶ Extract, clean, categorize and accurately match your products with those of your competitors, in an automated process in a cloud technology;
- ▶ Test and apply advanced repricing strategies in real-time;
- ▶ Analyze and support informed decision-making in a fast, simple and flexible way to improve profitability and identify opportunities.

IP Protection Level:

Only part of Altilia's IP is patent pending: N 13/774,289, filed on 2/22/2013. Founders mainly own the distinctive competencies needed for Altilia's platform that combines algorithms and approaches coming from many different computer science and IT areas. Other patent applications will be submitted.

State of development:

PRODUCT

Industrial application:

Retail, Suppliers, Manufacturers, E-commerce & Consumer Products, Analytics (any industry having an e-commerce web site)

Market segment:

E-commerce is the trillion-dollar industry, see eMarketer. Big Data was 18.1b in 2013, with an annual growth of 61%. The forecast: \$47 billion by 2017. IDC forecast: the Big Data technology and services market will grow at 27% CAGR to \$32.4 billion through 2017. Annual revenue projection could be 10M\$.

Advantage factor:

Key elements: Innovative approach capable of integrating any web/enterprise data; Scalable data mining and prediction algorithms; Unique combination of: Semantic, Big Data and Cloud technologies; new App and Workflow for Big Data management; Business Mashboard to manage millions of complex decisions.

Commercial challenge:

You need dynamic pricing and offering if your products compete with other sites. This requires taking data from multiple sources, such as competitor pricing and customer actions in order to determine the right price. Overcoming this challenge will give your business a huge competitive advantage. MANTRA Price Intelligence: extracts and aligns data from multiple heterogeneous sources; gives insights through Big Data analysis; enables to competitively and profitably price millions of products in real-time.

Publications and Customer References:

- ▶ Flesca, Furche, Oro. Reasoning and Ontologies in Data Extraction.
- ▶ Oro, Ruffolo, Staab. XPath Extending XPath towards Spatial Querying on Web Documents.
- ▶ Oro, Ruffolo. SILA: a spatial instance learning approach for deep webpages.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via A. Volta 41
87036 Rende (CS)

CALABRIA

Employees: from 20 to 49
Turnover: from 500.000 to 2,5 mln €
Export: from 75.000 to 250.000 €
Status: SME

Contact: Ermelinda Oro (Founder & CRO)
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E-Mail: info@altiliagroup.com
Web site: www.altiliagroup.com

Project Proposal MANTRA Customer Intelligence

Description of the innovation project:

Businesses of all industries and size are searching right Bid Data solutions capable of improving customer operations in order to answer needs such as:

- ▶ reduction of Customer Churn Rate;
- ▶ understanding customer needs;
- ▶ building a complete Customers profile.

MANTRA Customer Intelligence enables to collect and analyze all heterogeneous structured and unstructured data spread in enterprise and web information sources. So, data include information about: Customer activities; CRM and social communications; Social profiles and comments; etc. can be extracted, harmonized into Customer Data Hubs, and semantically analyzed. Descriptive and predictive analytics can drive to more accurate customer segmentations, Customer Care, and more personalized promotions and recommendations.

IP Protection Level:

Only part of Altilia's IP is patent pending: N 13/774,289, filed on 2/22/2013. Founders mainly own the distinctive competencies needed for Altilia's platform that combines algorithms and approaches coming from many different computer science and IT areas. Other patents will be submitted.

State of development:

PRODUCT

Industrial application:

Customers operating in different industries such as: Retail, e-Commerce/Web, Publishing/Media, Finance, Telco, Utility

Market segment:

Reference market of Big Data was \$11.59 billion in 2012 and 18.1 in 2013, with an annual growth of 61%. The forecast exceeds \$47 billion by 2017. IDC forecast shows the Big Data technology and services market will grow at a 27% CAGR to \$32.4 billion through 2017. Annual revenue projection is 20M\$.

Advantage factor:

Key elements are: innovative approach capable of unifying disparate web and enterprise unstructured and structured data; unique combination of: Semantic, Big Data and Cloud technologies; new App and Workflow based approach to Big Data management; Extendible APIs; User Friendly GUI & Business Mashboard.

Commercial challenge:

The availability of Customer Data Hubs harmonizes all existing data about customers contained in heterogeneous data sources; the possibility to analyze customers from many different points of view; and the ability to react by "predictive analytics" are challenges that give your business a huge competitive advantage. MANTRA Customer Intelligence easily empowers decisions making and predictive capabilities, better drives business processes, prevents churn and improve offering, saving cost and time.

Publications and Customer References:

- ▶ Oro, Ruffolo. Towards a Language for Representing and Managing the Semantics of Big Data.
- ▶ Oro, Ruffolo, Saccà. Ontology-Based Information Extraction from PDF Documents with Xonto.
- ▶ Flesca, Furche, Oro. Reasoning and Ontologies in Data Extraction.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING



Via Pio la Torre, 36
87100 Cosenza (CS)

CALABRIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Angelo Mendicelli (Developer)
Telephone: +39 0984494270
E-Mail: info@artemat.it
Web site: www.artemat.it

Project Proposal Beatrice

Description of the innovation project:

Beatrice is a Mobile tourist guide system, based on Semantic Web technologies and Augmented Reality. Beatrice is a mobile application that implements a complex indoor/outdoor geolocalization system and enables its administrators to create, share, and modify semantic points of interest (POI), in a defined area (map). Semantic POIs describe geographic (indoor/outdoor) places with explicit semantic properties (date of creation, category, historical notes, description, author, etc.).

IP Protection Level:

No patent as yet for this project. Currently there are different/several mobile augmented reality applications. These applications offer unstructured information and do not offer services indoor navigation and Augmented reality services based on algorithms of image recognition.

State of development:

PROTOTYPE

Industrial application:

Tourism, Cultural Heritage

Market segment:

Touristic organizations, cultural heritage institutions, museums, open parks and others companies that need to offer innovative ways to share information and improve the user experience. The business model is being evaluated.

Advantage factor:

User: Live view of a real-world; sensory input (multimedia or GPS data); Share feedbacks on the Social Networks; Indoor/outdoor navigation.

Administrator: Customization of the information in the system; POI categorization through semantic reasoning; Ability to analyse users feedbacks and paths.

Commercial challenge:

In the market there is not a cross-platform framework with the power and flexibility of information representation and semantic reasoning with the possibility to operate indoors. These properties allow to take advantage of indoor and outdoor navigation services and also provide access, through the network, to geographically referenced information and relevant to the user in relation to its current position. The interaction between people and AR can be done directly through mobile applications.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING



Via Vicinale Agnolella, 4
80131 Napoli (NA)

CAMPANIA

Employees: from 3 to 9

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Sebastiano Sicignano (CEO)

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E-Mail: support@divelike.com

Web site: www.divelike.com

Project Proposal

DiveLike

Description of the innovation project:

International booking portal that allows divers (underwater passionates) and Diving Centers (companies that provide services to divers) to discover new dive sites, instantly book the best deals from Diving Centers, store and share dive experiences.

IP Protection Level:

No patent as yet. Currently there is a prototype of the portal.

State of development:

PROTOTYPE

Industrial application:

Underwater - Diving

Market segment:

The customers are Italian and foreign Diving centers. With 1000 Diving Center members in three years estimate revenue forecasts are:

- ▶ first year: 50.000€ with 200 Diving Center members;
- ▶ second year: 350.000€ with 550 Diving Center members;
- ▶ third year: 1.000.000€ with 1000 Diving Center members.

Advantage factor:

There are not dedicated instrument for actors of this market to diffuse their contents and commercial offers in the travel system on the web. DiveLike allows Diving Center to reach other customers all around the world; eliminating the dependence from the tourism development of the places in which they operate.

Commercial challenge:

Today the diving operators are taking into consideration all the tools available online which can help attracting tourism, but none of these tools are designed specifically for this market and the lack of focus on a niche area, such as scuba diving, leads to several inefficiencies (according to a cost-benefit analysis). The company's market analysis indicates the absence of a specialized intermediary, who knows the specificities of the industry, the problems of the operators and the end users needs, and who is able to develop innovative solution that bring value to all players in the market. Therefore Aventure offers an aggregator that is a point of reference for all fans, without geographical or linguistic limitations: a technological solutions that cannot be achieved by individual diving centers.

Publications and Customer References:

The company was mentioned in the online magazine "Optimagazine" available at the following link: www.optimaitalia.com/blog/2014/07/01/divelike-ovvero-il-piacere-di-andare-sottacqua-per-esplorare-i-piu-bei-fondali-sottomarini/157249; and in the online magazine "Il Desk", available at the following link: <http://ildesk.it/newslong.php?id=7287>.

Proposal of cooperation agreement:

VENTURE CAPITAL FINANCING, SEED CAPITAL

BABY DREAM



Via Ferrante Imperato, 190 (Complesso Napoli Est)
80146 Napoli (NA)

CAMPANIA

Employees: from 3 to 9
Turnover: from 500.000 to 2,5 mln €
Export: from 250.000 to 500.000 €
Status: SME

Contact: Pasquale Corvino (CEO)
Telephone: +39 0815591970
E-Mail: info@babydream.it
Web site: www.babydream.it

Project Proposal

Kidsdistribution.com - B2B Wholesale Website for Italian Kids Brands

Description of the innovation project:

Kidsdistribution.com is the first B2B e-commerce platform selling children's wear and accessories of top brands. The website allows Italian brands to reach new market segments of people interested in Italian fashion for children, increasing in this way their sales and profits.

IP Protection Level:

Kidsdistribution, a brand registered by Baby Dream Srl, is an e-commerce platform that has introduced a process innovation in the selling of kids wear of top brands using new technologies, for which it will ask for a license.

State of development:

PRODUCT

Industrial application:

B2B e-commerce

Market segment:

2012 data show an overall growth in the Italian market of online clothing sales compared to 2011, with an increase of 19%, amounting to 1049 million € of turnover. Kidsdistribution.com aims to reach 0.5% of this market in the first three years of operation.

Advantage factor:

The features that make this platform so special are linked mainly to the real time connection to B2C club outlets all over the world and the customized management of that draws orders depending on the archive of previous customer orders.

Commercial challenge:

Kidsdistribution allows its customers not to lose time and money making long trips to buy stocks for their shops, placing orders easily during their working days and choosing what they prefer without the need to buy stocks already prepared by suppliers, with a minimum purchase of only 200 € and delivery in 48 hours all over the world.

Publications and Customer References:

IV Report of B2B Observatory of Milan Polytechnic; E-commerce Report in Italy 2014 - Chamber of Commerce Milan.

Proposal of cooperation agreement:

COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via G. Porzio, 4/14, Centro Direzionale Isola G2
80143 Napoli (NA)

CAMPANIA**Employees:** Up to 2**Turnover:** less than 250.000 €**Export:** less than 75.000 €**Status:** SME**Contact:** Fabio Di Salvatore (Head of Group
Planning and Funded Projects Management)**Telephone:** +39 0815625482**E-Mail:** info@beyondtech.it**Website:** www.beyondtech.it**Project Proposal****Innovative Platform to Facilitate Access to Territorial Promotion Services****Description of the innovation project:**

The field of financial services is taking a leading role in the global economic system. Moreover, the evolution of technology has favored new electronic payment methods and easy access to consumer loyalty mechanisms of consumer based on the concept of reward. These services are used in various contexts, providing solutions and support for the management of micro-payments, coupons, virtual coins, cashback, etc. The idea is based on the innovation of territorial promotion systems, which represent a complex system consisting of social, cultural, tourist, commercial and financial activities, in which payment and loyalty services in order to make their diffusion and fruition.

IP Protection Level:

At this time, no patent has been registered and no request has been made.

State of development:

CONCEPT

Industrial application:

Informatics, Electronics, Financial sectors

Market segment:

The market segments concerned are Cultural Heritage, Tourism, Retail, Transport and Mobility, Handicraft, Services to Citizens, Public Administration. The commercial value and economic returns depend (proportionally) on the size of potential clients (merchant, provider, consumer).

Advantage factor:

The main innovative aspect consists of integrating a set of features into a technological solution (platform), in order to easily access the different services offered in cultural, commercial, tourist and transport contexts, implementing loyalty policies/strategies/mechanisms.

Commercial challenge:

The main competitive benefit derives from a dual vision of the potential business generated by this idea. First, consumers can enjoy multi-channel payment tools for easy access to booking and ticketing services, for example reservation and payment of car pooling services, etc. At the same time, merchants can propose coalized and personalized commercial offers, taking into account some important user's information such as preferences, interests, most visited geographical areas, etc.

Publications and Customer References:

The company is mentioned in the following publication: Qui Group S.p.A. – Paybay Networks S.r.l. – R&D project: "TITAN".

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING, R&D CO-FUNDED PROJECTS (H2020, Other National/Local Programs)



Via Salvatore Fusco, 16
80133 Napoli (NA)

CAMPANIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export:
Status: SME

Contact: Francesca Scarpetta (General Manager)
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E-Mail: direzione@cambiomerci.com
Web site: www.cambiomerci.com

Project Proposal Cambiomerci.com Platform

Description of the innovation project:

The company Cambiomerci.com in 3 years of activity has associated 450 companies throughout Italy enabling the exchange through complementary currency, of goods and services across the entire economy.

The basic principle is that of Corporate Barter, a commercial practice that allows the multilateral exchange of goods or services as compensation among SMEs. The platform of Cambiomerci has an innovative interface aligned with the most advanced digital features. Access requires insertion of credentials provided at the moment of registration.

IP Protection Level:

No patent as yet. The use of Barter with complementary currency is a usual procedure in the USA and is considerably developing in Italy, where the institutions have started some experiments ruled by regional governments, to meet companies paralyzed by the block of credit.

State of development:

MODEL

Industrial application:

Transactions among SMEs and in the retail sector

Market segment:

Cambiomerci.com is a parallel commercial circuit as opposed to traditional circuits, its services are offered indiscriminately to SMEs operating in any commercial field. Commercial value € 2.400.00,00 and the annual return, on an investment of € 800,000.00, is estimated at an internal rate of 60%.

Advantage factor:

Cambiomerci aims to comprise all types of retail commercial operations. This opportunity will be managed through the utilization of credit cards in stores and will also give individuals the possibility to use complementary currency within the network.

Commercial challenge:

The presence of funding would allow a greater promotion of the circuit of barter, even through events that advertise and promote cambiomerci and the use of complementary currency. That means having more companies that guarantee entry fee in the circuit and a large number of commissions paid for transactions effected. In this way the value of the company would increase, together with its annual turnover, with consequent increase of financial resources.

Proposal of cooperation agreement:

KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

Piazza XXIV Maggio, 21
84124 Salerno (SA)

CAMPANIA

Employees: from 3 to 9

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Alessandro Tritto (CEO)

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E-Mail: info@cardproject.it

Web site: www.cardproject.it

Project Proposal WAY - Who Are You

Description of the innovation project:

The need for tools for reliable identification of individuals is increasingly felt both in the real and in the virtual world. The "Bring Your Own Identity" concept, that allows any user to have an identity and a unique set of credentials usable for a variety of services, is spreading over time in the network.

This idea concerns the implementation of a digital identity management system, that allows the use of public and/or private on-line services, with the following characteristics:

- ▶ User-centric approach;
- ▶ Ensure the authenticity of data;
- ▶ Ensure the privacy of users;

and a Personal Data Storage service with which people can store their personal data, manage and use them to access other services, both physical (offices, restricted areas and connected objects, etc.) and virtual (e-gov services, e-store, etc.) with a policy of sharing data ranging from "anonymous" to "fully verified".

IP Protection Level:

No patent as yet.

State of development:

CONCEPT

Industrial application:

Identity Management

Market segment:

Market segment is referred as Identity Relationship Management (IRM), for digital identities management and secure access to services and connected objects.

According to a CISCO research, the overall value of this market could reach \$ 50 billion by 2020.

Advantage factor:

The current economic model adopted by WebCos (e.g. Facebook) is to the users' detriment, excluding them from the control of their own digital identity. The Personal Data Store, with its policy of access control to personal data, inherently enables user-centric management of the identity information.

Commercial challenge:

In the user-centric model, the identity becomes the property of the user who may choose providers and agree with them on terms of use and decide which Personally Identifiable Information to use, depending on the context and the need for privacy and security. This model contrasts with the existing economic monopoly of the WebCos that, together with the PDS service, could place itself as an innovative and disruptive offer, able to generate new value in respecting and protecting the rights of individuals.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING



Via A. De Gasperi, 4
80038 Pomigliano d'Arco (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Pier Giuseppe Meo (CEO)

Telephone: +39 027968199

E-Mail: info@comprassieme.it

Web site: www.comprassieme.it

Project Proposal Local Commerce Web Platform

Description of the innovation project:

Web platform allowing small-medium local companies to sell and distribute products neighbouring communities in an efficient and cheaper way with the use of a centralized routing service structure based on urban vans equipped with a micro-container system.

IP Protection Level:

No IP Protection as yet.

State of development:

PRODUCT

Industrial application:

Food

Market segment:

The food market has the highest growth rate, at more than 300% in the last 3 years, with an estimated value of 120 MI in Europe.

Advantage factor:

Integration of the marketing chain with the delivery infrastructure. Goods aren't only transported but customers also use the platform to promote and sell their products.

Commercial challenge:

Proximity delivery of heavy goods actually aren't optimized so there is the paradox that the delivery of local products are more expensive than foreign products.

Publications and Customer References:

- ▶ LOHAS Consumer Trends
- ▶ The Global, Socially-Conscious Consumer March 2012 (1) NMI
- ▶ Database, 2008, Natural Marketing Institute

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, SUB-CONTRACT AGREEMENT



SS 7 Appia Km 706+030 c/o Cittadella della Ricerca
72100 Brindisi (BR)

PUGLIA

Employees: from 50 a 99
Turnover: from 2,5 mln to 5 mln €
Export: from 75.000 to 250.000 €
Status: CONSORTIUM

Contact: Lucio Colizzi (Head of Computer Engineering Department)
Telephone: +39 0831449111
E-Mail: info@cetma.it
Web site: www.cetma.it

Project Proposal

ICT for Immersive, Interactive and Collaborative Design

Description of the innovation project:

CETMA can boast excellent skills in the field of virtual reality and immersive systems applied to the design, with a low cost approach in order to meet the needs of SMEs in digital design perspective. It was therefore developed a proof of concept based on OpenSource technologies, modular and scalable, capable of being used in contexts of design reviews both in laboratories of advanced visualization (such as the Virtual Reality Center) and on stand-alone workstations. The low cost interaction, the immersivity and the collaboration module are the basis of the framework realized. One of the possible configurations of the solution (Dune.Cube) is a transportable system suitable for different contexts for communication/ dissemination purposes.

IP Protection Level:

CETMA is:

- ▶ the owner of the design;
- ▶ the owner of the sources of all platform DUNE.Framenwork.

State of development:

INDUSTRIALIZED PROTOTYPE

Industrial application:

Design review, Medical, Edutainment, Web Inspection, Game Simulation

Market segment:

The developed solution is widely used in all the markets which provide communication of products and/ or services (Design studies; Trade, Museum).

Advantage factor:

Stereo vision; Immersive and configurable multiview (CAVE, FLAT, CURVE); Low-cost wire-less tracking (Kinect, Wiimote,...); Multiple Input Device; Extensibility of the platform with the integration of new tracking devices; Collaborative Module; Photorealism; Simulation control room.

Commercial challenge:

Immersive Digital Prototyping; Immersive and collaborative design review; Wireless and low cost man-machine interface; Multi-channel immersive visualization systems with FLAT and CAVE configurations; Simultaneous loading of heterogeneous data (CAD, 3D, Volumetrics,...).

Publications and Customer References:

- ▶ www.cetma.it/cvrc;

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT

D.A.BI.MUS. SRL - DIGITALIZZAZIONE DI ARCHIVI, BIBLIOTECHE E MUSEI

Via Quintino Sella, 268
70123 Bari (BA)

PUGLIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Nicola Barbuti (CEO)

Telephone: +39 0805714712

E-Mail: info@dabimus.com

Web site: www.dabimus.com

Project Proposal

ICRPad - Innovative Digital Recognition

Description of the innovation project:

ICRPad is a new application for digital recognition and graphic matching of images reproducing ancient manuscripts and printed books, handwritten documents, signatures, illuminations, etc.

IP Protection Level:

- ▶ Patent Pending Italy: BA2011A000038;
- ▶ Patent Pending Intern.: I166-PCT.

State of development:

PRODUCT

Industrial application:

Cultural Heritage

Market segment:

All the market segment related to cultural heritage.

Advantage factor:

ICRPad is an innovative digital recognition application created to promote new interactive fruition of cultural heritage.

Commercial challenge:

ICRPad is an absolutely new digital recognition application created to promote an innovative interactive fruition of cultural heritage, using technologies and methodologies never produced before.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING



Via del Fiumicello, 7
80142 Napoli (NA)

CAMPANIA

Employees: more than 499
Turnover: more than 25 mln €
Export: more than 15 mln €
Status: LARGE COMPANY

Contact: Orazio Manni (Unit Manager)
Telephone: +39 0816907740
E-Mail: info@dappolonia.it
Web site: www.dappolonia.it

Project Proposal

SportE2 - ICT Solutions for the Energy Efficiency of Sports Facilities

Description of the innovation project:

SportE2 consists of four integrated modules and scalable solutions based on ICT including internet, wired and wireless sensors to monitor the energy behavior of sports facilities, cloud systems, and management software for the benchmarking and analysis of multi-facilities. Sensors, actuators and control systems have been developed and integrated into a single hardware and software platform, that can handle automatically and intelligently all the needs of a sports facility. The modular and scalable SportE2 approach allows selecting the most suitable solutions for any type of sports facility, from swimming pool to tennis club, characterized by use scenarios and completely different optimization needs.

IP Protection Level:

No patent as yet. The SportE2 system is based on proprietary knowledge of the project partners.

State of development:

PROTOTYPE

Industrial application:

Energy saving in sports facilities

Market segment:

The potential market for SportE2 is represented by the managers, both public and private, of sports facilities located in different geographic areas or geographically distributed. In particular all indoor sports centers, both new and existing, can benefit from SportE2.

Advantage factor:

The developed ICT modules are customizable to the needs of different facilities that incorporate open areas for sports and covered areas for indoor activities, in older plants and mono-discipline such as the district-pool. The energy savings expected are around 30%-40% in terms of power consumption.

Commercial challenge:

SportE2 has a competitive advantage compared to other ICT solutions for improving the energy efficiency of buildings, which are typically available for different kinds of buildings such as offices or hospitals. To date, the company has been unable to identify any potential competitor operating in this market segment with solutions specially developed for sports facilities.

Publications and Customer References:

- ▶ Several scientific papers mention SportE2, for instance: - 2014 Renewable & Sustainable Energy Reviews (Vol. 38, pp 990-1002). A modular optimisation model for reducing energy consumption in large scale building facilities. I. Petri, H. Li, Y. Rezgui, Y. Chunfeng, B. Yuze, B. Jayan.
- 2014 World Sustainable Building Conference. Baseline Analysis for Deployment of a Scalable and Modular Dedicated BMS in Sport and Recreation Buildings. J. Maseda, V. Sanchez.
- 2014 Clean Technologies and Environmental Policy (<http://dx.doi.org/10.1007/s10098-014-0828-2>, pp 1-14). A semantic service oriented platform for energy efficient buildings I. Petri, Y. Rezgui, T. Beach, H. Li, M. Arnesano, G. M. Revelo.
- ▶ SportE2 is a EU-Cofounded project involving a group of 9 partner from Europe: D'Appolonia (engineering consultancy and design services company of RINA Group), Università Politecnica delle Marche (group of Mechanical and Technical Measurements), STARING (a firm specialized in energy efficiency of sports facilities), Schneider Electric Italy (providing energy management services) and Sport Association Fidia (owner of the project pilot in Rome) from Italy, Tecnalia (research center based in Bilbao operating in the field of technologies for the construction industry) and Emtesport (a Spanish company that manages about 20 sport facilities and the one in Etxebarri) from Spain, ISA - Intelligent Sensing Anywhere (a Portuguese company specialized in monitoring systems) and SELF Energy (ESCO) from Portugal, and finally Cardiff University.
- ▶ The SportE2 is developed under the European Union's 7th Framework Programme for research, technological development and demonstration under the grant agreement N 260124.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT

Via del Parco Margherita, 33
80121 Napoli (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Michele Palmieri (CEO)

Telephone: +39 3206611345

E-Mail: info@digitaxi.it

Web site: www.digitaxi.it

Project Proposal

DigiTaxi

Description of the innovation project:

The project betters the distribution of the taxi service across the territory, reduces waiting times and optimizes costs, all this by leveraging mobile devices' incorporated GPS. Through a real-time transfer of geographic locations to the server, it is possible, while calling, to funnel the taxi's request to the first available taxi which is the closest to the user's position. The system is based on a central application server accessible through an internet connection. Router and geocoding activities are geographically based, given the use of a map server. The software is scalable and evolves when the number of taxis and users increases.

- ▶ DigiTaxi Client Mobile App enables to: get an overview of the taxis available within a specific area; know the estimated price of the ride; know the taxi driver's details and waiting time; follow, through the smartphone's screen, the taxi's movements until the pick-up point; know the recommended path and the estimated time of arrival; rate the service at the end of the ride; book a ride for a specific day; pay the ride using a credit card.
- ▶ DigiTaxi Driver Mobile App enables to: set the work shift; accept or reject a ride request; know at the time of the call the address of the client's destination; visualize the position of the user; visualize the list of rides made.

IP Protection Level:

The software source has been filed with the Software Public Registry of the SIAE of Rome.

