



POLITÉCNICA

"Ingeniamos el futuro"

CAMPUS
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Innovatech
UPM INNOVATIVE RESEARCH
UNIVERSIDAD POLITÉCNICA DE MADRID

nº
3

UPM INNOVATECH

Technical University of Madrid innovative research

actúa_COM,
open innovation in
middleware



actúa-com

“The best 3 projects could be considered as COM projects for their financing, development and incubation with the support of Santander, ISBAN y PRODUBAN”

- Distributed systems architectures for applications in companies, middleware and context-aware platforms, real-time stream processing, storage and massive data management...
- Management of social and massive data such as obtaining information structured from social data, detection of behavior patterns and predictive models as well as machine learning from social data...

The deadline for the reception of the ideas in the field of *open middleware* will be on **November 18th 2013**. The application requests a brief description of the business idea according to the defined format and highlighting innovative aspects, the needs to be covered and its market potential.

After assessing the ideas received, a selected group of teams will move into the next phase: training and contact with experts to develop the business model. Besides, the best three ideas will be awarded with €1,000.

Those projects with higher potential will move into the final phase and will be able to be awarded with prizes worth €10,000. In addition, the best three projects could be considered as COM projects for their financing, development and incubation with the support of Santander, ISBAN y PRODUBAN.

[More information.](#)

The middleware, the software layer able to communicate the levels of network/infrastructure and application, is a critical concept in any TI system for years. The global market of middleware is growing over the last years at rates of around 10%, a business figure near the M\$ 20,000 in companies such as IBM, Microsoft and TIBCO, which leads the industry, according to Gartner Consulting. The **Center for Open Middleware**, a joint centre of the Technical University of Madrid (Universidad Politécnica de Madrid) with **Santander Bank, ISBAN and PRODUBAN**, aims to boost the creation of an open ecosystem, which is innovative and sustainable build around the middleware and open source platforms. In order to support the transformation of ideas into innovations, the COM has launched in collaboration with UPM Entrepreneurship Program the 1st competition of UPM Innovation Open

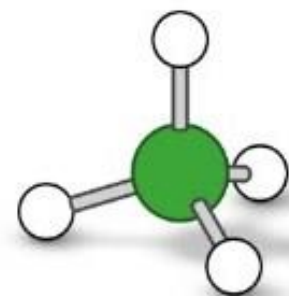
Middleware **actúa_COM**.

The competition, which will be divided into phases along the next months, will allow us to identify innovative business ideas, to support the development of business models and to promote its value into market.

The call is open to all UPM university community: professors, researchers, students, management staff and all former members of the university.

The competition is organized around the following technological challenges:

- Human-machine interfaces such as written and spoken natural language, gesture recognition, security, identity or biometrics...
- Applications for smartphones and tablets that include banking functionality such as payment mechanisms or social networks integration.

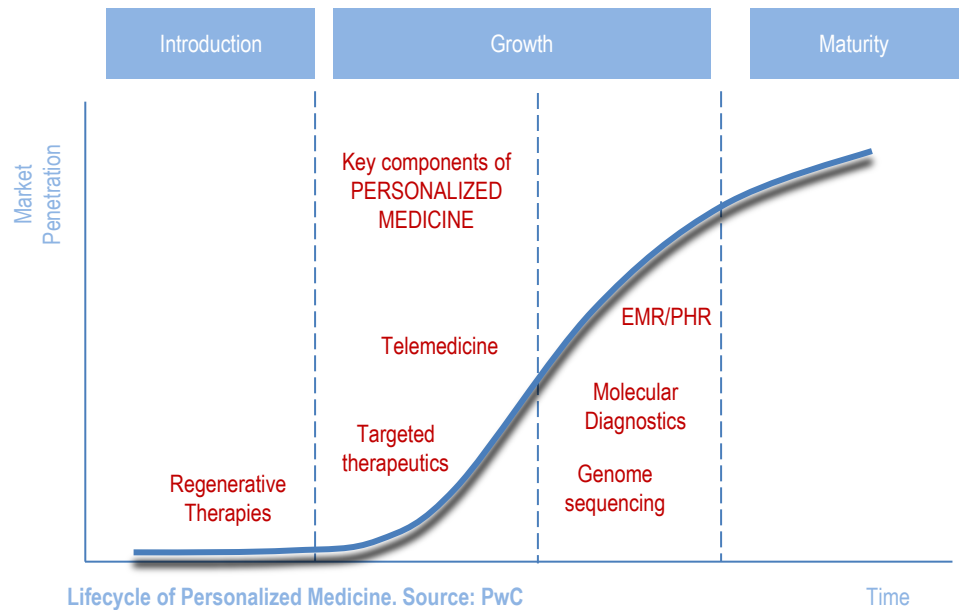




Health 2.0: an improvement in our life quality

The current lifestyle leads us to eat unhealthy food and to do little exercise what can trigger diseases. Knowing in depth lifestyle of a patient in order to make a proper diagnosis and monitoring, could be critical. The Health 2.0 technologies can contribute to fulfill these goals by allowing us to monitor biomedical parameters obtained in the daily day of the patient and send the results automatically to doctors. These technologies are enabling the growth of personalized medicine, whose last objective is to increase life expectancy.