State of development:

PRODUCT

Industrial application:

App used for booking and calling taxis with mobile devices

Market segment:

Main Italian radio operators are in Naples (market of 2400 cars; total annual turnover of € 2 mln), Milan (5300 cars; total annual turnover of € 12 mln) and Rome (7.800 cars; total annual turnover of € 11 mln).

Advantage factor:

In the near future cities will have more Restricted Traffic Areas, therefore taxis will replace private cars. The DigiTaxi App aims therefore at reducing the number of private cars circulating in towns, encouraging a more natural way of approaching urban life.

Commercial challenge:

There are no fixed costs related to the technological offer, for every call received the taxi driver will earn a revenue of € 0,50. The monthly cost of the service provided is less than 50% compared to the costs related to the existing services (Naples: € 38,75; Rome: € 87,12; Milan: € 99,12). DigiTaxi is currently being tested in the city of Naples, with the intention of exporting the service in Italy and abroad.

Publications and Customer References:

- ▶ DigiTaxi was identified as being one of the Italian excellences among innovative start-ups during the "Camera Hub Forum" by the Chambers of Commerce Consortium (Milan, 2014).
- ▶ DigiTaxi was included in the ORCHESTRA Platform (Technological solutions oriented towards the touristic and cultural heritage's intelligent enhancement) by IBM Italia, Autostrade Tech, CNR and the University of Naples.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, VENTURE CAPITAL FINANCING

Corso S.D'Amato, 87/89
80022 Arzano (NA)

CAMPANIA

Employees: from 20 to 49

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

Contact: Umberto Daniele (CEO)

Telephone: +39 0816181111

E-Mail: engineering@enginfo.it

Web site: www.enginfo.it

Project Proposal Body Scanner - Security System

Description of the innovation project:

Body Scanner is a passive system millimeter waves that operates in real time. It is designed for stand-off security screening in civil and military installations. The scanner automatically detects metallic and non-metallic objects hidden under clothing, without showing or capturing any anatomical details. It is a passive stand-off system and does not emit any radiation.

IP Protection Level:

Patented product.

State of development:

PRODUCT

Industrial application:

Security sector

Market segment:

Military and civil market. Market value about K€ 100-150 per system.

Advantage factor:

Passive millimeter wave technology, does not emit any radiation, totally safe for people. The System detects metallic and non-metallic objects hidden under clothing, without showing or capturing any anatomical detail: no privacy issues.

Commercial challenge:

Few competitors in Italy and in Europe.

Publications and Customer References:

The product has been subjected to testing by NATO and to some trials in the field. It is supported by appropriate technical and commercial documentation.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, SUB-CONTRACT AGREEMENT

Viale De Laurentis, 21/VIII
70124 Bari (BA)

PUGLIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Vito Virgilio (Managing Partner)
Telephone: +39 0802149609
E-Mail: info@eulogic.it
Web site: www.eulogic.it

Project Proposal

Encryption Security Platform for Messaging, Documents and Cloud Services

Description of the innovation project:

The solution seamlessly completes your existing working style, and environment, to protect your data like documents, from being leaked to unauthorized users. The solution also supports mobile applications platform IOS and Android, to share encrypted content using Email, SMS, WhatsApp, Tweet etc. Identity control on shared data is always available.

IP Protection Level:

No patent has been filed in Italy.

State of development:

PROTOTYPE

Industrial application:

By its nature, the platform cuts across all sectors

Market segment:

The biggest markets for the product are finance/banking/government/public sector and generalizing all sectors for which data and information security are critical.

Advantage factor:

Product innovation allows to develop and diffuse the solution, unique in this product segment at the moment. The solution key factors are: usability, completeness of product, easy integration with everyday work tools, multiplatform support, availability in both on-premise and cloud mode.

Commercial challenge:

Commercial challenge will be fast market penetration taking advantage of temporary absence of competitor product able to cover so many needs in data, documents and cloud security. Other important goal is to create solid partnership with local VAR distributors that could know well the selling channel with some other complementary security or infrastructure products.

Publications and Customer References:

Solid partnership with an USA company for product development and software engineering. Meetings in progress to create an agreement with a local University Lab for project technical improvement for user interface design (UID).

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

EUSOFT SRL

Via Marco Partipilo, 38
70124 Bari (BA)

PUGLIA

Employees: from 10 to 19
Turnover: from 500.000 to 2,5 mln €
Export: less than 75.000 €
Status: SME

Contact: Stefano D'Ascoli (CEO)
Telephone: +39 0805426799
E-Mail: info@eusoft.it
Web site: www.eusoft.it

Project Proposal LIMS Eusoft.Lab in saas

Description of the innovation project:

Eusoft.Lab is a L.I.M.S.- Laboratory Information Management System – able to computerize the entire cycle of testing laboratories, as required by the quality standards and the accreditation agencies. Eusoft.Lab was also designed for the innovative use in SaaS (Software as a Service) on Cloud Computing platform. The SaaS LIMS is hosted on the server of the service provider rather than that of the laboratory and can be accessed by end-users through the Internet. Huge advantages derive from this - in terms of cost, flexibility, speed of implementation, simplicity and scalability. Eusoft.Lab is one of the few “SaaS Ready” LIMS in the world.

IP Protection Level:

Eusoft.Lab L.I.M.S. is a Laboratory Information Management System, a software owned, produced and commercialized by Eusoft. Its brand and the description of its features are registered.

State of development:

PRODUCT

Industrial application:

Food, Environmental, Petrolchemical, Pharma

Market segment:

Eusoft.Lab LIMS is addressed to testing laboratories. Laboratories perform chemical/microbiological /physical tests on materials, environment, food, non-food samples (chemicals, petroleum, energy, pharmaceuticals). The market has high levels of growth and profitability.

Advantage factor:

LIMS are typically provided On Premise (in-house), a mode that has been proven to be complex and expensive. Thanks to SaaS the laboratory can be more agile in implementing a LIMS. Eusoft.Lab LIMS in SaaS is becoming increasingly popular to solve the problems of obsolescence and complexity.

Commercial challenge:

Eusoft.Lab LIMS has a highly differentiated value proposition that fits the expectations of the various market segments. It contains bundles of products and services at different prices in order to minimize the total cost of ownership and allows a wide penetration in the market.

Publications and Customer References:

Gartner, a leading ICT advisor, quoted Eusoft in 2013 and in 2014 among global vendors of LIMS Cloud in three “Hype Cycle” reports. The Cloud LIMS is placed in “Innovation Trigger”, which is the phase in which a potentially revolutionary technology changes the rules of the game.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING



Via Pedro Alvarez Cabral snc
87036 Rende (CS)

CALABRIA

Employees: from 20 to 49
Turnover: from 500.000 to 2,5 mln €
Export:
Status: SME

Contact: Marco Antonio Mastratisi (Research Industrial Manager)
Telephone: +39 09841862840
E-Mail: info@exeura.eu
Web site: www.exeura.eu

Project Proposal

Rialto - Platform for Business Analytics

Description of the innovation project:

Rialto is a platform for the development and execution of Business Analytics processes. It provides all the basic functionalities enabling the rapid development of complex knowledge discovery applications, such as customer profiling and segmentation, fraud detection, churn analysis, market campaign, etc.

IP Protection Level:

No patent application has been filed. Rialto has been initially developed through a R&D project and progressively evolved as an industrial platform through later projects.

State of development:

PRODUCT

Industrial application:

Business Analytics

Market segment:

The market segment is Business Analytics. Specifically: Customer Operations, IT-Telco, Healthcare, Bank&Finance, Energy, Automotive, Insurance, Logistic, etc.. ICD confirmed that in 2011 the BA's market has grown in value by 14.1% worldwide. It is also expected to grow by 9.8% annually until 2016.

Advantage factor:

Rialto is an innovative platform for the development of Business Analytics processes which combines the usability and simplicity of desktop tools with the efficiency and robustness of enterprise platforms.

Commercial challenge:

Rialto is currently sold at a price of 16.000 € per license.

Publications and Customer References:

Rialto is used as a data mining platform in many industrial applications (e.g. CartaLis, Aster Group, etc.). Rialto is also used for teaching in the Data Mining courses taken at the Departments of Computer Science and Computer Engineering at University of Calabria.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

viale A. Olivetti, 11
70056 Molfetta (BA)

PUGLIA

Employees: more than 499
Turnover: more than 25 mln €
Export: from 5 mln to 15 mln €
Status: LARGE COMPANY

Contact: Chiara Altomare (International Operations)
Telephone: +39 0228014712
E-Mail: info@exprivia.it
Web site: www.exprivia.it

Project Proposal CittàDigitale

Description of the innovation project:

CittàDigitale is an integrated mobile application platform for services to citizens, that is usable through a single mobile application. The user operates virtually between participating cities, and he/she may use services that are enabled for the selected city. Currently, the app offers the possibility to manage a Digital Wallet, to buy and use tickets or parking credits, and to pay Italian health charge. Services can be paid by credit. Future developments concern the extension of:

- ▶ services offered (tuition fee payment, infomobility, city tax payment, Healthcare, Emergencies);
- ▶ payment methods (Credit Telephone, NFC).

IP Protection Level:

No patents and no certifications have been requested.

State of development:

PRODUCT

Industrial application:

Transport, Healthcare, Mobile Payment.

Market segment:

End users are citizens and tourists.

Customers potentially interested in CittàDigitale are Municipalities or groups of Municipalities belonging to the same geographical area (es. Municipalities in a District or a Region) and willing to start or improve their Smart City path.

Advantage factor:

Less fraud concerning falsification of tickets and start&stop of parking payment, thanks to:

- ▶ encrypted QR Code solutions;
- ▶ ticket display timing;
- ▶ parking restart control for the same car.

Commercial challenge:

Competitive advantages of CittàDigitale are:

- ▶ multiple and different citizen/tourist services provided and paid through a single tool;
- ▶ mobile services, improving the availability of the services involved and enabling real time payment and control;
- ▶ fully dematerialized travel/parking tickets;
- ▶ economy of Services Management;
- ▶ very low initial investment.

Publications and Customer References:

BariDigitale is a 2-year pilot project for the town of Bari. Started in May 2013, following a MoU among the Municipality of Bari, AMTAB and Exprivia.

BariDigitale won the 2014 "SMART CITY" prize assigned by SMAU, the main Italian exhibition for Information & Communication Technology.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE

viale A. Olivetti, 11
70056 Molfetta (BA)

PUGLIA

Employees: more than 499
Turnover: more than 25 mln €
Export: from 5 mln to 15 mln €
Status: LARGE COMPANY

Contact: Chiara Altomare (International Operations)
Telephone: +39 0228014712
E-Mail: info@exprivia.it
Web site: www.exprivia.it

Project Proposal

E4cure Enhancement - New developments for the Clinical-Healthcare Information System

Description of the innovation project:

E4cure is an integrated suite of software systems composed by a complex group of applicative modules supporting diagnosis and care processes in public and private medical centers. Project objectives:

- ▶ strengthen e4cure clinical offer through new modules and new functionalities development applying different innovative technologies (Mobile devices, User Experience Design, Clinical Pathways, Information Extraction, Voice Recognition, Data Analytics);
- ▶ make e4cure suite available on international markets, through both technical development for the localization of the solution, and marketing initiatives.

IP Protection Level:

Certifications: UNI EN ISO 9001:2008, UNI EN ISO 13485:2004, Council Directive 93/42/EEC on Medical Devices, compliance with main reference standards (DICOM, IHE, HL7, etc.).

State of development:

PRODUCT

Industrial application:

Public and Private Healthcare, in Italy and abroad

Market segment:

Clinical components of e4cure, especially the Electronic Medical Record (EMR), today reach less than 10% of the potential market. Preliminary analysis of the commercial value of the solution and its economic return depends on the geographical market addressed.

Advantage factor:

Application of the most innovative ICT Technologies.

Commercial challenge:

e4cure solution completely matches the need for both rationalization and innovation of diagnosis and care processes in public and private medical centers.

From an economic point of view, return from the commercialization of Exprivia technology and solutions is going to be very satisfying if success achieved in Italy is replicated in other markets.

Publications and Customer References:

There are more than 200 hospitals in Italy and around 40 in Spain and Latin America using Exprivia's technology: www.exprivia.it/en/mercati/sanita/referenze.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, IPR ASSIGNMENT, JOINT DEVELOPMENT

Via E. Gianturco, 31
80047 Napoli (NA)

CAMPANIA

Employees: from 20 to 49
Turnover: from 2,5 mln to 5 mln €
Export: from 250.000 to 500.000 €
Status: SME

Contact: Massimiliano Scarpetta (President)
Telephone: +39 08119668806
E-Mail: info@foxbit.it
Web site: www.foxbit.it

Project Proposal
Wave Radar - Fox Bit 01

Description of the innovation project:

Use of standard X band radar and optical system for coastal monitoring. Use of back-scattering of the sea surface in order to identify ocean currents, sea pollution, drifting objects, oil spill detection, etc. The project is new and the company is working to a prototyping version of the service. Coastal guard and Italian government have been informed.

IP Protection Level:

No patent as yet.

State of development:

PROTOTYPE

Industrial application:

ICT

Market segment:

Government, Defence, Environment.

Advantage factor:

Innovative use of standard X band Radar.

Commercial challenge:

Only in Italy there are 7458 km of coastal length.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL CONTRACT

Via E. Gianturco, 31
80047 Napoli (NA)

CAMPANIA

Employees: from 20 to 49

Turnover: from 2,5 mln to 5 mln €

Export: from 250.000 to 500.000 €

Status: SME

Contact: Massimiliano Scarpetta (President)

Telephone: +39 08119668806

E-Mail: info@foxbit.it

Web site: www.foxbit.it

Project Proposal

Acoustic Radar - Fox Bit 02

Description of the innovation project:

Detection of objects that make noise with an array of acoustic sensors.

IP Protection Level:

No patent as yet.

State of development:

PROTOTYPE

Industrial application:

ICT

Market segment:

Automotive, Environment, Airport.

Advantage factor:

Complementary sensing system

Commercial challenge:

Low cost and no electromagnetic pollution

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL CONTRACT

Via De Spuches S:N.
90044 Carini (PA)

SICILIA

Employees: from 10 to 19
Turnover: from 500.000 to 2,5 mln €
Export: less than 75.000 €
Status: SME

Contact: Angelo Mulone (CEO)
Telephone: +39 0918674029
E-Mail: geola@geolabsrl.it
Web site: www.geolabsrl.it

Project Proposal

Non-Destructive Prospections for Local and Remote Monitoring of the Status of Structural and Non Structural Masonry and Infrastructure

Description of the innovation project:

The invention refers to an original non-destructive and non-invasive process for monitoring chemical and physical parameters of concrete, structural concrete, cementitious and lithoid. In particular, the method allows for the measurement of pH, chloride concentration, conductivity and physical parameters such as temperature and humidity.

It is an original method for the acquisition of chemical-physical measurements through the use of sensors placed in the structures in work, in order to avoid:

- ▶ the on-site taking of samples by coring or destructive tests;
- ▶ analytical laboratory measurements on samples/dust picked up;
- ▶ the constant presence of the operator in charge of the reliefs.

IP Protection Level:

Currently a patent application has been filed with number PA2014A000004 at Italian Patent Office.

State of development:

PROTOTYPE

Industrial application:

Construction Industry, Civil Engineers, Construction Supervision, Certification and Test Bodies and Quality Control, Public Administration and Insurance

Market segment:

Diagnostics by means of sensors; delivery of integrated services in engineering sector through web portal, computing platform database. Preliminary assessment of the market value: € 4,500.00 for each station of ph and chloride sensors. Estimated economic return per year: € 1,200,000.00.

Advantage factor:

The invention allows the acquisition of in-situ chemical and physical parameters, allowing continuous monitoring (even remotely) required for a thorough study of the evolution of the phenomena that affect the concrete, structural concrete, concrete blocks, lithoid. It optimizes time and costs.

Commercial challenge:

Thanks to the low invasiveness of the used diagnostic technique and the possibility of monitoring, even remotely, storage conditions, and deterioration of the structures, the technique and the proposed devices are a great attraction to their low cost of implementation and their high versatility to a extensive spread in the area.

Publications and Customer References:

- ▶ In Situ Measurement of Cl-Concentrations and pH at the Reinforcing Steel/Concrete Interface by Combination Sensors- Analytical Chemistry vol. 78 No 9, 3179-3185;
- ▶ In Situ Leaching method for determination of chloride in concrete pore water- Cement and concrete research 36, 492-503.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, IPR ASSIGNMENT

Contrada Biggemi, ex SS114 n.216
96010 Priolo Gargallo (SR)

SICILIA**Employees:** from 10 to 19**Turnover:** from 2,5 mln to 5 mln €**Export:** less than 75.000 €**Status:** SME**Contact:** Salvatore Argentino (System and Automation Manager)**Telephone:** +39 0931774911**E-Mail:** export@gruppomega.it**Web site:** www.gruppomega.it**Project Proposal****WU-SNap - Wide Unified Sensor Networks Appliance****Description of the innovation project:**

WU-SNap is an electronic system for the control of sensors for environment data collection and management of actuators in automatic and manual modes, based on standard protocols and user interface compatible with Internet browsers. This product comes as a hardware rackmount industrial appliance of 19" 2U, it has all hardware components redundant and a fail-over mechanism that ensures high data reliability and continuity of service. WU-SNap integrates a GSM modem used to send alerts on events, and an analog and digital data acquisition card, consisting of 4 digital inputs, 4 analog inputs (0-20 mA, 0-10Vdc), 4 High Power relay outputs (10A). There are various accessories for converting data from RS485 Modbus/CanBus to Ethernet.

IP Protection Level:

Patent N. 0000272580, patent date 23/12/2011. Issued by the Ministry of Economic Development, Italian Patent and Trademark Office, application number SR2009U000002, type M. utility.

State of development:

PRODUCT

Industrial application:

All industrial sectors

Market segment:

The possible target markets are small to large companies and public administrations.

To give an estimation of market size the SmartCities sector shall be considered.

It's estimated that the overall size of this potential market in the EU is € 100mln for 2015, with growth rates b/w 15% and 20% for the next 5 years.

Advantage factor:

Ability to integrate on a single platform different communication protocols and devices, regardless of brand. Integrates: CCTV, Access Control, e-map with ROI, alerts via SMS and email, web interface, HADR, data trend and chart, data export in CSV format, protocols TCP/IP, HTTP, MODBUS, CANBUS, SNMP.

Commercial challenge:

This invention is a radical innovation in tools for monitoring and control. All signals acquired by devices, wherever installed, are transferred thru Ethernet bus (LAN or Internet) to the Control Unit. The market penetration of the invention, as there is no effective competition from the major manufacturers of hardware devices, would allow the creation of an over-income for at least the next five years, before the market may suffer a real competition on price.

Publications and Customer References:

Our clients are:

- ▶ ENI S.p.A.;
- ▶ Isab S.r.l.;
- ▶ Isab Energy S.r.l.;
- ▶ ERG Power S.r.l.;
- ▶ Marinagri S.p.A.;
- ▶ University of Catania (Faculty of Pharmacy);
- ▶ University of Palermo (CUC);
- ▶ Lukoil Italia S.r.l.;
- ▶ Interdistrict coordination Automated Information Systems (CISIA) of Messina.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT

Via Merine, 36
73100 Lecce (LE)

PUGLIA

Employees: from 50 a 99
Turnover: more than 25 mln €
Export:
Status: SME

Contact: Luigi Blasio (Head of Health and Research Department)
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E-Mail: blasio@ietnet.net
Web site: www.ietgroup.it

Project Proposal

Internationalization and Commercialization of Products

Description of the innovation project:

The project consists of different products:

- ▶ NeoCare (registration in progress) is a practical solution able to satisfy all the organizational and medical care needs of the neonatology wards. This is achieved by making medical treatment processes and in the automatic assistance and facilitation in the exchange of information between the different operators of the medical and nursing team and between these and the families of newborn babies. Its functions are: ADT, Clinic diary, Nursery sheet, Monitoring, Outpatients department and follow up, HIS ADT integration and lab integration, Communication with parents, Safety and privacy, Statistics;
- ▶ JSignal (registration in progress) is a gateway for interface with department biomedical equipment;
- ▶ OneCare (registration in progress) is a practical solution able to satisfy all the organizational and medical care needs of the hospital wards. It automates the complete work flow management of the assistance processes and also facilitates the informative exchange between the different assistance team operators. Its functions are: Drug Management and Delivery; Patient Treatment and Care; management of Corporate Structures including several Hospitals;
- ▶ GeBIOp (registration in progress) enables the management of surgical and anaesthesia delivery units;
- ▶ Mother and Child Health Records is an instrument designed to promote the dialogue between the community, the hospital and the patient;
- ▶ HER - Electronic Health Record for Hospitals, Communities and Regions: systematic collection of electronic health information about an individual patient or population.

IP Protection Level:

Patent application has been filed.

State of development:

PRODUCT

Industrial application:

Hospital, Community and Regional Automation for Clinical and Healthcare Fields

Advantage factor:

Clinical and Healthcare Process Automation.

Commercial challenge:

Increase foreign sales and create a network of partners for the marketing of products / services of the Company.

Publications and Customer References:

The products are used in Italian Hospitals and in some Hungarian Hospitals: Lecco Hospital, Maggiore Policlinico Hospital, Mangiagalli e Regina Elena in Milan, Fondazione IRCCS di Natura Pubblica (Milan), ULSS n. 9 (Veneto Region), "S. Maria di Ca' Foncello" Hospital (Treviso), Azienda Ospedaliera Università di Ferrara (Ferrara), ASL Bari - Presidio Ospedaliero "Ospedale Di Venere", Consorziale Policlinico di Bari Hospital, IRCCS Burlo Garofolo (Trieste), Ente Ecclesiastico Ospedale Generale Regionale "F. Miulli" Acquaviva delle Fonti (Bari), IRCCS - Casa Sollievo della Sofferenza (San Giovanni Rotondo, Foggia), "La Madonnina" Hospital (Bari), ASL Foggia, Puglia Region, Szabolcs-Szatmar Hospital- Megyei Önkormányzat Jósa András Oktató Kórház (Hungary), Hospital Jász-Nagykun-Szolnok Megyei Hetényi Géza Kórház-Rendel?intézet (Hungary), Fehérgyarmati Kórház és Gyógyfürd? (Hungary).

Proposal of cooperation agreement:

KNOW HOW TRANSFER, JOINT VENTURE AGREEMENT

Piazza dei Martiri, 30
80121 Napoli (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Claudio Cimmelli (CEO & Founder)

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E-Mail: info@igoon.it

Web site: www.igoon.it

Project Proposal

iGoOn - Digital Hitch-Hiking

Description of the innovation project:

iGoOn's innovative range lies in a real time geolocation of both the means of transportation and the users, while connecting drivers who have empty seats with people looking for a ride only when they are in actual close proximity.

This system - available on a mobile app - minimizes the risk of delays and/or routes changes. Once the network of registered cars and users widens, both the speed and quality of the matching will improve. Travel expenses will be calculated on the basis of the kilometres travelled and measured on the cost of the fuel, as well as of the wear and tear of the car. In particular, the expenses will be covered via a system of virtual credits with no direct exchange of money between passengers and drivers.

IP Protection Level:

For the time being there is no IP protection.

State of development:

PROTOTYPE

Industrial application:

Technology applied to Public and Private Transport

Market segment:

iGoOn aims at positioning itself within the steadily growing market of sustainable mobility, in line with Europe 2020 strategy's priorities. The issue is rather topical and urgent, given that 13.2% of every household's budget is spent on average on transport goods and services source.

Advantage factor:

iGoOn's advantage factor consists of a real time matching between drivers and passengers' needs, thanks to the geolocation of both the car and the users. The system connects them automatically, without needing to manually search for the ideal match.

Commercial challenge:

iGoOn aims at representing a disruptive innovation in the field of sustainable mobility. The rationale behind the project is to transform citizens' approach to mobility throughout Europe by highlighting the considerable savings such a system entails. Based on real time response to users' needs and centred on automatic matching, iGoOn, is therefore not only a carpooling facility, but represents a veritable service of digital hitch-hiking.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Eleonora Trumello (Associate)

Telephone: +39 0916615631

E-Mail: info@informamuse.com

Web site: www.informamuse.com

Project Proposal

QRouteMe

Description of the innovation project:

InformAmuse QRouteMe® technology is a complex, multichannel information system to build and deliver rich user-experiences in museums, exhibits and large events. Users of QRouteMe® may access multimedia information about the surrounding environment, and also find and be found, by means of large interactive screens and also on their personal mobile devices. QRouteMe® allows site managers to coordinate the information flow, to manage advertisements, and to check the related statistics. The system has been deployed during the following international events: Vinitaly for 4 years in a row since 2011, London International Wine Fair 2011, Prowein 2012, Fruitlogistica 2012 and 2013.

IP Protection Level:

InformAmuse holds an Italian Patent No. 0001395403: An apparatus allowing for multimodal virtual navigation in 3D environments.

State of development:

PRODUCT

Industrial application:

Fairs, Museums, Exhibits and Large Events

Market segment:

The revenue model is segmented on three different revenue sources: rental of space and equipment, advertising and promotions on the web and on mobile, use of the system by buyers and sellers. Forecasts envisage will lead to total revenues of 84000 € in 2014, 382000 € in 2015, 1278000 € in 2016.

Advantage factor:

QRouteMe integrates different technologies: touch screens, QR, inertial sensors, spherical image navigation systems, voice interfaces, kinect motion detection and iBeacon for positioning. These proven ICT technologies are put all together to implement an immersive enjoyment of large public spaces.

Commercial challenge:

QRouteMe allows the immersive fruition of events, during which communities of buyers and sellers join together. Sellers are looking for communication channels and would like a stable affiliation with their buyers. QRouteMe can be seen as a tool to build and develop relationships with customers through high valuable information sharing.

QRouteMe develops the business of communities, adopts technological innovations and increases the participation in events.

Publications and Customer References:

- ▶ InformAmuse won a Best Paper Award for publication, ISBN: 978-0-7695-4842-5/12.
- ▶ Exploitation of Mobile Access to Context-Based Information in Cultural Heritage Fruition, BWCCA 2012, ISBN: 978-0-7695-4842-5/12.
- ▶ QRouteMe: A Multichannel Information System to Ensure Rich User-Experience in Exhibits and Museums. JTIT 2012, ISSN: 1509-4553.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING



Via E.Nicolardi, 110
80131 Napoli (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Luciano Serafini (CEO)

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E-Mail: info@raid.net

Web site: www.wifipub.eu

Project Proposal

Marketing and Advertising Tools WiFi Based

Description of the innovation project:

Wimo provides a set of marketing and advertising Apps based on Free WiFi mesh networks.

Wimo helps marketing agencies, brands, companies, business owners to create customer loyalty by a useful and appreciated service such as a free internet connection, keeping customers informed about special offers, events, discounts and other useful information.

Wimo also provides easy to use rewards and fidelity Apps and other marketing tools designed for vertical markets, such as: Wifipub.eu, Wimo Social, Wimo Urban, Wimo Prox, Wimo Brand, Wimo Events. Territorial marketing tools are also available to public administration.

More info on: <http://goglobalnow.eu/presentation/wimo/>

IP Protection Level:

Wimo is a registered Italian trademark since March 2010.

State of development:

SERVICE

Industrial application:

Proximity Marketing and Advertising

Market segment:

Wimo helps marketing agencies, brands, companies, business owners to "loyalize" their customers offering them a useful and appreciated service such as a free internet connection, keeping them informed about special offers, events, discounts and other useful information.

Advantage factor:

Wimo also provides easy to use rewards and fidelity Apps and other marketing tools designed for vertical markets. The keys of its success are: usability, simplicity, low cost and high performance, versatility, utility, an unique winner mix. €

Commercial challenge:

Wimo offers high revenue to his partners; by looking for distributors all over Europe, Australia and the Mediterranean Area.

Publications and Customer References:

Wimo concluded sponsorship agreements with:

- ▶ ConfCommercio Napoli
- ▶ Legacoop Campania
- ▶ Gesco Consorzio Imprese Sociali
- ▶ ARCI Napoli
- ▶ City of Naples

A series of partnerships for the distributions and/or the use of Wimo have been put in place with different entities, for example: Ismeralda Network - Sardinia's Beaches (Costa Smeralda); izoom.it (Emilia Romagna Region); Bacardi (Wimo has been used by this brand for the Isola Bacardi event: isolabacardi.it) and with several franchise chains (such as: Fratelli la Bufala, Fresco Trattoria, Mo confort café, Butterfly, etc.).

As for the foreign partnerships under progress: Wimo is currently in use in the Netherlands (Business Palace BV, Televisiestraat,2 - Den Haag - NL) and in the city of San Francisco (Mind the Bridge Fundation, 560 Mission st (JP Morgan Building), 13th Floor).

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, COMMERCIAL CONTRACT

INNOVAGRITECH SRL

Largo Papa Giovanni Paolo II, 1
71100 Foggia (FG)

PUGLIA

Employees: Up to 2
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: UNIVERTITY SPIN-OFF

Contact: Nicola Faccilongo (Partner)
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Web site: www.unifg.it/ricerca/imprese-e-trasferimento-tecnologico/spin/innovagritech-srl

Project Proposal Virtual Service Center

Description of the innovation project:

This innovation concerns the organization of food chains; however, the definition of the architecture of the application and, particularly, the means to ensure the relationship between the different elements of a complex production process has led to the selection and use of technology solutions that offer maximum flexibility the constraints and rules of safety and accuracy. The aim is also to support collaboration with realities that are not strictly part of the supply chain. Consider, for example, those that characterize in an increasingly important way the so-called business networks.

IP Protection Level:

Patent application to be submitted.

State of development:

PROTOTYPE

Industrial application:

Agro-industry

Market segment:

Agriculture and Agroindustry. 1.620.844 companies are operating in this sector.

Advantage factor:

Govern the flow of information process / product, in order to better qualify the agricultural food production and direct markets, drawing the proper recognition in terms of image and added value.

Commercial challenge:

Activation of consulting services related to the use of the IT platform.

Publications and Customer References:

F. Contò, N. Faccilongo, P. LaSala. "The effect of cloud approach in short chain administration. A Neural Network Model for Classifying Olive Farms". Agricultural, Forestry and Environmental Informatics: e-innovation challenges of International Journal of Agricultural and Environmental Information Systems, by IGIGLOBAL.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL CONTRACT



Via Giovanni Paolo II, 100
84084 Fisciano (SA)

CAMPANIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Gianluca Manca (CEO)
Telephone: +39 3282326773
E-Mail: info@intertwine.it
Web site: www.intertwine.it

Project Proposal Intertwine

Description of the innovation project:

Intertwine - digital innovative startup of RCS NEST, incubator developed by Digital Magics and Gruppo RCS - is an online editing multimedia platform that allows users to create, share and publish their ideas collaboratively. Intertwine is based on two different kinds of users:

- ▶ The plotter, who creates the plot of the idea;
- ▶ Brickers, the community which shares Bricks, pieces of multimedia content (texts, pictures, audio, video) that will build the plot.

Once the sharing process has ended, Plotter chooses the best Bricks and creates an Intertbook, a multimedia opera; Intertbooks will be sold in digital delivering, generating earnings for Plotters, Brickers and Intertwine.

IP Protection Level:

No patent as yet. The company has an exclusive royalty contract.

State of development:

PROTOTYPE

Industrial application:

Publishing, Blogging, Educational

Market segment: The market segments are:

- ▶ Ebook
- ▶ Blogging platform
- ▶ High quality contents marketplace.

Advantage factor:

The company gives everybody a chance to be an author or co-author of a multimedia work with the possibility to obtain a revenue. The company is creating a new kind of entertainment system that combines classic text books with a modern multimedia work.

Commercial challenge:

Intertwine is also developing an algorithm that will allow the company to receive sensitive information about readers and the way they use Intertbooks, in real time. This will generate data that can be sold to editors and distributors.

Publications and Customer References:

The company received the following awards:

- ▶ Vulcanicamente 1 award: winner
- ▶ Smau premio Lamarck: winner
- ▶ Mind the bridge: selected
- ▶ Wind business factor: finalist
- ▶ Invested by Digital Magics 110k
- ▶ Invested by RCS nest.

Proposal of cooperation agreement:

COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

S.S. 7 Km 7,300 per Mesagne
c/o Parco Tecnologico Cittadella della Ricerca
72100 Brindisi (BR)

PUGLIA

Employees: from 10 to 19
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Giovanni De Rocco (Manager)
Telephone: +39 0831588022
E-Mail: iris@terin.it
Web site: www.terin.it

Project Proposal

ForEDILlearn Platform for INRL - Interactive Network Remote Learning Project

Description of the innovation project:

The INRL project is designed to analyze and test new methods for e-learning, which aim to ensure major interest and to promote new interaction experiences between end-users and content. It proposes the improvement and integration of specific training modules in e-learning platforms already on the market. These modules called “interactive / experiential pills”, allow to reinforce the format of the content using interactive-cognitive technologies (3D augmented reality and interaction) and smart the concepts of learning by interactive and collaborative remote learning.

IP Protection Level:

There are no pending requests for patenting.

State of development:

PROTOTYPE

Industrial application:

E-learning, E-tutoring, Educational fields involved into building and construction.

Market segment:

The project is intended for government agencies, schools, e-learning experts, and in particular e-tutor, information brokers, educational managers, medium and large organizations in which the company aims to introduce integrated technologies for continuous learning.

Advantage factor:

Provide a new teaching formula, in the classroom and in e-learning, through use of VR / AR technologies, interactive games and video stereoscopic sequences, in order to stimulate a greater understanding of issues and disciplines, “mixing unknowingly entertainment to know.”

Commercial challenge:

Enter into new international markets, to provide services of training in e-learning by doing at affordable costs, that is mobility from home. Not just limited to the construction industry, but also to other areas such as health, transportation and other productive sectors.

Publications and Customer References:

- ▶ The project has been co-financed by the Puglia Region within the framework of the ApulianICT LivingLabs.
- ▶ The project has been presented at the 2014 Edition of the IEEE-INISTA (International Symposium on Innovations in Intelligent Systems and Applications) event.
- ▶ During the 2014 International Conference on EMET. Santorini Island, Greece, July 18-20, 2014 two articles describing the proposed technology were presented: “Education and Training projects of Apulian ICT LivingLab”; “Apulia Future Learning 3.0: cluster of Education and Learning in Apulia Living Labs”.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, KNOW HOW TRANSFER, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING

S.S. 7 Km 7,300 per Mesagne
c/o Parco Tecnologico Cittadella della Ricerca
72100 Brindisi (BR)

PUGLIA

Employees: from 10 to 19
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Giovanni De Rocco (Manager)
Telephone: +39 0831588022
E-Mail: iris@terin.it
Web site: www.terin.it

Project Proposal

IHCS - Innovative Health Care System

Description of the innovation project:

IHCS is a telemedicine system for the monitoring and the home rehabilitation of vulnerable people suffering from cognitive disorders or chronic degenerative and neurodegenerative rare diseases. It consists in a modular platform, which provides innovative services. It also includes diagnoses to evaluate the course of diseases through eye movement detection, the International Affective Picture System (used in studies of emotion) and finger tapping test. The diagnoses will be sent to a service center which will report any alarm situation.

The storage of information occurs through a web-based platform which is able to share information with the various stakeholders of the project.

IP Protection Level:

There are no pending requests for patenting.

State of development:

PROTOTYPE

Industrial application:

Telemedicine, Home Health Care

Market segment:

The project is intended for Hospitals and SMEs operating in the health care system. The main goal is to have social inclusion, healthy and active ageing, as well as significant savings on spending within public health and social home care.

Advantage factor:

The patient can establish a direct link with your doctor to report any situations of discomfort or complications. The doctor can remotely monitor the physical and psychological condition of their patients through a simple and intuitive interface.

Commercial challenge:

Enter new international markets such as the U.S., who do not have a national health service, to provide telemedicine services at affordable prices. For example, the telemedicine system adapts perfectly to follow the older population. Another market application of this technology is telemedicine applied to rural hospitals. In the U.S., managers of rural hospitals are looking for systems that can strengthen the service offerings to serve their communities and keep patients close to home.

Publications and Customer References:

- ▶ The project has been co-financed by the Puglia Region within the framework of the ApulianICT LivingLabs.
- ▶ The project won the 2014 Edition of the IEEE-INISTA (International Symposium on Innovations in Intelligent Systems and Applications) event.
- ▶ An article mentioning the project has been published: "A novel BCI-SSVEP based approach for control of walking in Virtual Environment using a Convolutional Neural Network"; DEI- Polytechnic of Bari; PERCRO Laboratory, TECIP Institute, Scuola Superiore Sant'Anna; IJCNN, July, 2014, Beijing.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, KNOW HOW TRANSFER, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING



Viale Augusto, 16
80125 Napoli (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Gianluca Iacono (CEO)

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E-Mail: info@isolanova.it

Web site: www.isolanova.it

Project Proposal

AlfonsOne

Description of the innovation project:

Hardware device for energy utilities management and control.

IP Protection Level:

Patent protection in working.

State of development:

MODEL

Industrial application:

Energy

Market segment:

Public-Private segment.

Advantage factor:

The innovative aspects will remain confidential until the filing of the patent scheduled for September 2014.

Commercial challenge:

The innovative aspects will remain confidential until the filing of the patent scheduled for September 2014.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

Via Corace, 27
88100 Catanzaro (CZ)

CALABRIA

Employees: from 10 to 19

Turnover: from 250.000 to 500.000 €

Export: from 75.000 to 250.000 €

Status: SME

Contact: Pasquale Lambardi (President)

Telephone: +39 3408690015

E-Mail: info@itheia.it

Web site: www.itheia.it

Project Proposal

Voice Analysis Control System

Description of the innovation project:

The project deals with voice tract analysis to define a reliable portable device for analysing voice and vocal robes status. The problem of disphonia and of vocal robes pathologies (such as faringe cancer) is a relevant problem due also to the fact that it is not simple to identify in a early stage. The project consists in implementing a system that includes new and reliable algorithms for disease early identification and to prevent voice related pathologies. Many solutions already exist in the voice analysis area but most of them are not 100% reliable (almost 50%) and they are not general purpose ones. The company carried out this system with cooperation with University of Catanzaro and with ICT-SUD consortium.

IP Protection Level:

Algorithms have not been patented due to the existance of similar one, but knoweldge and clinical party are included in experiences that cannot be patented.

State of development:

PROTOTYPE

Industrial application:

Healthcare sector

Market segment:

Clinical and health operators in the world.

Advantage factor:

The system is based on clinical experiences and cooperation with a othorinolaringoiatric team and this allow to overcome the existence of voice analysis tools.

Commercial challenge:

The application of the system, realized in terms of mobile apps and in terms of web based system, may find customers among clinical doctors and specialists. It allows their patients to keep under control the voice status but also by considering the possibility of monitoring the post surgical intervention patients that can be monitored byusing remote control. Also rehabilitation can be performed, guided and controlled by using the system.

Publications and Customer References:

The idea has been published by Prof. Pierangelo Veltri in an international journal. F. Amato, M. Cannataro, C. Cosentino, A. Garozzo, N. Lombardo, C. Manfredi, F. Montefusco, G. Tradigo, P. Veltri, Early detection of voice deseases via a web based system, Biomedical Signal Processing and Control, 2009, 206-211.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via F. Imparato, 190 Is. F/4
80146 Napoli (NA)
CAMPANIA

Employees: from 3 to 9
Turnover: from 250.000 to 500.000 €
Export: from 75.000 to 250.000 €
Status: SME

Contact: Gaetano Cafiero (CEO)
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E-Mail: info@kelyon.it
Web site: www.kelyon.it

Project Proposal

kGenTest - Web-Based Software Tool for the Management of Flow Activities related to Biomolecular Tests in Personalized Therapies Against Cancer

Description of the innovation project:

kGenTest 2.0 is the evolution of an application already developed by Kelyon for various pharma companies, used in Italy by hundreds of healthcare professionals.

kGenTest 1.x is a web-based software tool that aims to support and facilitate the activities of oncologists and pathologists involved in the management of patients with different types of cancer, employed when it's needed to know the status of a specific gene mutation in order to select the most appropriate cancer therapy for each patient. kGenTest 2.0 will manage different workflows related to genetic tests in one easily adjustable and extensible platform.

IP Protection Level:

kGenTest platform is at the moment in production with the release 1.x. Kelyon is developing a new release 2.0. kGenTest is not patented, like most software products.

State of development:

PRODUCT

Industrial application:

Pharmaceuticals companies and scientific associations that operate in the oncology sector and all therapeutic areas that need to perform a biomolecular test in order to define the treatment for a patient

Market segment:

The product targets Pharma market areas that need chemical or biomolecular tests for the diagnosis and treatment of serious pathologies requiring biological drugs and involving high costs for the healthcare system. The R&D pipeline of the pharma companies operating in this sector is large.

Advantage factor:

kGenTest rel. 1.x led excellent results for the reduction of waiting time of tests outcome to 50%. kGenTest rel. 2.0 will make user experience easier and will further reduce waiting time for test outcomes.

Commercial challenge:

Kelyon is the market leader in Italy in the sector of Personalized Onchology software. Selling the product on the international market will increase company value in order to acquire a European leadership in the sector of personalized medicine software platforms.

Publications and Customer References:

The Italian Association of Medical Oncology (AIOM) has published various studies, presenting data managed by the kGenTest platform, in many conferences and events such as annual meetings on cancer care organized by ASCO – American Society of Clinical Oncology (www.asco.org) in Chicago.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT

Via G. Matteotti, 63
70024 Gravina in Puglia (BA)

PUGLIA

Employees: from 20 to 49
Turnover: from 2,5 mln to 5 mln €
Export: less than 75.000 €
Status: SME

Contact: Mariarita Costanza (Technical Director)
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E-Mail: info@macnil.it
Web site: www.macnil.it

Project Proposal SMART URBAN MOBILITY

Description of the innovation project:

MAC&NIL's project is about an innovative system of sustainable mobility in urban areas. The whole system has developed an urban traffic monitoring network, for city mobility as a whole, all the city mobility thanks to several data sources: stationary traffic source, public transport service and also private citizens. An open WEB platform is available to all citizens. All the users will have access to all the open data collected and can view the sustainable mobility dashboard. Also, an APP available on smartphone will inform citizens about arrivals, congestions, delays and work in progress. It will be able to give options, even in case of emergency. It will be able to provide booking services.

IP Protection Level:

Part of the project is covered by the Patent Certification: Italian Patent (Patent's title: "SISTEMA DI TELERILEVAMENTO DI UN VEICOLO", No. 0001379121).

State of development:

PRODUCT

Industrial application:

Public Sector (Public Transportation and Mobility)

Market segment:

The advanced world is looking for smart solutions to improve the quality of life in city and urban areas. The segment is huge: each city up to 250.000 inhabitants will be a potential service user.

Advantage factor:

There is comparable service. MACNIL is the first company in the world to develop such a service. Very innovative outcomes: Beating traffic congestion. Real time monitoring and trafficking of public transportation vehicles for users and citizens. Reducing CO2. Making citizens proactive and socially involved.

Commercial challenge:

The MACNIL competitive advantage is about the pioneering aspect of non-replaceable services because it is the first service of this kind in the world. Of course there are many opportunities for applications, especially starting from the main cities of the US, Canada, Sweden, UK, Germany, Austria, Belgium, China, U.A. Emirates and Russia. There is a huge potential for applications in such a context. The company can help cities to improve, become smarter and provide innovative and useful service for citizens.

Publications and Customer References:

Dissertation of trainee from the University of Bari "Moro" Master Degree in Informatics. Title: SMART MOBILTY: Models and Technique for Infomobility GPS data analysis. Also, the Municipality of Bari is using the service at the moment.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT

Via Michele Cifarelli, 28/A
70124 Bari (BA)

PUGLIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Alessio Lorusso (CEO)
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E-Mail: a.lorusso@mekatronika.it
Web site: www.mekatronika.it

Project Proposal**The First Consumer Full Color 3D Printer****Description of the innovation project:**

The company invented and developed the First Consumer Full Color 3D Printer. This innovative technological approach combines two already known procedures that have never been applied together before. Furthermore, Mekatronika managed to obtain a new special material, to be patented as well, for printing purposes. Thanks to these inventions the company is able to print any type of object, in any shape, any colour or mix of colours, any texture or design, making use of a unique kind of white filament. Mekatronika is also creating an interactive web platform that will allow users to upload and download digital objects to be printed subsequently on this printer, with the possibility for individual users to customise them in terms of colour and texture.

IP Protection Level:

No patent as yet. The project is at the moment in the final stage of development, after which requesting European and US patents shall be considered.

State of development:

PROTOTYPE

Industrial application:

Consumer Electronics Industry

Market segment:

Mekatronika's product addresses medium-high level private consumers (18-35 y.o.), with a considerable cultural level, interested in new technologies and confident with High-Tech. Estimated price is 1200 €, with a profit between 50%-65% and a 20.000 item presence on the 400.000 market expected for 2016.

Advantage factor:

At this moment, full color 3D consumer printer does not exist on the market. The only machine able to print 3D objects in multiplicity of colours is an industrial engine, characterised by high complexity and very high costs. The printer is the first, that everyday consumer can put on his desk.

Commercial challenge:

Not only is this printer the first within reach of a common consumer, a fact that constitutes a great advantage on every possible competitor, but also, thanks to the special material used, it will be the only one suitable for full exploitation of the machine (any other will not permit full colour printing). The company will assure itself a constant profit from the sale of consumables. The web platform will also produce income, by taking a percent of transactions between object designers and consumers.

Publications and Customer References:

No publications printed as yet.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, KNOW HOW TRANSFER, CERTIFICATION FOR EXPORT, IPR ASSIGNMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via Aldo Moro, 1/P
84081 Baronissi (SA)

CAMPANIA

Employees: from 10 to 19

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

Contact: Gabriella Santoro (CEO)

Telephone: +39 089954135

E-Mail: momaspa@gigapec.it

Web site: www.momanet.it

Project Proposal Knowledge Extraction

Description of the innovation project:

The scope is to implement a framework, accessible via web, that, using semantic technologies for classification and research of highly innovative information, makes available to individuals living in geographically disadvantaged areas (like deserts, mountain communities, rural and dispersed settlements, isles, etc.) services able to provide them with answers expressed in natural language (i.e. consulting services, specialized training, etc.). The framework will integrate techniques of Natural Language Processing (NLP), Semantic Search, Text Similarity, Faceted Browsing etc. purposed to Knowledge Discovery. The framework will also spur the creation of Open Communities implying an active participation of the involved users.

IP Protection Level:

The qualifying MOMA Technology line, namely the Semantic Technologies, includes the newly registered "SEMANTIC PLATFORM 2", a software presenting innovative functionalities such as Knowledge Extraction, Conceptual Data Analysis, Crawling, NLP, Q&A, Link Discovery, Faceted Browsing and Wiki.

State of development:

PRODUCT

Industrial application:

Service Sector

Market segment:

The market segment will be focused on the e-Health scenario for diffuse and generalized users, showing a worldwide growth trend of 12-16 % per year (\$ 160 Bln in 2015). The spread of the presented technology platform services will absorb at least 1 ‰ of the above Revenues (equal to \$ 0.16 Billion).

Advantage factor:

The main ICT technologies are used by means of general-purpose and user-friendly tools and features such as the use of natural language for finding information of interest that responds effectively to the need to overcome historically established cultural and territorial gaps.

Commercial challenge:

On the one hand it facilitates the search for information, no longer relying on typical tools whose use might be problematic for the user, and which have inherent limitations, and on the other hand it aims at obtaining higher quality, extremely powerful and easy-to-use search levels. In particular, the PA will improve their performance by making relationships with stakeholders easier and providing a useful and citizen-user centered tool.

Publications and Customer References:

- ▶ P. Del Nostro et alii: ARISTOTELE: A Semantic-driven Platform for Enterprise Management. In IEEE International Conference on AINA 2013, International Workshop on NetVe. 2013;
- ▶ P. Ritrovato et alii: "ARISTOTELE: An Environment for Managing Knowledge-Intensive Enterprises", In proceeding of SEBD. 2013.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

Viale Venere, 35
90149 Palermo (PA)

SICILIA

Employees: from 50 a 99
Turnover: from 2,5 mln to 5 mln €
Export: from 75.000 to 250.000 €
Status: SME

Contact: Delia Di Bona (Chief Financial Officer)
Telephone: +39 0917487239
E-Mail: info@mosaicoon.com
Web site: www.mosaicoon.com

Project Proposal

Medialize your Brand

Description of the innovation project:

The key innovation of the company is its business model that rely on three technological proprietary Platforms: Crevity, Plavid and Tracking. Crevity is a crowd creativity platform allowing Mosaicoon to select the best creative ideas for the client and then the best partner for the production of the video content. Plavid is the exclusive platform for multi-channel distribution of branded content on the web based on over 10,000 websites, blogs, and social profiles, reaching 800million of users worldwide. Tracking is a monitoring platform that allows the clients to monitor in real time the evolution of the campaign distribution on Plavid, joining data from all channels and devices used. The data is audited by Adform and Nielsen.

IP Protection Level:

Not relevant for this innovation.

State of development:

PRODUCT

Industrial application:

Digital Advertising

Market segment:

Digital advertising investments will reach 137.53 billion USD in 2014. Digital ad spending is expected to increase by 14.8% compared to 2013 and to rise to nearly one-third of the total by the end of the forecast period (2018), when advertisers will invest more than 204 billion USD on digital.

Advantage factor:

Thanks to its proprietary Platform, Mosaicoon is able to assist the Brand in becoming a Digital Media Company which produces, distributes and tracks online video contents, introducing in the digital advertising market a breaking-through model that revolutionise the value chain of the Industry.

Commercial challenge:

Thanks to its Platform Mosaicoon is able to integrate all the different services usually offered in the market by at least three different Players, scaling the entire process and offering a single strategy for a company who wants to invest on the web. This means that Mosaicoon is able to propose itself as the unique responsible for the results of the campaign, that are for that reason guaranteed, and then to propose to its client an effective way to invest their budget in the digital market.

Publications and Customer References:

- ▶ Some of the company's clients: Vileda, Microsoft, Nissan, Samsung, MSC, Jaguar, P&G, Unilever, Danone.
- ▶ Some of the prizes won for this innovation: for 2 consecutive years Italian National Champion for Innovation (EBA); Start Up Nation (Israeli Embassy); Premio dei Premi Innovazione (acknowledged by the President of the Italian Republic, for being the most innovative company in Italy); Bright Future Ideas Award (UK Trade&Investment).