An example of these technologies is "GameCare", a UPM solution which is available [here](#).



Biometrics, the security of the future

The biometrics industry is a large market which includes products and services focused on biometric security on mobile devices. It is a market that will grow from M\$ 30 to M\$165 in 2015 in terms of business, according to the analyst estimates.

As a result, the Group of Biometrics, Biosignals and Security (GB2S) of the UPM has developed two solutions for biometric identification that focuses on the mobile phone industry.



TV report «Biometrics based on physical or behavioral characteristics of a person» at RTVE.



In-air Signature is a software application that verifies personal identity through the authentication of an in the air gesture by the user simulating a signature with his mobile phone. This solution can be quite polyvalent because it can be integrated easily to other applications. The mobile phone does not need many special requirements and the software can be compatible for mobile payments or the

operation of online contents.

Hand Geometry is an application that allows personal identification through hand geometry by taking a photo and analyzing it with a mobile phone, which is the only thing the user has to do. As with In-AirSignature, Hand Geometry has a low hardware cost and a wide industry implementation of its application.

Biicode changes the code reuse



This spin off company of the UPM resolves problems of code reuse which programmers use every day. Therefore, its platform helps programmers throughout the world to enhance their productivity by saving time and increasing their technical skills. Biicode helps programmers in the software projects of dependency resolutions, this eases the code reuse and consequently it allows them to increase productivity and efficiency.

This company has proposed a new paradigm to easily share and reuse the source code. It aims to remove entry barriers for advanced develop of applications for any languages or system. Biicode proposes a new and innovative model which allow to publish, reuse your own code or belonging to others, update dependencies or collaborate modifying

and improving these dependencies can be done in a simple and unified way.

The technology employed is completely new and it challenges the current paradigm of development resulting in a worldwide innovative project.

The team responsible for the creation of this technology has an extensive

experience both in the field of technological development and research.



Biicode has been chosen as the best technology-based company at the IBM SmartCamp Madrid, a content part of the framework of IBM Global Entrepreneur which gives support to young companies to develop their projects and business ideas. Biicode will be representing Spain in the European final competing against other countries.

[More information.](#)



Investment in technology: California vs Europe



The Centre for Support of Technological Innovation UPM organizes the first *UPM innovatech International Workshop "The new innovation & technology-based entrepreneurship model"* on 4th December, 2013, within the framework of the project of the International Campus of Excellence of Montegancedo.

Presentations, networking, business opportunities... all these issues will be focused on a single day where we will share experiences and business acceleration models based on technology.

California is one of the most dynamic global poles in terms of technology investment and it is based on its rapid economic recovery in activities of high added value. Europe aims to boost a similar frame through the Horizon 2020 programme. To compare and learn from these strategies is essential. For this, we will have experts in the field such as Glenn Osaka, former Senior Vice President, Services at Juniper Networks. Another experienced speaker will be

Jonathan Taplin, Director of Annenberg Innovation Lab at University of Southern California.

The workshop is addressed to technology based companies, universities, and R&D centres as well as start-ups companies and is entitled *1st UPM innovatech International Workshop "The new innovation & technology-based entrepreneurship model"*.

Free entry previous requirement of an invitation through this email: innovacion.tecnologica@upm.es.

[More information](#)



1st UPM innovatech International Workshop THE NEW INNOVATION & TECHNOLOGY-BASED ENTREPRENEURSHIP MODEL

2013, December 4th

The 1st innovatech® University Technological Innovation "Innovation and Technology-Based Entrepreneurship" Workshop, is aimed to discuss and present experiences on new models of technological acceleration from Universities and its introduction into productive market. Based on the format most commonly used by large technological multinationals, this Congress is an open innovation initiative to share experiences, discuss and propose new challenges in Public&Private technological cooperation.

Centre for Support of Technological Innovation- *innovatech*
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INSIA Dynamometric Wheel: safer, durable, efficient and reliable vehicles

The performance of active safety systems for vehicles such as the ABS and ESP can be improved considerably by obtaining real-time information of the forces applied when wheels come into contact with the road. This information, which can be used to determine dangerous situations, can be obtained by the use of dynamometric wheel resulting in safer vehicles.

Javier García Jalón and M^a Dolores Gutiérrez López, researchers from the University Institute of Automotive Research (INSIA-UPM), has developed the INSIA Dynamometric Wheel which is able to monitor the interaction tire-road by improving vehicle safety from calculating forces and moments generated in the contact area.

Unlike commercial dynamometric wheel which usually has different inertial properties from the original wheels of vehicles and, therefore their dynamic behavior can change, the INSIA

Dynamometric Wheel are produced directly by implementing the vehicle wheel in a way that its dynamic behavior remains unchanged.

In addition, the innovative design of the INSIA allowed researchers to achieve a cost nearly two orders of magnitude lower than the price of a commercial dynamometric wheel. As a result, the INSIA Dynamometric Wheel is affordable or even allows them to extend its application which was previously unfeasible because of the high cost.

This solution is protected by patent granted in Spain and in the process of international protection in Europe and USA.

[More information](#)



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