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT

NAOS EVOLUTIONS SRL - MEDI RESEARCH SRL



Via Murano, 17
88100 Catanzaro (CZ)

CALABRIA

Employees: from 10 to 19

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME - UNIVERSITY MEDITERRANEA SPIN-OFF

Contact: Domenico Ursino (Consultant of NAOS Evolutions s.r.l. - Founder and member of MediResearch)

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E-Mail: c.dusci@naosconsulting.it

Web site: www.naosolutions.it

Project Proposal

Startupper - a Cyber-Ecosystem for Startups

Description of the innovation project:

Startupper is a new social (i.e., based on Web 2.0) and semantic (i.e., based on Web 3.0) platform for startups. It realizes a network for a synergic cooperation among professionals, startups, consolidated companies and investors. In addition to the classical functionalities typical of social networks, it provides several new features such as a virtual room for startup cooperation, a trust and reputation management system, an engine for proposing startup federation, for recommending calls to interested startups, for completing startups, and so forth.

The main novelty of Startupper.eu is its "semantic side" directly derived from the future Web 3.0 paradigm, which makes it capable of proactively helping all its users to find what they really need.

IP Protection Level:

No patenting activity has been started yet. The company plans to perform it in the near future.

State of development:

MODEL

Industrial application:

Web Based Platforms, Specialized Social Networks

Market segment:

The target market is that of specialized social networks. The company needs about 200,000 euros to implement its system. It plans to obtain a very quick ROI thanks to advertising (for the no-fee access to classical Web 2.0 services) and to low fees (for access to innovative Web 3.0 services).

Advantage factor:

The main innovation of Startupper is its exploitation of the Web 3.0 paradigm to create a comprehensive network among startups and all the other players belonging to this ecosystem (e.g., investors, professionals, clients, etc.). It aims to become an international reference in this context.

Commercial challenge:

Thanks to the Web 3.0 technology, Startupper empowers its engine with the semantics management capability. Thanks to this feature, it is possible, for instance to complete a team for a startup, to find the startups to construct a federation capable of pursuing a given goal, to suggest the best opportunities for each player, etc. The importance of including Artificial Intelligence in new platforms is now acknowledged. For instance, Google invested 400 million US dollars to the DeepMind startup.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

Via Giuseppe Alessi, 51
90143 Palermo (PA)

SICILIA

Employees: from 10 to 19
Turnover: less than 250.000 €
Export: from 75.000 to 250.000 €
Status: SME

Contact: Massimiliano Carta (CEO)
Telephone: +39 0916196197
E-Mail: info@omniacon.it
Web site: www.omniacon.it

Project Proposal MobiPay

Description of the innovation project:

Due to an increase in the application of mobile payment tools, MobiPay has been designed in order to be used as a mobile application for all sorts of payments. The aim is an affordable, user-friendly and reliable tool by means of which it is possible to carry out payments smoothly and in real-time thus avoiding paper money. In so doing commission rates can also be reduced. This application is easy to download and can be used in different fields (theatre, cinema, transport, medical fees, shopping, public administration, parking fees etc..). MobiPay is in fact a highly verticalized tool, based on a multi-channel platform, which helps manage the urban area through an integrated access to the services provided at local level.

IP Protection Level:

For this project, which is meant to be provided both as a product and as a service, no patent application has been filed. Since the product is based on a software solution, it cannot be patented.

State of development:

CONCEPT

Industrial application:

Industries, Banks, Institutions, Tourism and Other Services

Market segment:

The service provided by MobiPay focuses on a target group which is keen on mobility and technology, living and being active in an urban area (citizens, institutions, banks and transport systems). Its commercial value is estimated in euro 900.000. The revenue depends on the number of users.

Advantage factor:

Besides facilitating mobility, this project also contributes to the sustainable development of urban areas by creating new job opportunities and by reducing CO2 emissions, being a sort of "green payment": no hardware devices to install and maintain, while processes are totally paperless.

Commercial challenge:

This product/service is a cutting edge IT solution in terms of technology. In fact, it helps to improve IT performances by achieving a major competitive edge in comparison to other NFC-based solutions. The product/service makes it possible to fill the gaps of NFC technology, which indeed presents many problems in terms of payment environment services.

Publications and Customer References:

Omnia has been cooperating with the Universities of Cagliari and Bologna. Moreover the Technology Transfer Team, founded in 2004 by the University of Bologna and Unindustria Bologna along with 12 companies (www.t3lab.it/en/) has promoted two research projects in this area.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, KNOW HOW TRANSFER, CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT

Via Scipione l'Africano, 9
91025 Marsala (TP)

SICILIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Stefania Vitali (Co-founder and COO)

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Web site: www.onb-analytics.com

Project Proposal

ONB - Innovative HR Assessment

Description of the innovation project:

ONB Analytics provides an innovative HR assessment software for medium and large enterprises. The SaaS solutions SmartNet and SmartSkills deliver powerful insights on collaboration and knowledge share levels, analyzing the digital communication streams. Within 7 days from the data upload, the system shoots a picture of the organizational structure. Through an intuitive user interface, accessible through a common web browser, it is possible to discover blind spots & bottlenecks in the information flow as well as real leaders and gatekeepers, no matter what their formal role is. Moreover, the software enables corporates to quantitatively measure the time dedicated to digital communication.

IP Protection Level:

The ONB products SmartNet and SmartSkills are proprietary software and have been registered in the Italian public register for computer software (SIAE), on 04.06.2014 with id number: 009268.

State of development:

PRODUCT

Industrial application:

Medium and large enterprises of the Industry and Service sector

Market segment:

ONB customers are medium-large size companies, with more than 100 employees using digital communication. Consultancy agencies are company's second customer target. The talent management and HR business intelligence market is worth about \$ 5.5 million and customers are about 350,000 in the EU and the USA.

Advantage factor:

ONB competitive advantages: i) methods based on data mining and big data analytics; ii) use of actual company data, already available and never used so far; iii) integration of communication web flows with the hot topics map; iv) interactive and user-friendly software; v) results in 7 days.

Commercial challenge:

The sale of licenses provides the main revenue. Up-selling revenue comes from the monthly subscription to the web-interface access, training, trouble ticketing and refresh activities.

ONB main activities are innovative R&D and sales activities. The costs are mainly variable costs, with the only considerable exception of the ITC infrastructure (cloud space and data storage). The major entry barrier for possible competitors is the specific knowledge required to develop similar algorithms.

Publications and Customer References:

Papers:

- ▶ The Community Structure of the Global Corporate Network, by S. Vitali, S. Battiston - Plos one, 2014;
- ▶ The Network of Global corporate Control, by S. Vitali, J.B. Glattfelder, S. Battiston - PloS one, 2011;
- ▶ Geography versus topology in the european ownership network, by S. Vitali, S. Battiston - Plos one, 2011;
- ▶ Industrial organization from a geographical and network perspective, by S. Vitali, e-collection.library.ethz.ch, 2010;

Awards Achieved:

- ▶ TechGarage, IT Forum Rimini, 2014 - Winner;
- ▶ StartCup Palermo 2013 - Winner;
- ▶ Bendigo Inventor Awards, 2013 - Winner of the International Awards Category.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING



Vico Mazzolina, 3
95034 Bronte (CT)

SICILIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Andrea Batticani (CEO)
Telephone: +39 3776891710
E-Mail: info@butlapp.com
Web site: www.butlapp.com

Project Proposal Butlr - Your Digital Concierge

Description of the innovation project:

Butlr is an innovative technological platform that combines tablets, computers, TVs, smart-phones with a smart, easy-to-use and reliable application that delivers to end users an exceptional and unique customer experience. The idea behind Butlr is to provide hotels with an integrated platform for the digitalization of every hotel service that enables guests to interact from their smartphones with the hotel personnel and with local businesses in town.

Just like a Butler treating his guests with white gloves, Butlapp will enable hotel guests to ask for the desired dish in their room, reserve the SPA, ask for tourist attractions and reach them, purchase tourist experiences and local products.

IP Protection Level:

Butlr is a Registered Trademark at the OAMI with number 012603114 and registration on 09/06/2014.

State of development:

PROTOTYPE

Industrial application:

Hospitality and Tourism

Market segment:

According to STR Global there are 187,000 hotels, offering 17.5 million guest rooms worldwide, representing a TAM for this product of more than \$ 8 BN.

Advantage factor:

Company's technology is better than its competitors' with respect to the fact that it is more focused on the design of a beautiful interface, as it is known that for the user the design is the product. While competitors' solutions are of much lower quality.

Commercial challenge:

Butlr will distribute its services mainly from the web. Moreover, any transaction, proprietary and not, will be conducted exclusively on the platform. To distribute this product in hotels the company will rely also on a number of sales people with experience in the market and on outsourcing companies for hotels.

Publications and Customer References:

The company is testing its platform at the Sheraton Hotel in Catania, which considers the App reliable and able to generate more revenues.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING

Via Trieste, 494
80036 Palma Campania (NA)
CAMPANIA

Employees: Up to 2
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: START-UP

Contact: Pasquale Simonetti (CEO & Founder)
Telephone: +39 3397810912
E-Mail: info@paqos.com
Web site: www.paqos.com

Project Proposal Itdoes

Description of the innovation project:

Itdoes allows you to engage a community of people to share specific needs and work together to solve them. For example trade items of daily use (selling, buying, renting), to recommend a plumber, an interior decorator, to easily find a babysitter or to delegate simple recurring tasks. Itdoes is a service offered primarily through applications for smartphones and tablets (eg. iPhone and iPad) and allows to better organize recurring tasks, sharing them with people nearby in order to receive or provide help. Ideal for those who cannot complete all their daily tasks, could use help from people around them but do not know how to organize the collaboration.

IP Protection Level:

No patent as yet.

State of development:

PROTOTYPE

Industrial application:

Social Innovation

Market segment:

The Sharing Economy is a socio-economic system built around the sharing of human and physical resources. It includes the shared creation, production, distribution, trade and consumption of goods and services by different people and organisations.

Advantage factor:

The strengths of the service, unlike its competitors, are represented by the functionalities offered by Itdoes, that are primarily focused on mobile devices, is widely exploited geolocation, shared activities and much more.

Commercial challenge:

Itdoes adopts the Freemium business model, the application will be available in two versions: Standard (free, with advertising), premium (paid, without advertising and with more functionalities). Itdoes is aimed, at a global level, at the market of the App for smartphones and tablets, and already has a very long list of heterogeneous competitors.

Publications and Customer References:

The start-up was founded after taking part, with its project "Itdoes", to the business idea competition "Vulcanicamente: dal Talento all'Impresa" promoted by the municipality of Naples in 2012. The start-up is currently collaborating with several companies, such as Startups based in the Silicon Valley (e.g. Lightt inc.) and it is looking for more partners abroad.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, CERTIFICATION FOR EXPORT, IPR ASSIGNMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING, ANY OTHER KIND OF COLLABORATION

Via Vicinale S.Maria del Pianto
Centro Polifunzionale Ed 6
80143 Napoli (NA)

CAMPANIA

Employees: from 50 a 99
Turnover: from 5 mln to 15 mln €
Export: from 500.000 mln to 2,5 mln €
Status: SME

Contact: Giuseppe Santoro (ICT Manager)
Telephone: +39 0810606800
E-Mail: info@protomgroup.com
Web site: www.protomgroup.com

Project Proposal

Wall-t

Description of the innovation project:

Innovative platform enabling to deliver solutions for enjoyment, training, communication, tasting and collaboration based on a 3D virtual environment able to interact, without wearable sensor or modified objects, with real objects and users' movements providing high level of immersivity.

Wall-t is a solution of immersive reality that manages a projection system of a virtual reality in which everything that happens is influenced by real movements of the user. It integrates a wide range of sensors: biometric sensors able to represent movements and other parameters of the user (voice, eye movement, heart rate, etc.) and other kinds of sensors for managing interaction of real objects with virtual scenarios. Particular focus has been placed on a 3D animation engine for giving the physical realism of the interaction. This new kind of world were real things and human can interact naturally with virtual 3D scenarios can be used in different markets and for different purposes, thus providing a new way to implement different applications.

IP Protection Level:

No patent as yet. Ongoing trademark registration.

State of development:

PROTOTYPE

Industrial application:

Marketing & Communication, Cultural Heritage, Training, Edutainment, Healthcare

Market segment:

The market segments identified are Large Companies, Communications and Marketing, Public Authorities (cultural heritage, communication, marketing), Healthcare, Industry (simulators, maintenance), Educational for which the company estimates sales next year just to existing customers, at 250K €.

Advantage factor:

The main aspect of innovation regards a new way to deliver communication, effective presentations and interaction with prototypes before they are built, and finally to supply immersive scenarios for edutainment, training and enhanced commercial appeal for any kind of offer (goods and services).

Commercial challenge:

The innovative use of technologies is for Protom Group part of a strategic objective aimed at increasing their competitiveness through the development of new product lines and skills applicable to current customers and markets served but also the opportunity to develop new markets and customers with a view to diversifying its ability to generate revenues from markets with different spending patterns and degrees of maturity.

Publications and Customer References:

Sardinia Region enhancement and promotion of European funds within Europe Day 2014. For MAV Ercolano, realization of an interactive papyrus presented as part of the exhibition "La villa dei Papiri" at Casa del Lector in Madrid Germán Sánchez Ruipérez Foundation. For Napoli Football Club interactive floor for their brand stores.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via Aniello Falcone; 304
80127 Napoli (NA)

CAMPANIA

Employees: from 3 to 9
Turnover: from 250.000 to 500.000 €
Export: less than 75.000 €
Status: START-UP

Contact: Gaetano Volpe (Marketing Manager)
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E-Mail: info@remocean.com
Web site: www.remocean.com

Project Proposal

Wave Radar for Enhanced Ship Safety and for Coastal Monitoring (oil soil detection and propagation, bathymetry maps, ship detection and tracking)

Description of the innovation project:

Process for the localization of objects, boats, people, etc., (drifting in the sea). This process allows to localize a target as a function of the displacement of the superficial currents and of the parameters characterizing the sea state, such as direction of the dominant wave and significant wave height with the possibility to scan the sea surface with a high temporal and spatial resolution. The invention provides a process for detecting the position of a target drifting in the sea within an area of uncertainty. This process is based on an accurate estimation of the superficial currents and the parameters of the sea state.

IP Protection Level:

Patent No.124214141.4-2220, for the process for the localization of target driving in the sea.

State of development:

PRODUCT

Industrial application:

Navigational Aid for Vessels

Market segment:

Remocean solutions are oriented to the e-navigation and to the maritime market and to the coastal monitoring and protection market. These are two fast-growing markets as a result of the evolution of navigation techniques in the maritime field, and increased attention to environmental protection.

Advantage factor:

Remocean was founded in 2010, after ten years of joint research activity between the IREA-CNR Institute (specialised in aerial and satellite image data processing in the field of environmental monitoring) and the INSEAN Institute (experienced in naval architecture and marine engineering). Remocean has therefore taken advantage of these exceptional research experiences, developing its core service in order to enhance the operational efficiency and safety of ship navigation while at the same time supplying useful information about the impact of the sea on the coastline.

Commercial challenge:

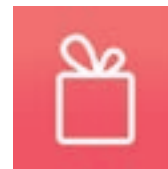
Remocean On-Board (for the maritime market) is the perfect solution for very large vessels and off-shore platforms for enhanced navigation and operations safety and comfort. Remocean On Land (for the coastal market) is the perfect solution for coastline applications. These installations include coast guard applications, wreck search, coastline and oil spill monitoring.

Publications and Customer References:

- ▶ Papers on SAR Processing and SAR Interferometry, for instance: F. Serafino, G. Fornaro, "Application of SAR tomography in urban area", Rivista Italiana di Telerilevamento, 2007, vol. 38;
- ▶ Papers on X-Band radar images for extraction of aerodynamics parameters, surface current and bathymetry, for instance: F. Serafino, et al., "Remocean: a flexible X band radar system for sea state monitoring and surface current estimation", IEEE Geoscience and Remote Sensing Letters, vol. 9, 2012;
- ▶ Customers and partners: Consorzio LaMMA; Grimaldi; CETENA SpA; Navico; Consilium Italy; CNR - IAMC (Institute for Coastal Marine Environment); Port Authority of Piombin and Elba.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING



Corso Trieste 83
81100 Caserta (CE)

CAMPANIA

Employees: from 3 to 9

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Umberto Canessa (CEO)

Telephone: +39 3921760290

E-Mail: umberto@shoozy.it

Web site: www.shoozy.it

Project Proposal Shoozy

Description of the innovation project:

Shoozy.it is an app whose ambition is to gather fashion within a community. A community based on users with different needs and diverging interests, whose interactions will generate buzz, on the low end, and financial interactions on the high end of the spectrum. Shoozy creates a social network between stores, users, fashion bloggers & brands where users can share photos of what they like when they are around for shopping and interacts with other thousands of followers and fashion bloggers. Stores regularly update their inventory so as to provide a virtual shop-window that allows Shoozy users to conveniently browse through their products without having to leave their houses.

IP Protection Level:

No patent application has been filed.

State of development:

PRODUCT

Industrial application:

Fashion, Ecommerce, Social

Market segment:

Theoretically, the entire market is the retail and fashion market. The current market size is \$3.9 bn in fashion (2013) and is expected to grow to \$ 19.77bn in 2018. Especially, the smaller brands and services such as Shoozy will see an increase of 44,5% in this period.

Advantage factor:

The advantage of Shoozy lays in its fast execution team and in the lean method of the business model. The network of fashion bloggers enables the company to reach a greater numbers of users at a low Customer Acquisition Cost (CAC).

Commercial challenge:

The challenge is to bring Shoozy inside every shoe shop all around the world, giving them a tool in which they trust and whereby they can expand their visibility, improve their efficiency and increase their sales and customers' loyalty.

Publications and Customer References:

The company recently concluded a partnership agreement with Salvador Artesano, a major Spanish shoe brand and producer with more than 50 stores in Spain. Thanks to this partnership Salvador Artesano's products will be sold both in Italy and worldwide using Shoozy, and Shoozy's services will be distributed in Spain, especially Push-Notification for hook users around stores and couponing.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via Centonze, 154
98123 Messina (ME)

SICILIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Alessio Salzano (Business Manager)

Telephone: +39 3491237488

E-Mail: info@skilledapp.com

Web site: www.skilledapp.com

Project Proposal

Skilled

Description of the innovation project:

Crowdsourcing is spreading throughout the world as a natural response to changes in job markets, which open their geographical boundaries and require the collaboration of diverse professionals in more flexible and challenging employment relationships.

“Skilled” is a mobile app that creates a network of referenced and geolocated professionals to search and offer skills both locally or remotely: once the information has been provided following a request, the system instantly forwards “push” notifications to compatible workers, who can state their availability and simply negotiate the fee; the employer will only have to choose among the latter.

Thanks to the mobile-based approach professionals available matching only takes a few minutes.

IP Protection Level:

No patent is currently being requested.

State of development:

PROTOTYPE

Industrial application:

ICT - Mobile App

Market segment:

Our potential market in Italy consists of approximately 10 mln users, divided in two main segments:

1. young people, students/unemployed, who look for opportunities to enrich their CV;
2. professionals looking for opportunities to supplement their income by exploiting knowledge gained in their work.

Advantage factor:

Skilled is entirely conceived as a mobile-based platform, so it allows immediate matching between skills supply and demand, fostered by a push notification system that alerts the user when a suitable request with his skills and location is published, or if he receives an offer to his request.

Commercial challenge:

Technical development of the app is focused on offering more integrated features, whereas business development aims at building strong partnerships with both private and public entities (e.g. universities). The competitive advantage lies in being the only provider of mobile-app-based crowdsourcing matching services; considering the estimated growth in terms of potential users, revenues will be generated starting from 2015 and the break-even point will be reached in 2016.

Publications and Customer References:

SkilledApp entered into a partnership with Telecom Italia after winning the 2014 Telecom Italia-Working Capital Accelerator call for ideas.

Proposal of cooperation agreement:

COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via G.Paolo II, 100
84084 Fisciano (SA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Danila Autuori (CEO)

Telephone: +39 0899920509

E-Mail: staff@skillme.com

Web site: www.skillme.com

Project Proposal

Skillme - the Innovative, Effective and Smart Marketplace for Professionals and Their Clients

Description of the innovation project:

This innovative project is the development of a BIG-data oriented and semantic-based algorithm which processes data (skills, FEEDBACK, rates, availability, costs..), returning a qualified ranking and disclosing targeted informations to directly and effectively starting profitable business dealings.

IP Protection Level:

No patent application has been filed because the technology is entirely based on formerly available free web solutions. However, the source code is confidential, the engineered algorithms are secret and no tech effects nor patentable improvements on any tech solution are produced.

State of development:

PRODUCT

Industrial application:

Service sector

Market segment:

Skillme targets the market of independent workers, that, in 2010 amounted, in Italy, to 5 Mln 748 000 units (ISTAT, registro statistico delle imprese attive, Eurostat Structural business statistiv), and accounted for the 18% of GDP (284 Mln € p.y.).

Advantage factor:

Through its smart and innovative web-solution Skillme is designed to directly keep in touch the stakeholders (Experts and Tradesmen), swiftly transact online business and meet the not yet fulfilled target needs thanks to a capable tool which accurately and explanatorily represent the truthful qualifications and SKILLS actually held by the experts proposed.

Commercial challenge:

The Skillme solution will be commercially used by our target to improve its job market position and easily achieve profitable business online, overcoming other existing, but incomplete solutions, such as Freelancer.com, Rated People, Twago and similar.

Publications and Customer References:

Skillme took part to GOGLOBALNOW (Naples); ExpoDelleStartUp 2014 (Milan); ACE SUMMIT (Bruxelles); TECHNOLOGYBIZ 2013 – 2014 (Naples); SMAU – success stories.

Skillme was mentioned in several articles online, for instance:

- ▶ ANSA: www.ansa.it/web/notizie/regioni/campania/innovazione/2013/11/20/Imprese-Sud-marketplace-Skillme_9649951.html;
- ▶ StartupperMagazine: www.startupper.it/cerca-valuta-contatta-skillme-il-professionista-esperto-a-portata-di-click;
- ▶ CorriereDelMezzogiorno: <http://corrieredelmezzogiorno.corriere.it/napoli/notizie/conomia/2013/11-dicembre-2013/curriculum-addio-meglio-feedback-2223779893886.shtml>.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via Figurella n. 2/A - Catona
89135 Reggio Calabria (RC)

CALABRIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Silverio Carlo Spinella (CEO)

Telephone: +39 3922066263

E-Mail: smarts@pec.it

Web site: www.smarts-srl.com

Project Proposal Smart Agent

Description of the innovation project:

Smart Agent solution aims at measuring key network parameters in crowdsourcing mode and by relying on modified company smartphones supplied to employees, in a transparent and non-invasive way. Also, a dashboard is offered to the user (Mobile Network Carriers, Mobile Virtual Network Operators, etc.) with the functionality to synthesize and analyze results through appropriate human machine interfaces. The approach followed allows for precise network optimization (RNI, RNO and O&M) and for a significant cost reduction (no need for expensive drive tests, in large areas) and a high accuracy in the measured data, without direct interaction with involved users (as in currently used surveys).

IP Protection Level:

At present, there is no patent request outstanding. The company is considering the possibility of patenting the product as a utility model or invention.

State of development:

MODEL

Industrial application:

Telecommunications

Market segment:

The target market is the B2B telecommunications sector, aimed at traditional and virtual mobile operators, and in general to all Telco operators engaged in the activities of RNI, RNO and O&M. The market value is estimated to be of the order of a few million €.

Advantage factor:

Smart Agent allows to:

- ▶ recover the “user perspective” in the process of network performance analysis (by exploiting the users’ distribution over the territory);
- ▶ to implement only targeted traditional optimization activities, otherwise almost impossible to achieve on a large scale.

Commercial challenge:

- ▶ Cost reduction in activity of RNI, RNO and O & M;
- ▶ Improvement of network performance by evaluating just the QoE of some company employees;
- ▶ Scalable crowdsourcing solution;
- ▶ Geo-referenced rather than statistical deterministic reports;
- ▶ Indicator of business continuity for all Telco companies, including those which do not possess an in-house RNI and RNO service.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

III traversa Via Virgilio, 4
80078 Pozzuoli (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Marco Finizio (CEO)

Telephone: +39 3381709664

E-Mail: info@softwareevolution.it

Web site: www.softwareevolution.eu

Project Proposal VIKI Technology

Description of the innovation project:

VIKI Technology enables machines to truly understand human language. By using advanced semantic algorithms together with natural language processing, VIKI understands the right meaning of texts. It can be applied to develop smarter virtual assistants, to process big data (unstructured text), to extract meaningful information from conversations or documents.

IP Protection Level:

The company is working to submit a patent request in the USA.

State of development:

PRODUCT

Industrial application:

ICT

Market segment:

Big Data, Social Robots, Social Media Analysis.

Advantage factor:

Higher precision in human understanding, flexible architecture enables a dynamic ontology management, easy verticalization.

Commercial challenge:

Penetration in the USA market, with local partners to push and increase local revenues and to open new opportunities with local Venture Capital firms.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING

Via Angelo Mazzone, 21
82100 Benevento (BN)

CAMPANIA

Employees: from 10 to 19

Turnover: from 250.000 to 500.000 €

Export: less than 75.000 €

Status: SME

Contact: Valentina De Luca (Marketing Executive)

Telephone: +39 0824 326033

E-Mail: info@spinvector.com

Web site: www.spinvector.com

Project Proposal 3D Binoculars

Description of the innovation project:

Interactive visualization system, similar to a binoculars but totally digital, that could be installed in strategic location close to enticement places (hotels, bars, restaurants) with a panoramic view on archaeological areas. This installation allows to look at the area as through a binoculars with a recreated view integrated with the normal one. In addition, the company releases an App available for the main platforms that perfectly matches 3D Binoculars, increasing the involvement and allowing alternative use modes. The implementation is available at its maximum quality as installation and with a very good quality via app. It is possible to display further information such as texts, images and multimedia contents (smartphone version).

IP Protection Level:

No patent application as yet.

State of development:

ADVANCED PROTOTYPE

Industrial application:

Cultural Heritage, Smart Tourism, Archaeology

Market segment:

Visitors increase: both direct incoming (thanks to the visits) and indirect (overnight, food service).

Virality: people tend to share and suggest the experience to friends and relatives. new way to disseminate historic and archaeological contents.

Advantage factor:

Technically there is a new use of Augmented Reality paradigm, because the company provides a stereoscopic fruition. The experience is enhanced and based on "gamification" concept.

Commercial challenge:

The innovation allows a competitive advantage on traditional service such as touristic guides with a minimum incremental cost involving a paradigm never used before in this sector but with a consistent record in others such as the digital entertainment.

Publications and Customer References:

- ▶ 2nd in Samsung Smart App Challenge 2013 with Party Party Videogame;
- ▶ best Practices 2012 awards by Confindustria for the installation created for the M.A.V., the Virtual Archaeological Museum of Herculanaeum;
- ▶ best App Ever Award by 148apps.com;
- ▶ Samsung Smart App Challenge Grand Prize in 2012 with From Cheese Videogame.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via Ferrante Imparato, 190
80146 Napoli (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Raffaele Ferrillo (Technical Manager)

Telephone: +39 0810102414

E-Mail: info@strategaservices.it

Web site: www.strategaservices.it

Project Proposal
NFV Virtualization of Networking

Description of the innovation project:

The networking virtualization (NFV) is still changing the paradigm of telecommunication, it's breaking the link between hardware and software. Therefore in a SDN (Software Defined Networking) approach, where network's architecture organization presents a decoupling between the control and forwarding layers, and it is programmable. The project "Bys4NFV" of the NA. EL. Corporation & Stratega, within NFV's architecture (standard ETSI), integrates a software system based on the Bayesian network. The final goal of the project "Bys4NFV" is the effective integration so that the NFS's network functions available on demand on NFV can be easily and automatically reached from the traffic on the physical path supervised by SDN control layer.

IP Protection Level:

No patent application has been filed. The ICT project Bys4NFV is in the state of prototyping.

State of development:

CONCEPT

Industrial application:

Telecommunications

Market segment:

The innovative product may be of interest of Telco, device manufacturers, and also for ICT companies. The cost of production and research are content to use OPEN SOURCE software. For these reasons, it is expected commercial value of the order of tens of K €.

Advantage factor:

The Telco capabilities and network services are made devices hardware owners. The launch of new services or upgrade require physical intervention on the time-to-market and costs. the NFV and Bayesian technology use IT virtualization with operational flexibility and reduction of cost.

Commercial challenge:

The VFN's mechanism is similar what happens for IT services running on cloud computing platforms, the difference is that the VFN may require to meet appropriate hardware optimizations to satisfy delay, scalability, geographic redundancy and manageability typical of telecommunication networks.

Proposal of cooperation agreement:

VENTURE CAPITAL FINANCING

TEST AND MANUFACTURING ENGINEERING SRL

Via Carlo Alberto Dalla Chiesa, 21
Zona Industriale PIP
81050 Portico di Caserta (CE)

CAMPANIA



Employees: from 10 to 19
Turnover: from 500.000 to 2,5 mln €
Export: from 250.000 to 500.000 €
Status: SME

Contact: Aniello Stellato (CEO)
Telephone: +39 0823794628
E-Mail: sales@tmesrl.net
Web site: www.tmesrl.net

Project Proposal Advanced Diagnostic System

Description of the innovation project:

The proposed project aims to realize a diagnostic system that is able to execute a completely automatic analysis on an electronic device (DUT). The system implements several diagnosis technologies such as optical inspection, thermography, In Circuit test, Analog signature analysis, Boundary Scan, In circuit Emulation. The implemented technological resources populate a database with the test results. According to the analysis of historical data in the database and the type of DUT, a smart controller system is used to make decisions about the tests to be performed. This allows to optimize the diagnostic process in terms of efficiency and time.

IP Protection Level:

Currently the proposal is uncertified. At the moment automatic test equipment (ATE) implements several test technologies, such as In Circuit test, Boundary Scan, CPU Emulation, that are customized for specific devices. However no ATE is able to make decisions about tests execution.

State of development:

CONCEPT

Industrial application:

Electronic production

Market segment:

The segment covers all Electronic firms. Once fully implemented, the system is estimated to generate an additional average turnover of 1Mln € o per year, with an increase of 20% per year, from a starting turnover of 500/550k €. The investment will be recovered in 1.5 years after the start of commercial activity.

Advantage factor:

The novelty is in the level of automation of the system. Several technologies, controlled by a smart system, work together. No technology is able to recognize all faults. But using a number of test technologies together, the coverage factor increases, making this proposal very efficient and very fast.

Commercial challenge:

The business proposal's innovativeness lies in the level of automation and integration of the system. The number of faults detected, the test configuration, the cost reduction, allow to optimize the efficiency and effectiveness of the diagnostic process. The final estimated price does not exceed that of traditional systems by more than 2%. In order to capitalize on technological development and exploit the rights of use, the company will require an international patent.

Publications and Customer References:

L. Angrisani, F. Cennamo, G. Ianniello, A. Stellato "Failure Analysis Based on Emulation Systems" accepted for publication and presentation at 20th IMEKO TC4 International Symposium which is being held 2014-09-15 in Benevento.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, COMMERCIAL CONTRACT

Via Palizzi, 107
80127 Napoli (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Giancarlo Pagliocca (Business Development Manager)

Telephone: +39 3385832183

E-Mail: info@trans-tech.it

Web site: www.trans-tech.it

Project Proposal

No.Noise System to Improve the Quality of Railways Systems

Description of the innovation project:

The aging of a railway line is closely related to a series of problems such as noise, safety and cost of maintenance. In this sector the problem of reducing vibration and noise has become progressively more and more felt, given that urban areas that have incorporated tracks, railway stations and metro lines are increasing, affecting the passage in large and medium-sized cities, both above and underground. Each geometric defect on a wheel rolling surface generates vibration: NO-NOISE is capable of monitoring the accelerations induced by the wheels' impact on the rail. The system has been designed to capture the dynamic load transmitted during wheel-rail interaction, thus measuring the quality of the contact surface of each wheel as it passes.

IP Protection Level:

The system is the subject of Italian patent application No. RM2010A000275 filed on 26/05/2010 titled "Monitoring System and Procedure for Public Transport Fleet Management". European patent pending.

State of development:

PRODUCT

Industrial application:

Vibration monitoring in Transport systems and Infrastructures (either on rails and tyres); customizable product for several applications

Market segment:

Transport and Infrastructure; the dimension of the market can hardly be defined since it has a wide field of applications.

Advantage factor:

The system allows continuous monitoring of the health status of railways and trains, providing information displayed to operators through graphic terminals.

Features: Automatic acquisition; data processing; data storage; Remote control, repeatable measures, Self-diagnostics.

Commercial challenge:

The competitive advantages coming from the application of the system can be summarized as follows: Benefits:

- ▶ Optimize predictive maintenance
- ▶ Improve Railway driving safety
- ▶ Allows maintenance cost savings

Thus reducing:

- ▶ Derailments
- ▶ Rail fatigue
- ▶ Track damage
- ▶ Bearing damage
- ▶ Concrete Tie Cracking
- ▶ Car and Truck damage

Increases:

- ▶ Wheel Tread Life
- ▶ Fuel Efficiency.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via Alessandro Manzoni, 21/A
84018 Scafati (SA)

CAMPANIA

Employees: from 3 to 9
Turnover: from 500.000 to 2,5 mln €
Export:
Status: SME

Contact: Salvatore Prete (General Manager)
Telephone: +39 0818508287
E-Mail: sprete@uniplan.it
Web site: www.uniplan.it

Project Proposal

Apparatus and Procedure for Waste Collection

Description of the innovation project:

This invention relates to an apparatus, optionally modular (in the sense that it is coupled to one or more similar modular pieces of apparatus) and a method that allows to collect waste, possibly estimating the type, distributing it automatically and in a uniform way in a special container, possibly divided in sectors to accommodate the different types of waste, thus streamlining the management of waste in terms of collection and transport and decreasing the environmental impact, in an efficient, reliable and inexpensive way.

IP Protection Level:

Patent pending.

Notice of Application for Dissolution Storage Reservoir No. RM2014R000735.

Patent Application No. RM2014A000091.

State of development:

PROTOTYPE

Industrial application:

Waste collection and Separation

Market segment:

The I.P. is aimed in particular to the collection of packaging waste (glass - paper-plastic) which has an average cost (national) 183 € / ton for a total (year 2012) of 5,527,000 tons collected. The incidence of "other costs" which include those for collecting road devices shall be 8% or € 14.64 / ton for a total of about € 81 million. Of these you can get about a 25% gathered through an advanced system for curbside collection on the type of I.P. at a cost of approximately € 20 million (source BAIN & COMPANY - Analysis of the costs of recycling in 2013 - Federambiente). It is estimated that this is the extent of the relevant market in Italy for the I.P. The company expects to sell at least 20 systems per year at a price ranging between € 18 and 25 thousand depending on the joint modules.

Advantage factor:

This invention solves the technical problem of the accumulation of waste at the opening of a container with consequent clogging of the inlet mouth of the same.

It also reduces the number of containers for the collection of waste and the frequency of container emptying activities.

Commercial challenge:

Since the I.P. constitutes an evolved system for collecting road (road said "covered") with performances that are placed, in terms of both interception of costs, including those of the "classic" road system (less costly and less effective) and that of the door to door (more costly and more effective), its marketing is a clear advantage for the company, because the product covers a broader niche market of recycling devices.

Publications and Customer References:

BAIN & COMPANY - Analysis of the costs of collection II ed. 2013 - Federambiente.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, KNOW HOW TRANSFER, IPR ASSIGNMENT, VENTURE CAPITAL FINANCING

Via Bernardino Martirano, 17
80146 Napoli (NA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Carlo Liberti (CEO)

Telephone: +39 3921155511

E-Mail: info@zeesty.com

Web site: www.zeesty.com

Project Proposal

The App for Sharing Restaurant Menus

Description of the innovation project:

Zeesty is an aggregator of menus for restaurants, pizzerias, pubs and clubs.

Each room will have the ability to scan their menu, making it available to any smartphone or tablet, even before the customer reaches the venue chosen. The restaurateur, with a few simple steps, from the control panel of his home page, can update the menu without having to reprint any time by notifying nearby Zeesty users with push notifications.

For Zeesty users: whether looking for their favorite dish, culinary lifestyle, the particular diet they are following or simply curious to eat a dish they heard of, a search on Zeesty geolocates the premises that meet these requirements.

IP Protection Level:

Patent No. 7403841211.

State of development:

PROTOTYPE

Industrial application:

Food-ICT

Market segment:

Restaurateurs and in the future, scaling the system, all those businesses with a list to advertise. In Italy alone there are 300 thousand restaurants, pizzerias or accommodation facilities with a menu; this is a huge and constantly expanding market.

Advantage factor:

Zeesty aims to revolutionize an industry, that of restaurateurs and retailers, and all those with integrated data.

Commercial challenge:

Zeesty aims to revolutionize the restaurant and retail industries integrated data. Cloud Computing ensures constant availability, an asset for the company and its clients. The added value will be the data for both customers but especially for third party users. Once there will be all the data, in a year it will be easier to find the information rather than create it.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING

Via della Pineta, 26
76123 Andria (BT)

PUGLIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: START-UP

Contact: Giuseppe Silvano (CEO)
Telephone: +39 3496459964
E-Mail: info@zenfeed.me
Web site: www.zenfeed.me

Project Proposal

Zenfeed

Description of the innovation project:

Zenfeed is the smart news reader that knows what you like. Zenfeed allows users to get all the news from their favourite sites in one beautiful and simple interface. If news are too many, users can sort them automatically by importance, thanks to its technology capable of analyze both news and users with advanced proprietary techniques. Non paying users will see some native advertising: in their stream, there will be some sponsored post, targeted to their profile using this technology. Paying users will enjoy no advertising and more advanced features based on this smart technology.

IP Protection Level:

No patent application as yet.

State of development:

PROTOTYPE

Industrial application:

Online Media

Market segment:

There are already 1.7 Bln users that read online news at least once a week, the 60% of all Internet users. The audience for digital media increases by 7% year by year. Zenfeed will reach 19 Mln users in 2019, and monetize with native advertising and premium subscriptions, earning an avg. of 0.6 €/user.

Advantage factor:

Zenfeed includes advanced techniques of semantic analysis, virality analysis, and user behavior analysis. With this deep knowledge about the users, Zenfeed can sort news automatically by importance. Actually, it does not have parallels with its competitors, and it is hardly replicable.

Commercial challenge:

Zenfeed is embracing cloud systems, NoSQL databases, programming languages and framework optimized for high computation (Scala, Akka). The technological stack it is building is very advanced and hardly replicable by competitors. This is particularly true for competitors that simply do news aggregation. The analysis tasks add lot of complexty, so much that they should rethink almost everything. They will be surely interested in a license to use this technology.

Publications and Customer References:

ZenFeed has worked together with CC-ICT-SUD for the definition of its strategies.

Selection of online articles that mentioned Zenfeed's technology:

- ▶ Rai News: Investor Day, il Gran Ballo delle startup (available at the following link: <http://goo.gl/4926wZ>)
- ▶ <http://businessandtech.com>: 7 alternative (valide) a Feedly (available at the following link: <http://goo.gl/LxXtWe>)
- ▶ Wind Business Factor: Dall'aggregatore di news al reader intelligente: ecco a voi Zenfeed! (available at the following link: <http://goo.gl/xbqUap>)
- ▶ TuComunica: Intervista a Zenfeed – RSS Reader dall'animo Social-Semantico (available at the following link: <http://goo.gl/ok9Jnt>)
- ▶ Ninja Marketing: Startup Weekend Bari, ecco i vincitori: ZenFeed, Searcharter e 100kHome (available at the following link: <http://goo.gl/2EXzw>)
- ▶ Che Futuro: Startup e Investor da tutto il mondo, a Milano la due giorni di U-Start Conference (available at the following link: <http://goo.gl/5gTCR9>)
- ▶ Che Futuro: Startup, Luiss Investor Day: caccia al finanziatore. Pmi, Digitali per crescere a Roma (available at the following link: <http://goo.gl/HJ3RXC>)
- ▶ StartupBusiness: Le gemme di Enlabs all'Investor day (available at the following link: <http://goo.gl/BZuTD0>).

Proposal of cooperation agreement:

LICENSING AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

Mechanical Devices



ASTRO INDUSTRY SRL - AEROSPACE TREATMENTS AND COMPONENTS IND.



Contrada Pantano
zona Industriale di Acerra
80011 Acerra (NA)

CAMPANIA

Employees: from 10 to 19

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

Contact: Pasquale Dell'Aversana (R&D Manager)

Telephone: +39 0818446268 ; +39 3476158785

E-Mail: innovation@astroindustry.com; direzione@astroindustry.com

Web site: www.astroindustry.com

Project Proposal Liquid Pocket Slider

Description of the innovation project:

Development of a radically novel bearing with a number of aerospace and industrial applications. Such bearing, invented by the R&D manager of ASTRO Industry, is referred to as the "Liquid Pocket Slider" (LPS). It is intended to work at very high speeds, actually so high that no other bearing of the known art could work at such speeds at a reasonable cost. It can be produced at a much lower cost than any conventional precision bearings and displays several peculiar features, such as a capability to proactively herald a need for maintenance. This means that a possible malfunction can be announced well before any performance degradation takes place.

IP Protection Level:

Patent application application No. RM2012A000355 (filed on 24.07.2012). International patent application for the same invention published, with priority search report, on 30.01.2014 No. WO2014/016739.

State of development:

PROTOTYPE

Industrial application:

Turbines for small-scale Energy production; Compressors; Household appliances including air hand dryers, washing machines, fans, vacuum cleaners, garden blowers, etc.; Space systems for satellite attitude control (control momentum gyros, inertia wheels, etc.); Air cycling machines for aircraft cab pressurization.

Market segment:

LPS bearings could cover 2-3% of the global bearing market, which is worth about \$ 100 Bln a year and still growing. Today more than 60% of such market is held by the 6 largest bearing companies (source SKF). Yet the company counts on the LPS bearing radical innovations to take over a portion of this market.

Advantage factor:

Ease of construction and consequent cost reduction; Simple installation; Very low noise; No need for liquid lubricants and related lubrication/cooling systems; Ability to stand mechanical shocks; Simple and proactive maintenance; Failure tolerance; Thanks to their peculiar features the very design paradigms of some machines may change.

Commercial challenge:

The following options are possible: 1) Selling just patent royalties and consultancies after a prototype has been built; 2) Developing a complete product and manage all the development phases up to commercialization and after sale customer care, including the related logistic organization.

Publications and Customer References:

- ▶ Gianbattista Della Porta Award (2005);
- ▶ The idea has been funded by CIRA (CIBA Park, 2008) and ASI (2009), and co-funded by Region Campania (2011);
- ▶ The idea of the LPS bearings has been selected by the Skolkovo Foundation (Moscow-2013) and by the Creative Clusters Aerospace initiative (2014).

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, KNOW-HOW TRANSFER, VENTURE CAPITAL FINANCING, PARTNERSHIPS FOR SUBMITTING PROJECTS IN NATIONAL OR INTERNATIONAL CONTESTS

Via L. Sturzo, 62
84036 Sala Consilina (SA)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Antonio Petrarca (CEO)

Telephone: +39 3481539780

E-Mail: info@automapantografi.com

Web site: www.automapantografi.com

Project Proposal Milling Machine CNC

Description of the innovation project:

The proposed machinery is still present on the market, the company has just optimized design and the manufacturing process to meet a specific market segment. Company's Milling machines are used in the carpentry, advertising company, mechanical works, dental sectors.

IP Protection Level:

No patent as yet for the proposed machinery, however the company is considering this possibility in the light of future developments.

State of development:

PRODUCT

Industrial application:

Woodworking, Mechanical, Dental, Advertising, Carpentry, Prototyping

Market segment:

The machinery is designed for the entry level handicraft market, i.e. for firms which today are too far from a high quality product, and are compelled to invest in a lower quality products. The Machinery has a cost of about € 25k, rather than € 35/45k for machines having the same functionality and qualities. The gross profit is 45%.

Advantage factor:

It would certainly be possible to implement new technologies on machinery already present on the market. At the same time, a phase of intensive design and prototyping of new products will be initiated, which is at the base of every successful company.

Commercial challenge:

Company's commercial challenge is to develop a business model from a B2C to B2B. Thanks to this, the company will be able to develop its machinery to ever increasing quality standards. Nowadays the production is about 6 machines per year, but thanks to a B2B commercial model it can reach a productivity of about 15 machines per years within the first two years.

Publications and Customer References:

- ▶ Best Practices Award - StartUp Paolo Traci - 2014;
- ▶ Telecom WorkingCapital - 2013.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING



Via Nazionale, 1221
83013 Mercogliano (AV)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Gaetano Capossela (Manager)

Telephone: +39 0825681968

E-Mail: info@capossela.it

Web site: www.facebook.com/pages/Motore-Capossela/713667882037985

Project Proposal Opposite Pistons Engine

Description of the innovation project:

Internal combustion engine with opposed pistons placed in a single cylinder and connected with 2 mutually synchronized shafts.

IP Protection Level:

There is European Patent and the company is applying for another one.

State of development:

PROTOTYPE 100 CC and 300 CC (bifuel: gasoline and gas)

Industrial application:

Mechanics, Automotive, Nautical, Aerospace, Energy

Market segment:

- ▶ Industry segment for the production of fuel-efficient engines;
- ▶ domestic segment for the production of cogeneration or hybrid engines.

Advantage factor:

Perfectly balanced engine that can run if necessary on 2 or 4 or 6 pistons.

Commercial challenge:

THE CPSL is a more balanced, more secure, more efficient heat engine and can be used for both military and civilian purposes.

Publications and Customer References:

Creative Clusters Aerospace Award granted in 2014.

For more information visit: www.youtube.com/watch?v=Rrb1kN24XS8

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, LICENSING AGREEMENT, KNOW HOW TRANSFER, COMMERCIAL CONTRACT

CARROZZERIA NUOVA SAN LEONARDO SRL



Via Roberto Wenner, 61
84131 Salerno (SA)

CAMPANIA

Employees: from 20 to 49

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

Contact: Adriano Campagna (Solo Director)

Telephone: +39 089301953

E-Mail: info@carnuovasanleonardo.it

Web site: www.carnuovasanleonardo.it

Project Proposal

Fully Electric Buses for Public Transport

Description of the innovation project:

E-Mobility is an urban mobility system that can reduce environmental, economic and social impacts. The widespread use of Fully Electric Vehicles is the key factor towards achieving the goals set by the EU's "Europe 2020" Energy Plan. The project focuses on performances of electric vehicles and on their low level of pollutant emissions (ZEV).

IP Protection Level:

Patent has been granted. Buses are in production.

State of development:

PRODUCT

Industrial application:

Automotive

Market segment:

- ▶ Public Administrations
- ▶ Public or Private Transport Companies

The market value of each Bus is about € 200.000,00 - 300.000,00.

Advantage factor:

- ▶ Zero Emissions Vehicle;
- ▶ high Performance;
- ▶ long Battery Life.

Commercial challenge:

- ▶ Development of urban e-mobility;
- ▶ replacement of conventional vehicles powered by fossil fuels in Cities.

Benefits:

- ▶ decrease of noise pollution;
- ▶ decrease of environmental pollution;
- ▶ improving of citizens quality of life.

Publications and Customer References:

There is no work, analysis, study, or reference to commercial activities or academic literature about the product.

Proposal of cooperation agreement:

CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT



Via Maiorise snc
81043 Capua (CE)

CAMPANIA

Employees: from 100 to 499
Turnover: from 5 mln to 15 mln €
Export: from 5 mln to 15 mln €
Status: RESEARCH INSTITUTE

Contact: Carlo Russo (Business opportunity, Head)
Telephone: +39 0823623111 ; +39 3356789105
E-Mail: c.russo.cira@pec.it
Web site: www.cira.it ; www.tepcoitalia.com

Project Proposal

Innovative Connecting Rod in Composite Material

Description of the innovation project:

Connecting rods designed in a very innovative manner, using fibrous composite materials positioned in such a way that fibres can express their total mechanical potentials being stressed only in tension and without singular critical points, during any stage of the work of the conrod, contrary to any other composite conrod. The innovation produces high performances of composite conrods, in terms of strength in tension and compression, Eulerian instability, fatigue strength, and weight above all, due to the very peculiar way of having the fibres directions in the composite, for both monocylinder as well for pluri-cylinder engines conrods, with no evidence of static or fatigue damage; weight reduction now between about 40% and about 60.

IP Protection Level:

Last year an application for industrial patent was filed, recently extended to international level through a PCT Application, related to a new concept of connecting rods using composite materials, with OMPI number WO 2014/091514 A1.

State of development:

PROTOTYPE

Industrial application:

Automotive, not only

Market segment:

An automated low-cost production system is envisaged, so that the composite conrod can be thought as alternative to the traditional metal ones (more than 300 millions fabricated per year), permitting reduction of energy loss and fuel consumption. In racing cars permitting higher pick-up and speed.

Advantage factor:

The composite present in the connecting rod has fibres subjected to ONLY TENSILE STRESS along their axis, both when the rod is subjected to TRACTION and when the rod is subjected to COMPRESSION. Together with no interruptions of the fibres the innovation leads to the complete exploitation of the composites.

Commercial challenge:

Considering that more than 300 millions of conrods are fabricated per year for the automotive industries, even a very limited percentage of the market could be satisfactory in the initial stages of commercial introduction of the composite low cost present conrod, once a proper marketing campaign is made, based on a extensive and complete testing campaign in different situation.

Publications and Customer References:

No publications or presentations of the conrod has been so far made, to protect the privacy of the innovation.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, VENTURE CAPITAL FINANCING

Via Bellini, 41/A
84090 Montecorvino Pugliano (SA)

CAMPANIA

Employees: from 10 to 19

Turnover: from 2,5 mln to 5 mln €

Export: from 2,5 mln to 5 mln €

Status: SME

Contact: Maurizio Crescenzo (Front Office)

Telephone: +39 082851166

E-Mail: mail@ctifoodtech.it

Web site: www.ctifoodtech.it

Project Proposal

Peach Pitter MECATRON

Description of the innovation project:

The machine orients the fruits through a continuous orientation system. When necessary an optical recognition system, that acquires the image of each fruit, analyzes it through a dedicated software and detects the value of the angle by which the fruit should be rotated, through a robotized system, which will position it correctly along the cutting plan. If the fruit is not recognized, the vision system communicates it to the processor, that will provide expel the fruit from the conveyor belt. The fruits are then pitted by rotating knives moved by a brushless motor, that guarantees an optimal finish.

IP Protection Level:

Patent Pending RM2014A000115.

State of development:

PROTOTYPE

Industrial application:

Food Industry

Market segment:

Global market of peach preserves producers. The potential market the innovative product refers to is of more than 500 machines, for a commercial value exceeding € 80 Mln.

Advantage factor:

Optical recognition technologies, suture line analysis and robotized hold system applied for the first time to peach pitting.

Commercial challenge:

The innovative MECATRON project guarantees 99% recognition efficiency, without manpower, compared to a current efficiency not above 90%, thus increasing the yield of production lines and reducing product wastage.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT

Via S. Maria Area PIP
84012 Angri (SA)

CAMPANIA

Employees: from 20 to 49
Turnover: from 500.000 to 2,5 mln €
Export: from 500.000 mln to 2,5 mln €
Status: SME

Contact: Giovanni Manzo (Managing Director)
Telephone: +39 0815135555
E-Mail: info@ferraioliofficine.com
Web site: www.ferraioliofficine.com

Project Proposal

Complex Mechanical Machining on Vertical and Horizontal Machining Centres and on Lathes in Turn Key Version

Description of the innovation project:

Mechanical components of first level for rolling stock (e.g. Pendolino Train); High Speed (S.O.Systems); for Robotics + PowerTrain.

IP Protection Level:

No IP Protection as yet.

State of development:

FINISHED, ASSEMBLED, CALIBRATED AND CERTIFIED PRODUCTS

Industrial application:

Rail - Robotics

Market segment:

Rail: constant growth of both freight and High Speed, although subject to public funding.
Robotics: market shows particular evolution especially in Asian and South American countries.

Advantage factor:

Skilled and expert workers, innovative and competitive producing systems, ongoing product and process innovation, also in collaboration with university professors (e.g. from Milan Polytechnic).

Commercial challenge:

Flexibility, Quality and Competitiveness.

Publications and Customer References:

Research project "Network Part Program" developed in cooperation with University of Salento (Innovation Department), Cetma Consortium (ENEA), I.T.I.A. (C.N.R.) Milan, Polytechnic of Milan.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER

Via Braccianti dell'Arneo, 2
73017 Sannicola (LE)

PUGLIA

Employees: from 3 to 9

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

Contact: Roberto Marti (President)

Telephone: +39 0833233038

E-Mail: robertomarti@isopharmacosmetics.com

Web site: www.dermosistemi.com

Project Proposal

Electro-Aesthetics and Medicine Devices

Description of the innovation project:

The Bipolar Radio Frequency H6RF is a new treatment with non-surgical procedure for tissue regeneration and treatment of both face skin problems (wrinkles, furrows, folds and depressions) and body imperfections (laxity of the neck, abdomen, arms, buttocks, inner thighs, fat deposits and cellulite). Diathermy stimulates the activity of fibroblasts according to the natural process of self-repair of the dermis and determines a skin retraction with an immediate Skins Tightning effect. H6RF Radiofrequency is an innovative multifunctional device with unique hardware architecture that allows to combine, in a single multi-technological device, a concentrate of innovation and scientific research: radiofrequency bipolar of resistive type with concentric handpiece for face and body. H6RF and H6RFD can treat all the imperfections related to sagging skin and, thanks to modern hexapole handpiece, the imperfections associated to localized adiposities, cellulite and to its mixed forms. The operator, in addition, can directly choose between the firing frequency of use 480 Khz, the 800 Khz and 1000 Khz.

IP Protection Level:

Patent BR2014R000001.

State of development:

PRODUCT

Industrial application:

Beauty and Medical treatment

Market segment:

Beauty Sector, Dermatology, Aesthetic Medicine.

Advantage factor:

SCEP (Self Control Emission Power) is the new type of technology used for the H6RF: a resistive and non-ablative bipolar radiofrequency for Dermatology and Aesthetic Medicine. The SCEP system assesses instantly and at any time the resistivity given by the tissues by calibrating the supply of energy and automatically stopping the delivery of energy when the handpiece is no longer in contact with the skin. It is a controlling device and method for medical/cosmetic and veterinary use with frequency emission modulation used on cutaneous biological tissues of humans or animals in order to modify the anatomy and/or a physiological process through the use of bipolar or multipolar resistive radiofrequency. It is able to calculate all the variations of the contact impedance of tissues subjected to treatment, relative to standard defined values and to monitor the variation of the parameter of the current intensity flowing in the electronic/biological circuit.

Commercial challenge:

This system allows to work at optimum and homogeneous temperature across the tissue portion and for the whole time of treatment, without the risk of tissue overheating or accidental thermal damage.

Publications and Customer References:

In 2014 the SCEP system was presented to the AIDA Conference of Aesthetic Medicine and Forensic Medicine, addressed to professional dermatologists, plastic surgeons, aesthetic doctors and coroners.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER



Via Quercione 65
81100 Caserta (CE)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Gaetano Capasso (General Manager)

Telephone: +39 0823821297

E-Mail: info@italrobot.com

Web site: www.italrobot.com

Project Proposal

Robotic Solution for No Industrial Application

Description of the innovation project:

Currently there are a lot of robotic applications in the industrial world, but nothing in other sectors, such as maintenance, agriculture, physiotherapy, sculpture and other application sectors.

The scope of Italrobot is to promote the Robot in all the other fields of application, for example:

- ▶ A robot is able to copy a marble or stone statue in few days, with a 3D vision system and electric cutting, more accurately than a human;
- ▶ A robot can assist a patient in the rehabilitation cycle, without exceeding the pain threshold;
- ▶ Automatic fruit-picker Robots;
- ▶ and other innovative projects.

IP Protection Level:

Patent applications have been filed for the following projects/products:

- ▶ Harvesting fruit Robot;
- ▶ Larding of hams Robot;
- ▶ Stock Pharmacies Robot.

State of development:

MODEL

Industrial application:

Maintenance, Agriculture, Physiotherapy Sculpture

Market segment:

In agriculture the Robot fruit picking can be sell at € 300.000,00, with a 1 year of return of investment, considering all the people working as fruit pickers during the summer.

Advantage factor:

All these activities are now done manually, with a lot of risk in terms of safety for people using ladders, cutting tools and other dangerous instruments.

Commercial challenge:

A company that buys this type of Robot can face the market of the fruit picking without the big personnel costs of the actually way of working.

Publications and Customer References:

- ▶ Italrobot won the Smart&Start Program, organized by the Ministry of Economic Development in 2014;
- ▶ There is a tight cooperation with the Department of Automation Engineering (Robotics Division) of the Sun University of Antwerp and of the University of Naples Federico II;
- ▶ Negotiations with Universal Robots, ABB Robotics and Schunck are underway to sign exclusive contracts for Italia Meridionale.

Proposal of cooperation agreement:

VENTURE CAPITAL FINANCING

Via Pupilli, 11
70024 Gravina in Puglia (BA)

PUGLIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: START-UP

Contact: Paolo Varvara (CEO)
Telephone: +39 3351412133
E-Mail: paolov56@libero.it
Web site: it.linkedin.com/pub/paolo-varvara/6a/766/145

Project Proposal

Highly Innovative Forklift Trucks

Description of the innovation project:

Patented Innovation of Duplex and Triplex masts, full free lift, named "Open Window Masts". These masts are characterized by the absence of a hydraulic cylinder between the central lifting frames, thus freeing the operator's field of vision.

IP Protection Level:

The J&E start up company has already been set up and the innovative products are covered by international patent application with exclusive Patent Application (EPO): EP 10747961 .0-1705/2467325 International

Application No. PCT/1T2010/000335 International Publication No. WO 2011/021231 A1.

In september 2014, EPO has certified that the European patent No 2467325 has been granted.

State of development:

PRODUCT

Industrial application:

Factory and Warehouses

Market segment:

The market segment for the Company covers the counterbalanced forklifts prepared with different types of masts. These forklifts are used both inside and outside of factories and warehouses. The European market for counterbalanced forklifts is estimated at 126.000 units per year.

Advantage factor:

New funds as a start up will allow to implement a more efficient production process, the distribution channel and the service assistance network for forklifts.

Commercial challenge:

- ▶ Gain an exclusive market, exploiting the product's uniqueness and the other innovative features that will be developed;
- ▶ greater competitiveness than the traditional products owing to a more efficient production process.

Publications and Customer References:

The entire R&D for the product innovation has been developed in-house and being a start up business idea it has no Customer references.

Proposal of cooperation agreement:

VENTURE CAPITAL FINANCING



Via Nuraghi, zona ASI Cons. II Sole
80038 Pomigliano (NA)

CAMPANIA

Employees: from 3 to 9

Turnover: from 500.000 to 2,5 mln €

Export: from 75.000 to 250.000 €

Status: SME

Contact: Domenico Piatti (Technical Director)

Telephone: +39 0815213419

E-Mail: info@robogat.com

Web site: www.robogat.com

Project Proposal

ROBOGAT - Fire-Fighting Robot Kits for Use in Tunnels, Underground Facilities and Confined Spaces

Description of the innovation project:

Robogat is the only smart fire-fighting robot system able to put out fire in restricted spaces, such as road and railway tunnels, refineries, chemical installation and nuclear power stations, where experience tragically teaches that intervention by people is dangerous and sometimes fatal. The Robogat system consists of two small robots similar to fast trains running on a monorail which is centrally or laterally anchored to the roof of a tunnel. They are electronically controlled and travel immediately to the fire. Also transmitting both video and infrared images during the approach and the extinguishing of the fire, to the control centre outside the tunnel. The system has been certified ETA.

IP Protection Level:

Robogat is protected by the following patents: International Patent No. 1 169092; Italian Patent No. 01312126; Italian Patent No. 01313780.

State of development:

PRODUCT

Industrial application:

Road and Railway Tunnels, Refineries, Chemical Installations and Nuclear Power Stations, Underground, Confined Spaces, Dangerous Goods Storage

Market segment:

In the world there are more than 40 tunnels between 5 km and 24 km long and about 200 tunnels between 2 km and 5 km long. The commercial value of the tunnel segment alone is about € 200 Mln. In addition, many cities have a subway and this market is worth about € 200 Mln.

Advantage factor:

The main advantages of the Robogat system are: intervention and rapid fire extinguishing even under high temperature and thick smoke conditions; can be used for environment or traffic monitoring; can be used for verification of tunnel structures; can be used for cleaning of tunnels.

Commercial challenge:

The Robogat system can be mass-produced at low cost and can compete with firefighting equipment such as sprinklers in shopping malls and in goods storage facilities, thus increasing commercial possibilities. The latest version of Robogat weighs 120 kg and has a cross section of 40 x 40 centimeters, but it can be reduced.

Publications and Customer References:

- ▶ Robogat has been featured in a number of publications that can be downloaded from the website www.robogat.com;
- ▶ Discovery channel has made a documentary: History of Robogat;
- ▶ Robogat was honored by the magazine Focus: the invention of 2000.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING



via R. Redi, 3
70124 Bari (BA)

PUGLIA

Employees: from 3 to 9

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

Contact: Fabio Ivona (Technical Office)

Telephone: +39 0805046840

E-Mail: tdu@traitdunion.eu

Web site: www.traitdunionsrl.eu

Project Proposal

SOS - Smart Operating Shelter

Description of the innovation project:

S.O.S. is a modern and advanced hybrid mobile operating theater; thanks to its modular structure, it can be adapted according to the specific needs of the environment. Each module is easy to transport and displace, as its dimensions are equal to a standard 20' shelter.

S.O.S. allows complex surgery, providing all the required medical equipment of a modern hospital. Its advanced technology can connect the shelter in order to obtain inter surgical teleconsulting and transmission of CAT images towards hospitals of international excellence.

Each shelter carries a hydraulic system to load and unload it from the trucks used to transport them in a short time and without the need for a crane.

IP Protection Level:

No patent application has been filed.

State of development:

CONCEPT

Industrial application:

Innovative Medical equipment

Market segment:

The product will be offered to national and international organizations that provide healthcare during wars, natural disasters and medical emergencies.

Commercial Value: from € 600.000,00 to € 4.000.000,00 depending on modules configuration.

Advantage factor:

The innovation of this system consists in:

- ▶ easy transport;
- ▶ advanced technical equipment.

Commercial challenge:

SOS will be proposed to the market through a direct channel.

This commercial section is composed by high skilled medical staff that can help the customer in the process of evaluating the product and choosing the best configuration for his needs.

Additionally, medical consultants have contributed to the design of SOS. This way, every aspect of the final product is adapted to its final users.

Publications and Customer References:

First Showed at "Contry Presentation: Cameroon" - Rome, 26th June 2014.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING

VINARY STEEL

Via Capodivilla, 204
80048 Sant'Anastasia (NA)

CAMPANIA

Employees: Up to 2

Turnover:

Export:

Status: PATENT OWNER

Contact: Vincenzo Terracciano (Engineer)

Telephone: +39 3389968879

E-Mail: enzo8782@gmail.com

Web site: www.facebook.com/pages/Emergency-staircase-Vinary-Steel/1459659724271087

Project Proposal

Emergency "Vinary Steel" - Staircase Adaptable to Different Elevations

Description of the innovation project:

This project relates to an emergency staircase in steel, fully bolted and adaptable to different elevations, intended to offer different ways of escape from a building.

To achieve this target a system has been studied with appropriate adjustable nodes between the various elements of the emergency staircase; such a structure is easy to realize and is effective and reliable.

The various elements that make up the structure (such as stairs, beams, columns, bracing, guardrails, etc.), are regulated according to the difference in height between the two floors of a building.

IP Protection Level:

Patent No. 0000276614. This product is protected in Italy with a Patent for Utility Model.

State of development:

CONCEPT

Industrial application:

Steel Buildings

Market segment:

By performing the estimation of a classic emergency staircase and an emergency staircase that is adaptable to different elevations, it is clear that this new technology has a lower cost: € 29.768,03 vs € 24.586,10. Money saved with a Staircase "VINARY Steel": € 5.181,93 .

Advantage factor:

It is possible to reach different elevations within a certain range of height difference between two floors of a building, using the same elements and without performing any modification to them but simply with appropriate adjustments of the joints.

Commercial challenge:

Due to simpler parts there can be a lower incidence of labor costs of up to 25%.

Total elimination of measurement errors in the survey phase.

The Serial production of the various elements that compose it.

Delivery of the complete job with an advance of about 30 days.

Rental of the product to companies that operate in the construction sector and removals.

Publications and Customer References:

This idea comes after a series of problems encountered during the assembly of traditional emergency stairs.

Proposal of cooperation agreement:

PRODUCTION AND SALE OF THIS PRODUCT

Viale delle Scienze, Ed 16
90128 Palermo (PA)

SICILIA**Employees:** from 3 to 9**Turnover:** less than 250.000 €**Export:** less than 75.000 €**Status:** START-UP**Contact:** Antonino Lo Iacono (CEO)**Telephone:** +39 0916615644**E-Mail:** info@webmachines.com**Web site:** www.wibmachines.com**Project Proposal****WIB – The Store of the Future****Description of the innovation project:**

WIB is a smart vending machine characterized by unique features in the Internet of Things and Mechatronic fields. Our handling technology enables all retail segments to automated sales while the web based approach, for the first time in this industry, allows final users to find and buy from the closest WIB machine via web & mobile, picking up their purchases conveniently 24H7 at the machine. WIB offers an effective communication channel characterized by wide screens, providing info and advertisement. The owner, will be able to implement advanced sales technique, combined promotion and marketing camping remotely. WIB stores reach high traffic locations, with a low investment and operating cost, satisfying today fast-mover consumer needs.

IP Protection Level:

The patenting process of these industrial inventions (VI2013A000214 and VI2013A000214) is proceeding smoothly in Italy and the PCT extension request will be filed by the next 9th of August. WIB picking technology and modular structure are the main innovations brought to the market by the company.

State of development:

PRODUCT

Industrial application:

Retail, Ecommerce, Vending

Market segment:

In Europe there are more than 3,700K vending machines serving mainly snack, drinks and beverages but WIB offer will not compete in this “red sea”, it is in fact addressed to the retail industry and all its sub-segment globally estimated at € 13 trillion.

Advantage factor:

WIB unique value mix made up by the advanced handling technology together with the actual ecommerce platform, puts its offer ahead of the pack in the worldwide automated retail scenario.

WIB brings also, the power of Internet into the market as recognized by the award receive from Intel.

Commercial challenge:

WIB technology is unique in the market, allowing to realize a fully automated, cost-effective store able to combine physical and digital channels of sale, increase revenues and daily activities efficiency thanks to ADV screen and the remote management tool. Retailers will scale fast implementing a network of unattended WIB stores. PCT patents, together with the first mover advantage, the constant product development and the international sales will dramatically increase the company's worth.

Publications and Customer References:

INTEL awarded WIB as the winner of the Worldwide Intelligent Vending Competition during Venditalia (May '14).

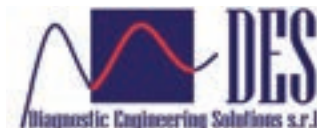
Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, CERTIFICATION FOR EXPORT, VENTURE CAPITAL FINANCING

New Materials



DIAGNOSTIC ENGINEERING SOLUTIONS SRL



V.le Japigia, 182
70126 Bari (BA)

PUGLIA

Employees: from 3 to 9
Turnover: from 250.000 to 500.000 €
Export: less than 75.000 €
Status: START-UP

Contact: Umberto Galietti (Chairman)
Telephone: +39 3667761924
E-Mail: info@desinnovation.com
Web site: www.desinnovation.com

Project Proposal

Modular Device for Structural Analysis of Various Materials and Structures

Description of the innovation project:

Modular and customizable instrument which allows to inspect, with thermographic non-destructive techniques, components or complex structures, through the use of various sources of thermal excitation (lamps, ultrasound, laser, microwave). MultiDES can handle analog and digital power supplies through independent channels for amplitude, frequency and waveform.

IP Protection Level:

Filing an international application under the PCT.

State of development:

PRODUCT

Industrial application:

Non Destructive Testing and Experimental Mechanics Systems development

Market segment:

MultiDES is aimed at companies of all sizes, from different industrial sectors (scientific assumptions to be applied to individual cases remaining unchanged): Aeronautics, Mechanics, Mechatronics, Tire industry, Automotive, Renewable Energy, Manufacturing, Civil Engineering, Public Administration.

Advantage factor:

Results more accurate and faster than the normal inspection techniques used, with reduced costs. The simultaneous inspections of different points of the component, allow to perform a wide range of analysis, for the detection of different types of defects.

Commercial challenge:

The system marks a step forward in the use of structural diagnostics techniques. The distinguishing feature of the product is the simultaneous use of different excitation sources, that greatly improves the quality of inspections, making them faster and increasing the types of defects detectable. The modularity and flexibility allow to make precise diagnoses, reducing set-up and test times, even when monitoring on large structures is carried out on-site.

Publications and Customer References:

Considerable interest has been shown by a great many scientific and commercial publications. Examples of thematic conferences:

- ▶ QIRT
- ▶ AITA
- ▶ THERMOSENS

Other specific works were presented to:

- ▶ ULTRASONIC AND THERMOGRAPHIC ANALYSIS OF COMPOSITE ADHESIVE JOINTS SUBJECTED TO ACCELERATED AGING, ECNDT 2014, Prague, 6-10 Octobre, 2014.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE, COMMERCIAL CONTRACT

ENEA - ITALIAN NATIONAL AGENCY FOR NEW TECHNOLOGIES, ENERGY AND SUSTAINABLE ECONOMIC DEVELOPMENT



Technical Unit for Material Technologies – Brindisi Research Centre
SS7 Appia - km 706,00 - 72100 Brindisi (BR)

PUGLIA

Employees: more than 499

Turnover:

Export:

Status: AGENCY

Contact: Leander Tapfer (Head)

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Web site: www.enea.it

Project Proposal

Low Cost Antireflective and Self-Cleaning Glasses Produced by Sol Gel Process

Description of the innovation project:

Different types of self-cleaning coatings were developed. In particular, one coating process allows us to obtain AR and hydrophobic (contact angle $>120^\circ$) glasses by depositing a single coating layer. This specific layer has been studied for the protection of photovoltaic solar panels and the external collector tubes of thermodynamic solar systems. Usually, these systems exposed to the inclemency of the weather may lose up to 40% of their efficiency within a few months due to dust and dirt. Besides the self-cleaning characteristics, the glass prototypes show also excellent optical qualities, are uniform, homogeneous, optically transparent, heat resistant up to 380°C , very adherent to the surface and can be handled and cleaned easily.

IP Protection Level:

No patent application has been filed. ENEA has developed self cleaning and AR coatings for glass by using dip-coating sol-gel processes. As a first industrial prototype an antireflective tube (4m long and 0.20m \varnothing) was fabricated. Current studies are devoted to horizontal process technologies by using large format digital printing systems.

State of development:

PROTOTYPE

Industrial application:

Self-cleaning coatings and glasses, antireflective and self-cleaning glasses, protective coatings for printed glasses

Market segment:

Home-building, transportation sector, solar panels, stems, solar thermodynamic and solar thermal sector, printing on glass.

Advantage factor:

Easily up-scalable process. Low cost production process. Customization of the production and of the product.

Commercial challenge:

Initially, the layers were developed to enlarge the products catalog of small and medium glass enterprises with low cost hi-tech products. Nevertheless, the developed AR-hydrophobic layers showed to be suitable for the protection of solar panels and the external collector tubes of thermodynamic and solar thermal systems and may be interesting for medium-large enterprises too. An AR-high hydrophobic layer (contact angle $>160^\circ$) was recently developed but with high and uncompetitive production costs.

Publications and Customer References:

Papers on coatings developed by ENEA and based on oxide Titanium, in particular:

- ▶ J. Phys. D: Appl. Phys. 43 095301 doi: 10.1088/0022-3727/43/9/095301 "Hydrophilic and optical properties of nanostructured titania prepared by sol-gel dip coating" M. C. Ferrara, L. Pilloni, S. Mazzarelli and L. Tapfer;
- ▶ Photocatalytic activity, hydrophilic and optical properties of nanocrystalline titania thin films prepared by sol-gel dip coating 2011 MRS Spring Meeting. M.C. Ferrara, L. Pilloni, A. Mevoli, S. Mazzarelli and L. Tapfer.

Proposal of cooperation agreement:

COMMERCIAL CONTRACT

IMAST SCARL - TECHNOLOGICAL DISTRICT ON ENGINEERING OF POLYMERIC AND COMPOSITE MATERIALS AND STRUCTURES - 1



P.za Borsa, 22
80133 Napoli (NA)

CAMPANIA

Employees: from 10 to 19
Turnover: from 2,5 mln to 5 mln €
Export: less than 75.000 €
Status: CLUSTER

Contact: Aniello Cammarano (Researcher)
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Web site: www.imast.it

Project Proposal

New Approach Graphene-Based to Improve High Temperature Behavior of Structural Components for Aeronautic

Description of the innovation project:

The aim of the project proposal is the realization of composite system filled with graphene by advanced manufacturing process with emphasis on composite system performances, cost reduction and high production rate. By using graphene, it is possible to realize composites with flame retardant properties and/or low flammability.

IP Protection Level:

IMAST has not filed any patents yet. IMAST acquired know-how related to the development of composite systems with electrical and flame retardant property by two techniques: in bulk modification of epoxy systems and coating graphene application on structures.

State of development:

PROTOTYPE

Industrial application:

Aeronautic, Railways, Shipbuilding

Market segment:

For the application of proposed solution, in the aeronautic sector for composite fuselage surface protection, in case of a production of 10 airplanes/ month for New regional Aircraft, it's possible to identify an annual market of about € 20 Mln.

Advantage factor:

The advantage factor of the proposed technique is the possibility to realize thin composite panels, with improved flame penetration.

Commercial challenge:

The acquired know-how for the application of graphene coatings or filled resins realization could be transferred to a SME. Moreover, the availability of Italian companies producing high-performance graphene, would constitute a significant competitive advantage for SMEs in an international market. In fact there is an increase of the use of composite structures with particular reference to the aviation market, but also for applications in the railway and shipbuilding sector.

Proposal of cooperation agreement:

KNOW HOW TRANSFER

IMAST SCARL - TECHNOLOGICAL DISTRICT ON ENGINEERING OF POLYMERIC AND COMPOSITE MATERIALS AND STRUCTURES - 2



P.za Bovio,22
80133 Napoli (NA)

CAMPANIA

Employees: from 10 to 19
Turnover: from 2,5 mln to 5 mln €
Export: less than 75.000 €
Status: CLUSTER

Contact: Aniello Cammarano (Researcher)
Telephone: +39 0815519586
E-Mail: segreteria@imast.it
Web site: www.imast.it

Project Proposal

In Situ Foaming of Thermoplastic Composites with Multifunctional Properties

Description of the innovation project:

The proposed project involves the implementation of lightweight composites and sandwich structures with several functional performance based on thermoplastic polymer foams. It is proposed the in situ foaming technique that allows in a single step expansion of the core, the consolidation core/skin (without adhesive layer) and its forming. This technique allows to avoid any machining (drilling, gluing), the inclusion of reinforcing structures after the sandwich realization and damage to the cell structure. In the frame of IMAST projects CESPert and TECOP the ability of in-situ foaming technology has been shown.

IP Protection Level:

CNR researchers intend to file a patent application on the proposed technology that is able to produce lightweight composites or sandwich structures by consolidating core and fiber reinforced layers in the same process (forming of composite and expansion).

State of development:

PROTOTYPE

Industrial application:

Automotive, Railways, Aeronautic, Personal Safety

Market segment:

In situ foaming technique allows to realize products with enhanced mechanical properties (energy absorption), functional (thermal-acoustic insulation) and recyclability suitable for automotive, railways, aviation and self-safety. All products represent an interesting industrial opportunity.

Advantage factor:

This proposal offers solutions designed according to the specific requirements, ensuring lightened systems and less expensive technical process.

Commercial challenge:

The in situ foaming technique, for the realization of multifunctional composites with improved specific mechanical properties, offers more advantages in transportation, in which national and international regulations as well as the end-users require cost reduction and fuel consumption and the realization of the safest vehicles. This technology is suitable for the construction of semi-structural components: car body parts, interiors, helmets, barrier elements, multifunction structural elements.

Publications and Customer References:

L. Sorrentino, L. Cafiero, M. D'Auria, S. Iannace, Cellular thermoplastic fibre reinforced composite (CellFRC): A new class of lightweight material with high impact properties, Composites Part A, Volume 64, September 2014, Pages 223–227 (2014).

Proposal of cooperation agreement:

KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

IMAST SCARL - TECHNOLOGICAL DISTRICT ON ENGINEERING OF POLYMERIC AND COMPOSITE MATERIALS AND STRUCTURES - 3



P.za Bovio,22
80133 Napoli (NA)

CAMPANIA

Employees: from 10 to 19
Turnover: from 2,5 mln to 5 mln €
Export: less than 75.000 €
Status: CLUSTER

Contact: Aniello Cammarano (Researcher)
Telephone: +39 0815519586
E-Mail: segreteria@imast.it
Web site: www.imast.it

Project Proposal

A Layer of Viscoelastic Material to Improve the Properties of Vibro-Acoustic Damping and Impact Resistance of the Final Composite Laminate

Description of the innovation project:

The topics of the vibro-acoustic energy dissipation properties and the impact resistance in panels made of composite material are particularly acute in the aeronautic field, where the increasing use of composite materials must be combined with safety and an acceptable level of comfort. The invention is related to the realization of composite laminates which may include at least first and second layers of a reinforced resin material (thermosetting resin reinforced by carbon fibers), and a third layer of viscoelastic material (elastomeric polymers) co-cured to first and second layers. The method can be applied in other industries such as automotive, rail and marine.

IP Protection Level:

Title of patent: "Laminati a base di compositi comprendenti materiale viscoelastico, metodo di preparazione degli stessi". On September 4, 2009 patent application was filed in Italy (MI2009A001537). The patent was granted on September 14, 2012 and the reference No. is 0001395375.

State of development:

PROTOTYPE

Industrial application:

Aeronautic, Automotive, Rail

Market segment:

In automotive e rail industry, Body and Interiors are main areas of applications. The automotive market is huge. In 2013, total vehicle sales were about € 13 Mln in Europe.

Advantage factor:

This invention solves the technical issues of de-lamination and the vibro-acoustic energy dissipation in composite materials, through the use of a specific class of elastomeric materials with a high loss factor and a low glass transition temperature.

Commercial challenge:

Light-weight structure is one of the keys to improve the fuel efficiency and reduce the environmental impact of transport vehicles (aeronautics, automotive and rail). Multifunctional composite materials represent a further opportunity to accelerate the replacement of metals materials, like steel and aluminum, at competitive cost.

Publications and Customer References:

- ▶ Impact behaviour of damped composite, C. Toscano, F. Lenzi, 7th Euromech Solid Mechanics Conference, 2009, Lisbon, Portugal;
- ▶ Design and testing of an Active Constrained Layer Damping demonstrator for aircraft's cabin noise reduction, A. Vigliotti, A. Sorrentino, Internoise 2009, 2009, Ottawa, Canada.

Proposal of cooperation agreement:

KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

MERIDIONALE IMPIANTI SPA

Bivio Aspro SN
Zona Industriale Piano Tavola
95040 Belpasso (CT)

SICILIA



Employees: from 20 to 49
Turnover: more than 25 mln €
Export: from 2,5 mln to 5 mln €
Status: SME

Contact: Agata Di Stefano (R&D Project Manager)
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Project Proposal

FLUXGATE

Description of the innovation project:

The innovative design of the fluxgate sensor prototype makes it more reliable in measuring magnetic fields with low cost and energy consumption vs the existing device.

The Security application includes a door equipped with a series of sensors positioned at different levels in order to identify ferrous material cross the door. This approach is completely non-invasive and therefore avoids any problem, for example, to those who have a pacemaker.

Solutions have been developed to locate infinitesimal amounts of ferrous material. This make possible the applications in the biomedical field for the detection of ferrous particles metabolised in organic material; in the industrial field for the analysis of finished products, in the defense field, for demining activities etc.

IP Protection Level:

No patent application as yet. The fluxgate sensor prototype has been released.

State of development:

PROTOTYPE

Industrial application:

Industrial, Security, Biomedicine, Geophysics, Geology, Military, Quality Control, Environmental

Market segment:

At this time an assessment of the market for each application has not been carried out, even if it appears very promising.

Advantage factor:

The design of the sensor results in improved performance: low consumption and wide operating range. It is capable of detecting particles or small amounts of iron only because magnetized by the earth's magnetic field, without the application of external magnetic fields (non-invasive).

Commercial challenge:

The market where the fluxgate sensor assembled in a gate has a significant impact is that of security in public places (airports, public offices), but also at private (banks, jewelers, etc.). In particular, the U.S. market seems to be a possible market.

Publications and Customer References:

- ▶ S. Baglio: RTD Fluxgate Magnetometer for Magnetic Biosensing. AIP American Institute of Physics 2007;
- ▶ C. Lei: Low power integrated fluxgate sensor with a spiral magnetic core, Microsystem Technologies 2011;
- ▶ M. Butta: Magnetic Microwires ..., Magnetics, IEEE Transactions 2010.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT

ORANGE FIBER SRL

Corso Sicilia, 64/A
95131 Catania (CT)

SICILIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Enrica Arena (Project Manager)

Telephone: +39 3891877475

E-Mail: enricaarena@orangefiber.it

Web site: www.orangefiber.it

Project Proposal

Sustainable and Vitaminic Textile from Citrus Waste

Description of the innovation project:

Orange Fiber's products are functional textiles from citrus products releasing vitamins on the skin. Its patented process aims at reducing the costs and the environmental impact of pollution related to the disposal of industrial waste resulting from citrus transformation.

The company is creating a B2B2C product addressing:

- ▶ the need of fashion brands to use a high quality sustainable and innovative textile for their collection;
- ▶ the need of consumers to have access to high quality sustainable clothing, with an added value constituted by the enrichment of vitamin C to be released on their skin.

IP Protection Level:

PCT patent pending EP2014.

State of development:

PROTOTYPE

Industrial application:

Textile Industry - Cosmetotextile

Market segment:

Orange Fiber's market is cellulose derivatives, textile from renewable sources to be sold to textile companies and fashion brands. It refers to the functional clothing market which is a valued in the EU at € 500 Mln € in 2012 and by 2030 80% of the world textile market will be made of technical and intelligent textiles.

Advantage factor:

Orange Fiber is a mix of two very strong marketing assets: sustainability of the product, made by renewable and natural raw materials that otherwise would have been wasted, and natural wellness for the skin, both sustained by a sound technology base, protected by a patent.

Commercial challenge:

Orange Fiber will present the textile in September and it is developing an outsourcing supply chain to jump start the production and selling of the product while producing the first pilot plant in view of future investment and internalization of the core part of the process.

Publications and Customer References:

Awards achieved:

- ▶ In 2013 Orange Fiber has been awarded with the Special Mention Working Capital - Telecom Italia Accelerator of Catania;
- ▶ It figured among the 5 sustainable ideas in Alimenta2Talent of the Padano Technological Park Parco and among the 10 sustainable ideas of Changemakers for EXPO 2015;
- ▶ Orange Fiber won the Biotechnology Award of the Padano Technological Park;
- ▶ It was among the 5 finalists of the Creative Business Cup Competition - Copenhagen;
- ▶ In 2014 it was selected among the fourteen most innovative Italian ideas to be proposed to Wall Street during the USACamp initiative, organized by Italia Camp and was granted the "Il Talento delle Idee" Award.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL CONTRACT

Via Cimminola, zona Pip Lotto C4
80031 Bruscianno (NA)

CAMPANIA

Employees: from 3 to 9

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Antonio Caraviello (CEO)

Telephone: +39 08118952145

E-Mail: info@sophiahightech.com

Web site: www.sophiahightech.com

Project Proposal

Standard & Special Testing Fixtures for Composites Material / CAE

Description of the innovation project:

In the most important engineering projects equipment/accessories are frequently required for the performance of experimental testing. Sòphia high tech design and sell standard test fixtures according to the reference standards (UNI, EN, ISO, ASTM, DIN, BS, AF, etc.), special type fixtures in order to perform unconventional tests, according to customer specifications. The marketed fixtures are made in carbon steel, stainless steel or metal alloys (nickel alloys) in order to obtain a performing product, even at high temperatures, minimizing side effects such as corrosion and oxidation in the laboratory conditions.

IP Protection Level:

The standard testing fixtures are not patentable, but governed by the following rules: UNI, EN, ISO, ASTM, DIN, BS, AF.

Concerning the special fixtures: they are specially designed and manufactured by customer requests to perform tests on materials/structures/processes not subject to any rules.

State of development:

PRODUCT

Industrial application:

Public and Private Research Laboratories. Companies working in the R&D field

Market segment:

According to data relating to laboratories, counted only in Italy in the 2013 (<http://albolaboratory.miur.it>), it is noted that there are 2322 laboratories. 140 laboratories perform mechanical testing on composite material (our core business).

Advantage factor:

Sophia High Tech structure boasts University Professors and Ph.Ds at the University of Naples Federico II, who share values and methods in the research and engineering.

The TEAM, highly motivated, interprets the professional challenges as the solution for continuous growth.

Commercial challenge:

Future targets:

- ▶ Spin Off validation;
- ▶ Acquiring the certification of internal quality;
- ▶ Increasing the European Customer Base;
- ▶ Increasing resources invested in R&D.

Publications and Customer References:

Sophia High Tech is a company registered to the Italian Chamber of Commerce as innovative start-up, it has participated and won the SMART&START tender.

Other targets achieved:

- ▶ CAE software purchased;
- ▶ Research program written.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

SUSTAINABLE ISLAND BY MECCATRONICA



Viale delle Scienze
edificio 16 (rif. consorzio Arca)
90128 Palermo (PA)

SICILIA

Employees: Up to 2

Turnover:

Export:

Status: CONSORTIUM

Contact: Antonello Mineo (President)

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Web site: www.sustainableisland.eu

Project Proposal

PET Structural Concrete

Description of the innovation project:

This is an ingenious sustainable solution for concrete, using fine sand, cement, water and PET.

IP Protection Level:

Patent No. 0001332599 ITALY. Research on concrete reinforced with fibers of recycled PET has been conducted on fibers of various geometric characteristics, obtained either by spinning PET recycling products or from the simple cutting of used PET bottles.

State of development:

PROTOTYPE

Industrial application:

Building Construction

Market segment:

The reduction of CO2 emissions into the atmosphere, the reduction in the consumption of natural resources, waste recycling are now recognized as key objectives for all industries.

Advantage factor:

PET can be used as aggregates to make lightweight concrete or as fibers to make reinforced concrete; all of this using old plastic bottles.

Commercial challenge:

The use of mineral additions allows to recycle waste, otherwise intended for the landfill, reduces cement hydration heat, improves the microstructure of concrete and increases chemical resistance against many aggressive agents.

Aggregates are typically 70-80% of the volume of the concrete, thus by limiting their use not only mining but also the volume of demolition waste would be significantly reduced.

Publications and Customer References:

- ▶ Genova E., Lo Presti S., 2013. "Calcestruzzi rinforzati con fibre di PET", In Concreto, n.112;
- ▶ Experiments have been carried out with GEOLAB SRL;
- ▶ A bronze medal has been awarded during the international exhibition of Inventions - Geneva.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, KNOW HOW TRANSFER, CERTIFICATION FOR EXPORT, IPR ASSIGNMENT

Renewable Energy





Via E. Notabartolo, 49
90141 Palermo (PA)

SICILIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Antonino Bontà (Sales Executive)

Telephone: +39 0918887364

E-Mail: info@adessoenergia.it

Web site: www.adessoenergia.it

Project Proposal

AE BIO SOLAR - Hybrid System for the Production of Electrical Energy

Description of the innovation project:

Hybrid system called "AE BIO SOLAR" for renewable solar energy conversion and burning of waste from agricultural biomass, to electricity and heat cogenerated at low temperatures.

IP Protection Level:

The company intends to submit a request for international patent. Engineered in the final phase of the project validation of a research institute (Power of Engineering, University of Enna).

State of development:

PROTOTYPE

Industrial application:

Production of Electrical Energy and Environmental Protection

Market segment:

The system targets all types of potential users. Incentives for at least 20 years (25 years for the solar). The system is produced in the 125, 175 and 250 KW versions and the cost for a finished system is € 1.100,000. Economic return about 6 years. Smaller systems are being designed.

Advantage factor:

This system is the first prototype in the world under construction with this innovative technology.

Commercial challenge:

This is an innovative system for the production of electricity which can allow the reduction of CO2 emissions.

Publications and Customer References:

After a year of study and comparisons between the company's suppliers of the main components of the system (all Italian), the project has been checked and verified by the Faculty of Engineering of the Enna University, with which a special R&D agreement has been signed.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, CERTIFICATION FOR EXPORT, IPR ASSIGNMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING



Via Valderice, 42/C
90144 Palermo (PA)

SICILIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Antonio Pantano (CEO)

Telephone: +39 091521353

E-Mail: info@apwonders.com

Web site: www.apwonders.com

Project Proposal

Oscillating Blades Wind Turbine

Description of the innovation project:

APWonders Srl will bring to market a high performances wind turbine with vertical axis of rotation and oscillating blades. The operation of the turbine has been verified successfully by building a small scale prototype and subsequently testing it in a wind tunnel and in field. The product responds to a request for wind turbines that can guarantee low cost, high performance, low noise and low aesthetic impact in the typical contexts of installation of small wind turbines: houses, buildings and sheds. The initial target market will be that of the mini or micro-generation of energy in the European Union countries. Customers of reference will be early adopters of two segments: private clients and business customers, farms and SMEs.

IP Protection Level:

The principle of operation, being totally innovative, has been patented both in Italy: patent RM2010A000504, and internationally: patent PCT/EP2011/066983. The research report on the patent is fully positive. The 7 claims do not overlap with any kind of previous patents worldwide.

State of development:

PROTOTYPE

Industrial application:

Wind turbines

Market segment:

The market will have an annual growth rate of 29.7%. Customers will be 13.5% (early adopters) of two segments of the EU countries: private clients (11745000), and business customers (4413700). Indexes: R.O.I. 95% year I, 244% year II, 313% year III; R.O.E. 1670% year I, 573% year II, 195% year III.

Advantage factor:

Advantages: it works with wind coming from any direction, high annual energy production in presence of weak and moderate winds, low cost, ultra-quiet operation even with strong winds, the formation of ice on the blades does not compromise its performance, blades with advertising images.

Commercial challenge:

It can be proved with theoretical calculations and tests the improvement in efficiency with respect to existing technologies. Thus the first value is the high productivity. The second is its cost, lower than competitors. The APWonders will have a competitive advantage while the common disadvantages of a new company against existing ones are limited by the particular situation of the sector characterized by: no leader, small businesses, low investment in research, levelling performance.

Publications and Customer References:

APWonders Srl has already been awarded with the "Bright Future Ideas Award", 23/01/14, Palazzo Mezzanotte, home of the Italian Stock Exchange. APWonders Srl has also won "Smart & Start" sponsored by Invitalia. A video of the turbine can be seen on YouTube: <http://www.youtube.com/watch?v=QZcWhS4Ks5E>

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING



Viale degli Ulivi, S.N.
74021 Montemesola (TA)

PUGLIA

Employees: from 10 to 19
Turnover: from 500.000 to 2,5 mln €
Export: from 250.000 to 500.000 €
Status: SME

Contact: Sergio Strazzella (Sole Director)
Telephone: +39 099612295
E-Mail: info@asepaenergy.it
Web site: www.asepaenergy.it

Project Proposal

Pre Mounting Automated Container Pumps for Biogas Plants

Description of the innovation project:

The Container is the result of technology transfer between two companies; this solution guarantees the standardization and the reduction of costs; the container will be provided with industrial automation software for reading process parameters and controlling the actuators such as pumps, agitators, heaters etc. The solution also allows verification, when the container is empty, of the correct functioning of each instrument and component mounted directly on the shop floor, reducing the time and cost of installation and start-up of the facility.

IP Protection Level:

The projects studies an innovative pre-mounting container solution for handling fluids of Biogas plants of small size (biomass and other liquid process fluid carrier for heating tanks) if necessary by December 2014 it will be patented as utility model.

State of development:

PRODUCT

Industrial application:

The container can be used as a component in biogas plants of small size both for applications related to agriculture and agri-food (use of animal manure, compatible organic waste from crop production and processing companies) water purification sector, and for the organic fraction of municipal waste

Market segment:

Reference market segment: small farms, agri-food Companies and companies for the disposal of organic waste. Size of Plants 100 - 1000 KW; cost of plants: € 1-4 Mln; Cost of Container: € 150-400 K.

Advantage factor:

The standardization of the container will reduce production costs (for the economies of scale produced and reduction of the time of construction) and installation costs, because the cold test of the component would be carried out downstream of the production process.

Commercial challenge:

Reduction of production and market entry costs and development of a global market with strong growth prospects; looking for a robust solution proposal gained with the development time.

Publications and Customer References:

The project received funding for European Technology transfer on PO Puglia Region 2007-2013 ERDF Convergence Objective AXIS I - Intervention 1.1 - Action 1.1.2. The project will end in November 2014.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING

Via Repaci, 20
87036 Rende (CS)

CALABRIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: START-UP

Contact: Gregorio Cappuccino (CEO)
Telephone: +39 0984494273
E-Mail: cappuccino@calbatt.com
Web site: www.calbatt.com

Project Proposal

Solutions for High-Efficiency Energy Storage and Electric Vehicle Charging

Description of the innovation project:

CalBatt develops fully customized solutions for maximizing the performance of energy storage systems, for both stationary and electric transportation applications. They are offered as add-on electronic boards to be embedded into chargers and/or battery management systems in order to implement a proprietary method (patent pending) for the dynamical analysis and optimization of charging performance, by:

- ▶ predicting accurately the charging time and efficiency under every likely operating condition;
- ▶ planning regularly the most convenient charging profiles according to specific user needs;
- ▶ maximizing charging efficiency thanks to ad-hoc optimization strategies.

IP Protection Level:

- ▶ 2 ITA patent applications (RM2012A000446 and RM2012A000643), positive EPO REPORT
- ▶ 2 EU patent pending applications (EP13425120.6, EP13425155) positive EPO REPORT
- ▶ 2 USA patent pending applications published with No. US2014/0081585 and US2014/0172334
- ▶ 1 JP patent pending application No. 002551/2014

State of development:

PRODUCT

Industrial application:

Energy storage and electric vehicle charging

Market segment:

The market segments of energy storage for stationary and transportation applications are growing fast, and they are expected to surpass at least \$ 20 billion by 2020.

According to its conservative analyses, CalBatt solutions could achieve revenues in the range € 7.5 -15 Mln by 2017.

CalBatt's target are battery and charger manufacturers.

Advantage factor:

Target: Experimental tests carried out together with Enel Engineering and Research Division by using commercially available battery chemistries have demonstrated that CalBatt technology can allow an energy efficiency increase of up to 15% with respect to state-of-art storage management and charging systems.

Commercial challenge:

CalBatt solutions aim to increase the value proposition of battery and charger manufacturers' products by: adding smart functionalities to their energy management systems;

increasing the profitability and return on investment (ROI) of storage systems and electric cars for end users (the 15% efficiency improvement achievable by using CalBatt solutions can allow increasing the ROI of storage systems used in PV by about 80%) acquiring higher competitiveness in a growing market.

Publications and Customer References:

- ▶ CalBatt's innovative technology received an award from Enel in the Enel Lab competition;
- ▶ Amoroso, Cappuccino, 2014. "Efficiency: a critical success factor for solar storage systems", available at the following link:
<http://www.intelligentutility.com/article/14/03/efficiency-critical-success-factor-solar-storage-systems>

Proposal of cooperation agreement:

LICENSING AGREEMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Zona Industriale SS 212
82020 Pietralcina (BN)

CAMPANIA

Employees: from 3 to 9

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

Contact: Francesco Salomone (Administrator)

Telephone: +39 0824991900

E-Mail: frasalo@tin.it

Web site: www.elettrosannio.com

Project Proposal

Photovoltaic Building Applications

Description of the innovation project:

The “brise soleil” PV shading system is an innovative application for ease of use, to shade windows and parking lots; it will be installed in a modular way and produce photovoltaic energy, shading and light modulation, BRISE SOLEIL is a photovoltaic solution that competes with traditional wood and metal sunscreens on the market. The Brise Soleil innovation offers users various opportunities, such as: the ability to modulate shading by modulating the angle of the solar shading; the possibility of obtaining electricity from the PV laminate installed on the frame blinds. This improves the climate management of a room or environment, reducing waste to heat or cool.

IP Protection Level:

Brise Soleil: question at Community level No. 001736158-0001, 26/07/2010, straighten shelves; application at the national level at the Ministry of Economic Development UIBM with No. NA2010A000035 21/07/2017, multifunction adjustable with or without shielding photovoltaic elements, patent dated 26.07.2013.

State of development:

PROTOTYPE

Industrial application:

Renewable Energy

Market segment:

Europe, Italy and Mediterranean countries. The photovoltaic market is growing and in recent years in Italy the number and power of PV systems have increased significantly (Source: EPIA “Market Report 2011” and “market outlook for photovoltaics until 2016”). Market value € 300.000, pay back time 3 years.

Advantage factor:

Modular and applicable to the installation on structures such as office buildings, shopping centers and other buildings that consume a lot of electricity during daylight hours. In addition, companies not necessarily “energy-hungry”, easily movable and adjustable.

Commercial challenge:

“Brise Soleil fotovoltaico”, the innovation of “Italian design”, its lightness and simplicity are the main factors related to the development of technology; by highlighting its significant competitive advantage in marketing the invention, the innovative shading system helps to greatly increase the corporate value for the exploitation rights owner.

Publications and Customer References:

Some documents and publications of the innovation proposed by Elettrosannio in collaboration with the Second University of Naples, and a Spin-off company called FotoSun srl:

- ▶ <http://premioinnovazione.legambiente.org/edizioni/2010/section.php?p=scheda&id=997>
- ▶ http://www.galoggiastra.it/attachments/article/472/libro_nostampa.compressed.pdf
- ▶ <http://www.qualenergia.it/articoli/20090529-the-tile-photovoltaic-of-electro-sannio-1>
- ▶ <http://dailyenmoveme.com/it/rinnovabili/la-tile-photovoltaic-brick-of-fotosun>
- ▶ <http://www.startcupcampania.unina.it/documenti/schede%20vincitori/>

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

ESTORAGE SRL START UP INNOVATIVA



Via Nazionale Parco Rajano
81010 Ruviano (CE)

CAMPANIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Nicola D'agostino (Administrator)

Telephone: +39 338 8503132

E-Mail: info@estorage.it

Web site: www.estorage.it

Project Proposal

Energy Storage for Family and Smart Cities

Description of the innovation project:

The technology used by the company is a combination of the most modern technologies for energy storage (it offers the most innovative products already patented and marketed) and ecommerce (www.estorage.it). Energystorage is the next challenge for photovoltaic systems as well as one of the most exciting market areas in the coming years. The company has chosen the most important perceived characteristics of a strong segment of the market. The differentiation will be achieved through four instruments: the best product quality, perceived as such by the customer; product offered with a high degree of innovation both in terms of materials and concept; innovative marketing policy that conveys the idea of innovation to customers, keeping costs much lower in relation to its competitors.

IP Protection Level:

The company offers a service, which therefore cannot be patented.

State of development:

Ongoing entrepreneurial activity and active and operational ecommerce site

Industrial application:

E-commerce, Energy storage

Market segment:

The company works in the market for large-scale distribution through the network of plants producing renewable energy, in particular solar photovoltaic stand-alone systems with storage batteries. This market is expected to reach 56 GW of installed accumulation capacity by 2022.

Advantage factor:

The company will propose energy storage systems suitable for any type of network, for individual installations, in multiple applications, or as one of several resources managed as an integral part of the network.

Commercial challenge:

The future of energy will draw small networks based on distributed and clean generation that will coexist with the storage systems. The battery suppliers expect the residential photovoltaic market will boom and are studying the most suitable products. The most common will remain the lead-acid batteries, while for lithium-ion batteries, much will depend on falling prices.

Publications and Customer References:

The company is mentioned in the following articles:

- ▶ <http://www.solarexpo.com/ita/news/news-dagli-espositori/Estorage-Srl-Start-Up-Innovativa/>
- ▶ <http://www.technologybiz.it/it/businessdevils/progetti/energy-storage/energy-storage-for-family-and-smart-cities-campania-innovazione>
- ▶ <http://www.campaniainhub.it/startup/creative-clusters-green-technology/creative-clusters-green-technology-i-10-progetti-selezionati>

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, SUB-CONTRACT AGREEMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via Roma, 29
c/o Dipartimento IDEAS
81031 Aversa (CE)

CAMPANIA

Employees: Up to 2
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Mario Buono (Governing Director)
Telephone: +39 0815010449
E-Mail: info@fotosun.eu
Web site: www.fotosun.eu

Project Proposal**DUAL TILE PV - Photovoltaic Tile****Description of the innovation project:**

DUAL TILE PV is a pre-assembled components (brick support, sealant PV module, monocomponent adhesive) to set up a system of integrated and effective surface coverage, studied and designed according to the canons of the eco-design and environmental sustainability for the use of solar energy. Technical and performance characteristics: maximum efficiency of the pv module; maximum architectural integration; maximum guarantees of durability, efficiency and resistance to atmospheric agents and deterioration process through the use of the high quality materials. Possibility to install the climatic contexts too, with particularly high temperatures and a higher percentage of return over time than competitors.

IP Protection Level:

Unique pre-assembled component and marketed, patented and certified: M.C.R No. 001926874-0001/2011; M.C.R No. 0002/001926874-2011; CE MARKING (UNI EN 1304:2005; UNI EN 539-2); IEC 61215:2005, IEC 61730-1:2004 IEC 61730-2:2007 – Safety Class II, application class A by TÜV InterCert GmbH.

State of development:

PRODUCT

Industrial application:

Sustainable Architecture, Sustainable Construction, Architectural Integration, Renewable Energies - Photovoltaic, Energy Efficiency, Experimental Research

Market segment:

Construction and brick covers (new or renovation buildings). National and international target: designers, construction companies, public and private institutions – Municipalities and Utility Companies in the field of renewable energy.

Advantage factor:

Maximum longitudinal and transverse ventilation of PV module. Reduction and limitation of photovoltaic cells, overheating of electrical connections and brick support; also installation in climatic conditions with particularly high temperatures; higher percentage of return over time than similar products.

Commercial challenge:

Promote the dissemination of photovoltaics in historical cities or in areas of particular environmental value, where it is not possible to install photovoltaic panels, highly invasive in accordance with the principles of design suitable for environmental sustainability.

Publications and Customer References:

Articles published: Casabella No. 819/2012; Ottogono No. 254/2012; Il Venerdì di Repubblica, 16-08-2013. Other articles are available at the following links: bit.ly/1yIUFqg; bit.ly/1tUlz4I; bit.ly/1B1xei4

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, KNOW HOW TRANSFER, CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

HPD SRL - HYRPINIA POWER DEVELOPMENT SRL



Area Industriale "Calaggio" snc
83046 Lacedonia (AV)

CAMPANIA

Employees: from 10 to 19
Turnover: from 500.000 to 2,5 mln €
Export: less than 75.000 €
Status: SME

Contact: Andrea Villano (Sale and Marketing Manager)
Telephone: +39 082785938
E-Mail: hpd@pec.it
Web site: www.hpdsrl.com

Project Proposal

Stand Alone Installation for Vertical Wind Turbines - Storage and Continuous Service for Power and Water

Description of the innovation project:

The project is based on two developed technologies: the first is a vertical wind generator, high efficiency, easy to transport and install using standard track and delivery equipment; the second is a system developed by a partner company dedicated to water treatment. The most successful solution is to be investigated in order to ensure a continuous water and power supply. For this purpose, a new storage device will be investigated in order to avoid cost and reliability problems of existing solutions (Battery, Molten Salts, etc.). Nevertheless hybrid sources can be connected to main systems in order to ensure the best power availability.

IP Protection Level:

At the moment, no patent or IP application has been filed. The submission of a Patent application is under consideration.

State of development:

CONCEPT - MODEL - PROTOTYPE

Industrial application:

Renewable Energy sector, because of the project's modular system suitable for applications ranging from greenhouses or civil dwellings up to oil companies

Market segment:

Thanks to the specific integration capability of the system, a new market segment can be envisaged since the proposed technological solution can be seen as a real innovation.

Advantage factor:

Transportation and installation costs are limited, saving efficiency, while the storage system overrides basic cost and maintenance costs and reliability problems that are typical of standard systems. The system is manufactured using fully recyclable materials.

Commercial challenge:

Technical advantage factors obviously allow to support market challenges, but it is important to underline that stand alone renewable energy production (and consequent water pumping and cleaning from the soil) enables to meet a lot of customers needs, for individuals or companies that are located in off-grid or remote areas.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING



C.da Molara – Z.I. III Fase
90018 Termini Imerese (PA)

SICILIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Filippo Paredes (CTO)

Telephone: +39 091580305

E-Mail: info@ideasrl.it

Web site: www.ideasrl.it

Project Proposal

Polygenerative Concentrating Solar Systems

Description of the innovation project:

Idea has developed two different CS systems: an HCPV collector and a Linear Fresnel collector. The first one is concentrating at 2.000x, that is currently the leading edge for such devices. Conversion efficiency is > 30% and the system cogenerates hot water at 90 C that can also be used to drive an absorption chiller. The tracker is light and modular and can be installed on roofs for building integrated plants. LFC generates heat at 250-300 C. It is very light, modular and easy to assemble. Idea supplies ready to install solar cooling units combining LFCs with efficient absorption chillers. A specific design for small scale CSP systems has been developed integrating molten salts heat storage and ORC generators.

IP Protection Level:

Prototypes have been built and some solutions that have been adopted are patentable. The company is now evaluating the IPR strategy. Patent application will be filed before the end of the year.

State of development:

PROTOTYPE

Industrial application:

Generation of Electricity, Industrial Solar Heating & Cooling, District Solar Heating & Cooling

Market segment:

Generation of power and energy services through the collection of solar radiation is one of the largest sectors in the renewable energy. Very few small-scale solutions have been introduced into the market, yet these can offer a flexible and efficient response to industrial and civil demand.

Advantage factor:

HCPV unit combines a number of innovative cutting edge solutions: level of concentration of 2.000x; a record efficiency > 30% combined with the availability of another 50% harvested solar energy as heat at 90 C; a dramatically reduced cost of the LFR collector; standardized active units.

Commercial challenge:

The present commercial challenge is the development of pilot installations showing the technologies at a commercial stage. To reach this goal the company needs both the identification of international partners in target countries and the partnership of investors to deploy the industrial production of collectors and active modules.

Publications and Customer References:

Papers written in collaboration with the National Institute for Astrophysics:

- ▶ Electrical-Optical Characterization of Multijunction Solar Cells Under 2000X Concentration AIP Conf. '14;
- ▶ Direct Sunlight Facility For Testing And Research In HCPV AIP Conf. '14;
- ▶ A concentrating-based solar cooling system for agri-food industry – 5th International Conference Solar Air-Conditioning '13.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING

Viale delle Scienze, edificio 16
90128 Palermo (PA)

SICILIA

Employees: Up to 2

Turnover:

Export: less than 75.000 €

Status: SME

Contact: Francesco Mungiovino (CEO)

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E-Mail: francesco.mungiovino@i-labscompany.com

Web site: www.facebook.com/ilabssrl

Project Proposal

I-Turbine - A New Generation Of Small Wind Turbine

Description of the innovation project:

The field is the power conversion, from mechanical to electric power. The Electric Power Converter (EPC) developed is based on neural algorithm and allows to the turbine to work always in maximum power condition. The EPC is, in fact, more rapid and precise in Maximum Point Power Tracking (MPPT) than the commercial ones and so the turbine produces more energy.

I-Labs also works to improve blades performance, design, materials used and monitoring system.

I-Labs developed blade design more efficient and beautiful, in its production it used an ecological composite material made by basalt fibers and bioresin and, finally, it has developed a monitoring system that always communicate to the company and to its client for turbine production and state.

IP Protection Level:

I-Turbine is controlled by an innovative inverter developed by ISSIA-CNR that has been patented in Italy on 08/05/2013 with registration number RM2013A000272 and extended on 05/05/2014 with PCT No. PCT/IT/2014/000119. I-Labs has a licensing option in its use.

State of development:

PROTOTYPE

Industrial application:

I-Turbine is a Renewable Energy production system

Market segment:

Potential customers will be the 2,5% of the business and consumer segments. Among the consumer market I-Labs has the sub-urbans and rural households, while in the business market it has shopping centers, SME and farms. I-Labs addressable market is 45 million € with a forecast income of € 9 Mln.

Advantage factor:

The develop of the electric power converter based on neural algorithm allows to increase the electricity produced by the turbine. This positive trend is the result of a better control operated on the PMG generator inside the turbine.

Commercial challenge:

I-Turbine will be the only one turbine controlled by an advanced inverter able to increase the quantity of electricity produced. This peculiarity together with the improved aerodynamic design and the new monitoring system make of I-Turbine the most advanced small system to produce energy by wind.

Publications and Customer References:

The company is still testing the first prototype.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, VENTURE CAPITAL FINANCING

SP 231 KM.30,900
70033 Corato (BA)

PUGLIA

Employees: from 10 to 19
Turnover: from 500.000 to 2,5 mln €
Export: from 75.000 to 250.000 €
Status: SME

Contact: Luigi Maldera (General Manager)
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Web site: www.mblsolutions.it

Project Proposal SUMO PROJECT

Description of the innovation project:

To build a highly automated innovative PV module production factory with a manufacturing capacity of 120MW/yr. The benefits:- Glass to Glass structure. No organic polymer encapsulant- Unique process specific to the SUMO module - Maximum resistance to high temperatures, up to 140 C - Probably the only module suitable for installation in the desert- High resistance to corrosion- Higher efficiency in hot regions- Extended lifetime of more than 30 years, 99% recyclable.

IP Protection Level:

Main barriers to competition are guarded trade secrets & patent applications kept within the company, available to only a few people.

State of development:

PRODUCT

Industrial application:

Photovoltaic Industry

Market segment:

The world PV module market is estimated in \$ 96,8 Bln (2014) & expected to rise 20% annually. The major target area is the MEA region and other hot areas such as Australia & Mexico. The initial target is a market share of 5% in the MEA region & a 0,08% share in the rest of the world.

Advantage factor:

Having no organic materials, these glass-to-glass, frameless modules are easily recyclable & can withstand temps of 140 C and above, satisfying PV module demand in the world's hottest regions.

Commercial challenge:

Competition in the PV industry depends on price/performance. Companies adopting a price only strategy quickly gain market share but operate on reduced profit margins, often not surviving. Successful companies, such as Sunpower, First Solar, Sanyo manufacture the best performance products. This high performance product is unique, heat resistant, recyclable, lightweight module.

Publications and Customer References:

A head start advantage of having a vast experience gained in over 10 years of experimenting with non-organic encapsulants in the desert, in the laboratory & close working collaboration with Milan Polytechnic.

Proposal of cooperation agreement:

JOINT VENTURE AGREEMENT, KNOW HOW TRANSFER, VENTURE CAPITAL FINANCING

Via Cornelia dei Gracchi, 28c
80126 Napoli (NA)

CAMPANIA

Employees: from 10 to 19
Turnover: from 500.000 to 2,5 mln €
Export: less than 75.000 €
Status: SME

Contact: Filippo Gasperoni (Sales&Marketing Manager)
Telephone: +39 0812457416
E-Mail: info@nhp.it
Web site: www.nhp.it

Project Proposal Solar City

Description of the innovation project:

The "Solar City" project concerns a family of urban design elements using solar energy and eco-sustainable technologies and materials. These elements are completely autonomous from the point of view of energy-requirement and are also self-sufficient public utilities, they are also able to provide all kind of information through the use of touch screen technology.

IP Protection Level:

No patent as a yet. At this stage only the design of the models and their renderings have been completed.

State of development:

MODEL

Industrial application:

Urban Design

Market segment:

These urban design elements could be useful for municipalities, public and private structure as hospitals, congress centers, sea ports.

Advantage factor:

The advantage factor of the Solar City's urban design elements beside the energy self sufficiency, is the enviromental sustainability that is able to drive the users and the cityzens to be aware of the importance of sustainable technology in our cities.

Commercial challenge:

The Commercial challenge is to create a business model able to distribute Solar City everywhere is needed informations and clean energy.

Publications and Customer References:

NHP s.r.l. is an experienced ESCo.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING



Via Francesco Beato Marino, 102 (Z.I.)
87040 Zumpano (CS)

CALABRIA

Employees: from 50 a 99
Turnover: from 2,5 mln to 5 mln €
Export: less than 75.000 €
Status: SME

Contact: Vincenzo D'Agostino (CEO)
Telephone: +39 0984825356
E-Mail: info@omniaenergia.it
Web site: www.omniaenergia.it

Project Proposal

South Mediterranean Passive House

Description of the innovation project:

The South Mediterranean Passive House has been designed according to a methodological approach based on coordination and interaction between the following issues: architecture (aesthetic and functional requirements suited to the dynamics of contemporary life); building technology (drywall construction with lower environmental impact stratification of the housing); plant engineering (renewable sources, intelligent control and management of energy flows-SMART GRID); ICT (smart sensor network for environmental monitoring purpose. Looking at the needs of the Mediterranean area buildings, top priorities are: thermal inertia to avoid summer overheating; maximum protection of the building against summer heat; limited heat loss; good comfort levels.

IP Protection Level:

No patent as yet.

State of development:

MODEL

Industrial application:

Energy Efficient Home Construction sector, with a focus on reducing consumption.

Market segment:

The market segment is the energy efficient Building, with a proposal of low cost, flexible, adaptable domestic properties, accessible to families of all sizes. A preliminary assessment of the commercial value of the product starts from € 1.250,00 per m², with an economic return around 30% of sales.

Advantage factor:

Innovative aspects are: reduction of requirements w.r.t. wet construction (water, formwork, etc.); low amount of waste during installation due to wide employ of finished components; reduced in site building times; charges related to the safety due to reduction of processing stages in building yard.

This new way of building, based on the adoption of lightweight and super-insulating materials, fully consolidated in the Northern European countries, is not spread in the Mediterranean area.

Commercial challenge:

The combination of different materials not yet tested in today's construction system and the development of innovative construction techniques. This in order to define an offer of houses that meets the actual construction market needs and address the major challenges that environmental sustainability today requires, without sacrificing high standards of comfort. A large-scale production and sale of large numbers would lead huge economic benefits to the holder of the exploitation rights.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, COMMERCIAL REPRESENTATIVE, VENTURE CAPITAL FINANCING

Via Circumvallazione, 85/G
83100 Avellino (AV)

CAMPANIA

Employees: from 3 to 9
Turnover: less than 250.000 €
Export: less than 75.000 €
Status: SME

Contact: Antonio Maccario (General Manager)
Telephone: +39 3202696947
E-Mail: info@protodesign-group.com
Web site: www.protodesign-group.com

Project Proposal

Electric and Heat Energy Contemporarily Production Using Multi-Junction Solar Cells Coupled with Organic Rankine Cycle

Description of the innovation project:

The proposed technology consists in the use of heat sinkers to absorb photovoltaic cell overheating and transfer the heat power to a fluid which feeds an Organic Rankine Cycle (ORC) system for the production of supplementary electric energy. The designed system is made up of a multi-junction photovoltaic cell and a concentration system composed by high efficiency lens which convey solar radiation on the small PV area. The radiation, multiplied by the concentration factor, leads to an increase of energy production and to an overheating of the PV area. This is removed by heat pipes, metal foam or honeycombs with an organic refrigerating fluid used to feed the ORC system.

IP Protection Level:

Patent pending: Italian Patent Request AV2014AA000006, Applicant: ProtoDesign s.r.l. Submission Date 27.05.2014. The current phase is the realization of a facility for electricity production and of a photovoltaic multi-junction concentration cell. Part of the technologies have already been developed and the first results will validate the process.

State of development:

MODEL

Industrial application:

Supplementary Energy Power Generation without any kind of pollutant emission, 100% renewable. Zeroing of any kind of dependence on fossil fuels.

Market segment:

PV systems are growing of almost 30% pa, reaching 5 GW. Concerning CPV, HIS estimates that, in 2020, 1,4 GW pa will be installed. The investments in CPV could grow beyond \$ 11 Bln by 2020, producing 7% of world requirements. By 2050, investments can reach \$ 93 Bln (EST)

Advantage factor:

Innovative management system: CPV in energetic and cascade connection making cells operate at higher Temperature. It penalizes the electrical energy output related to the PV (the reason why it has never been applied), but the heat engine is maximized. Global efficiencies > 30%.

Commercial challenge:

Exploiting three concepts: increase system average energy efficiency, optimize the system, zeroing dependence from fossil fuels. CPV is expensive but has strong advantages. The higher cost per watt compared to Photo-Voltaic (PV) is due to a higher cost of the panels (suppliers still have to reach economies of scale). Considering the LCOE (Levelized Cost of Electricity), according to market analyses, the system cost for CPV will stay low enough to compete with the PV.

Publications and Customer References:

Ferrara F., Gimelli A., Luongo A. Small-scale Concentrated Solar Power (CSP) Plant: ORCs Comparison for Different Organic Fluids; Energy Procedia, Volume 45, 2014, Pages 217–226.

Proposal of cooperation agreement:

LICENSING AGREEMENT, KNOW HOW TRANSFER, IPR ASSIGNMENT

Via A. Caracciolo, 32
70123 Bari (BA)

PUGLIA

Employees: from 3 to 9

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: SME

Contact: Giuseppe Palma (Sales Director)

Telephone: +39 3283631128

E-Mail: beppe.palma@purix.com

Web site: www.purix.com

Project Proposal
Solar Cooling Purix

Description of the innovation project:

Clean, clever and competitive solar air conditioner turnkey system, targeting the high volume market (<5kW).

The substitution of electricity with solar heat (or backup heat source) as the main energy input offers a reduction of the electricity consumption by up to 85%. Instead of conventional industrial refrigerants, the system applies water as natural refrigerant, and a flexible design offers great opportunities for matching with interior design and architecture.

IP Protection Level:

2 groups of patents filed (PCT) in 2011 and 2013, covering a series of related inventions each. The first PCT application reached the national phase in January 2014.

State of development:

PROOF OF BUSINESS

Industrial application:

Sustainable technology for air conditioning, Cooling of technical installations, Green Living.

Market segment:

High volume market for mono and multi split air conditioners with high environmental performance.

Advantage factor:

Green turn key consumer product with flexible design for adoption into existing buildings and offers the functionalities similar to conventional products. The product based on renewable energy and water as natural refrigerant and competitive return of investment.

Commercial challenge:

Reach out to users in Italy and EU.

Publications and Customer References:

Commercial installations in Puglia, Italy and Denmark.

Proposal of cooperation agreement:

COMMERCIAL CONTRACT, PARTNERSHIP, DISTRIBUTION AGREEMENT, COMMERCIAL REPRESENTATIVE

SABER TECHNOLOGY SRL

Via Principe di Belmonte, 80
90139 Palermo (PA)

SICILIA

Employees: from 3 to 9

Turnover: from 500.000 to 2,5 mln €

Export: less than 75.000 €

Status: SME

Contact: Bernardo Zuccarello (Scientific Director)

Telephone: +39 3209242290

E-Mail: sabertechnologysrl@gmail.com

Web site: www.saber-technology.eu

Project Proposal

Low Cost Vertical Axis Wind Turbine

Description of the innovation project:

MINI-WIND TURBINE specifically developed for cost containment, with high reliability.

IP Protection Level:

Patent pending.

State of development:

PROTOTYPE

Industrial application:

Wind Turbines for Renewable Energy Production

Market segment:

Mini wind turbines, nowadays underdeveloped due to the high cost of turbines currently on the market. Potential market for hundreds of € Mln.

Advantage factor:

Simplified design and manufacture, as well as increased reliability wing to innovative design.

Commercial challenge:

Marketing of the product in the local, domestic and foreign markets, thanks to its reliability and low cost.

Publications and Customer References:

Studies and research activities of the Department of Chemical, computer and Mechanical Engineering and Engineering Management of the University of Palermo.

Proposal of cooperation agreement:

COMMERCIAL REPRESENTATIVE, KNOW HOW TRANSFER

SBSKIN - SMART BUILDING SKIN SRL



Via Ponte di Mare, 91
90123 Palermo (PA)

SICILIA

Employees: Up to 2

Turnover: less than 250.000 €

Export: less than 75.000 €

Status: START-UP

Contact: Rossella Corrao (CEO - Co-founder)

Telephone: +39 3204330312

E-Mail: info@sbskin.it

Web site: www.sbskin.it

Project Proposal

Multifunctional Glassblock Components for Active Solar Façades

Description of the innovation project:

SBskin patented new high-insulating glassblock configurations integrated with 3rd generation solar cell technology (DSSC).

SBskin also patented a completely dry assembly system that allows for simultaneous construction of building envelope and PV system.

Such innovative glassblocks are assembled in precast and prestressed panels which allow for an easy and fast construction of energy efficient and active façades and roofs able to:

- ▶ reduce heat loss;
- ▶ produce clean energy;
- ▶ control light transmission;
- ▶ offer high levels of mechanical resistance;
- ▶ characterize the aspect of buildings.

IP Protection Level:

Sbskin already patented its inventions:

- ▶ PCT WO 2013/132525 A2 - A hybrid solar cell integrated glassblock...;
- ▶ National Patent PA2012A000003 - Pre-compressed Glassblock Panel...;
- ▶ National Patent PA2012A000002 - Integration of Hybrid Photovoltaic Cells in Glassblock.

State of development:

PROTOTYPE

Industrial application:

Glass industry, Building and Construction industry, Energy

Market segment:

The target markets are:

- ▶ BIPV market, worth € 5.9 Bln, with a 16.9% CAGR forecasted;
- ▶ Glassblock market (114 Mln items/year) currently addressing high energy performance products.

With an investment of € 1 Mln, the company forecasts € 11 Mln revenues in the 5th year.

Advantage factor:

The glassblock market lacks new efficient and cost-effective solutions. On the other hand, BIPV competitors have not achieved all the key success factors included in SBskin products (energy saving, ease of installation, aesthetics, customizability, functionality).

Commercial challenge:

The integration of 3rd generation Pv cells (DSSC) with glassblocks, that occupy a significant position on the worldwide market, will allow the launch of a highly performing product while contributing to the entering on the market of a not yet very widespread PV technology that, nevertheless, offers great potential in terms of energy efficiency and building integration.

Publications and Customer References:

Sbskin arises from academic research carried out by three of the cofounders (Corrao, Morini & Pastore) which has been the topic of more than 16 scientific publications and 10 Master degrees.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, SUB-CONTRACT AGREEMENT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING

Via delle Mammole, 22
70026 Modugno (BA)

PUGLIA

Employees: from 10 to 19
Turnover: from 500.000 to 2,5 mln €
Export: from 75.000 to 250.000 €
Status: SME

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Telephone: +39 0805375656
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Web site: www.telformng.it

Project Proposal Vertical Wind Generator System

Description of the innovation project:

The project is a vertical axis wind turbine with an integrated aerodynamic system capable of increasing the impact speed of the wind, leading to a higher production compared to similar systems, and to a reduction of the minimum wind speed for starting the production of electricity.

IP Protection Level:

The company is preparing the patent application.

State of development:

PROTOTYPE

Industrial application:

Generator for residential buildings with a power that varies from 3KW to 6KW, according to the size of the system.

Market segment:

It will be placed on the market of small-sized and medium-sized generators for residential buildings, with an estimated sale price of around € 6,000 and an estimated sales volume of about 1,000 units for the first year, considering an economic return of not less than 30%.

Advantage factor:

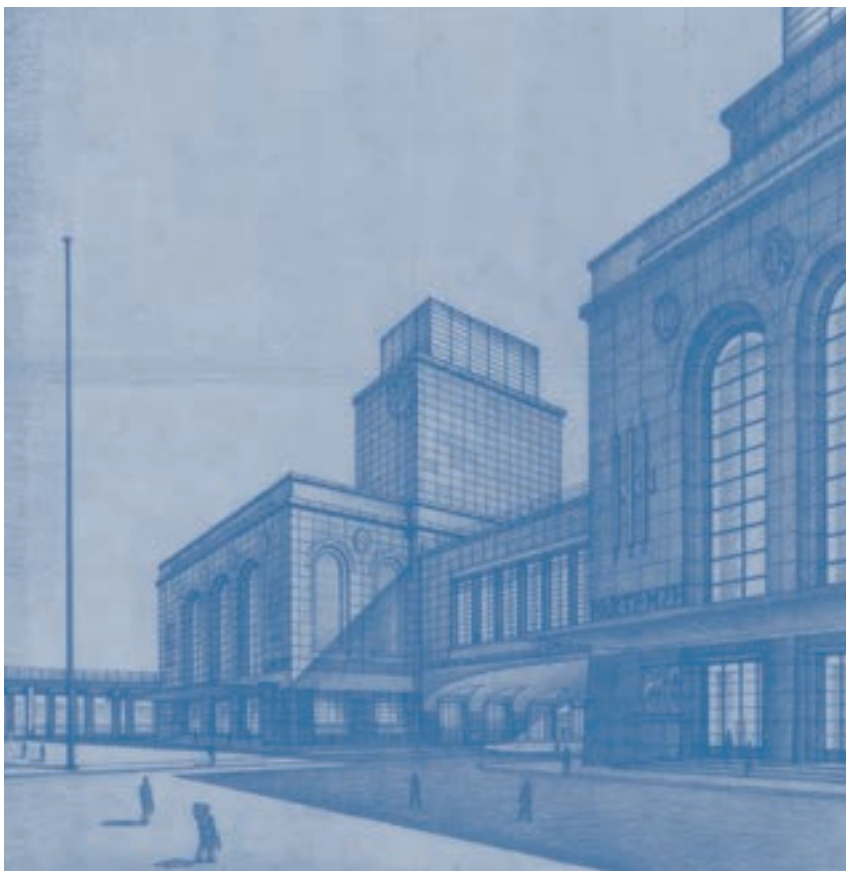
Smaller size compared to traditional solar and wind systems with equal power production. This also leads to a low visual and environmental impact. Furthermore, the wind speed necessary for production is minimal compared to the wind energy systems currently on the market.

Commercial challenge:

The first challenge for the company is to enter a new market segment, implementing a diversification compared to existing systems that use renewable energy. In particular, the proposed system can be compared (for the power it can supply) to a photovoltaic system: it should cost 20% less, while ensuring the same output power against a smaller space requirement.

Proposal of cooperation agreement:

DISTRIBUTION AGREEMENT, JOINT VENTURE AGREEMENT, LICENSING AGREEMENT, COMMERCIAL REPRESENTATIVE, CERTIFICATION FOR EXPORT, COMMERCIAL CONTRACT, VENTURE CAPITAL FINANCING



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