

2012-13

Report

TecnoCampus
Mataró-Maresme Foundation



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Edition

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Miquel Rey i Castilla

President of the TecnoCampus Mataró-Maresme Foundation



As President of the TecnoCampus Mataró-Maresme Foundation, I am delighted to present to you this 2012-2013 report, a document that reflects the project's energy, drive and ambition, combining a top-class University committed to Education with a Science and Innovation Park focused on Industry and Entrepreneurs. More importantly, the result of this sum is clearly superior to their individual value. It represents an essential multiplier effect in achieving our mission: to increase the gross domestic product (GDP) of the territory.

This project, which dates back almost thirty years to the creation of EUPMT, first appeared in an official document in 1999 under the scope of the Master Plan of the Information Society drafted by the university and the IMPEM (Municipal Institute of Economic Promotion of Mataró). It was finally official opened in the Rengle area of Mataró in 2010. Three years later, having consolidated a management model based on a plural and participative foundation, we can now say that TecnoCampus is in full operation.

The project continues to grow in terms of students, teaching staff, and studies, enabling us to proudly refer to Mataró as a "University City". The number of entrepreneurial projects and start-up support actions is on the increase, while the business incubator, acting as a leading example in Catalonia, has enabled us to become a member of the Start-Up Catalonia network this year. All these initiatives define us as an "entrepreneurial campus". The number of occupied office spaces has swelled, reaching almost full capacity, and the Rengle area can now be referred to as the TecnoCampus business district, with a new area of top-class offices in Mataró for those who want to be on the doorstep of the greater Barcelona metropolitan area.

It is obvious from this year's figures that by combining the University with a business incubator with extensive experience, a system of projects for industry, and a technology transfer centre like CETEMMSA was a wise decision. This positive sum, which is progressively being strengthened as shown by recent figures, is the differential feature of TecnoCampus, enabling it to consolidate itself as a leading model in triple helix University-Industry-Government systems. Creating a continuous circle between all these agents, which generates knowledge, wealth, quality of life and employment opportunities, is the central goal of TecnoCampus, our mission, as identified in the Strategic Plan of the Foundation.

The best news, however, is that we are just starting out. The future is full of opportunities and we must promote entrepreneurship, industry, professionalisation, and internationalisation. We will venture further into projects on reindustrialisation, printed electronics, wearable and intelligent textiles, new technologies and information, ICTs applied to healthcare, the entertainment industry, health sciences and sport, and tourism, opening the way with new initiatives in logistics and maritime business. Today, TecnoCampus is a major instrument for economic growth and social progress for citizens, for the city of Mataró, Maresme and all Catalonia. Thanks to everyone who made this project possible.



Jaime Teodoro i Sadurni

Managing Director of the TecnoCampus Mataró-Maresme Foundation

This document summarises the result of a year's work at TecnoCampus in the different areas of the Foundation: the universities structured around three knowledge areas (Technology, Business and Health), and close to 2,000 students, the campus providing services and resources to all, the Park serving Industry and Entrepreneurs, with more than 100 companies, and the corporate area itself as a management and governance structure that manages a budget of almost 10 million euro. In short, it represents a living system with close to 2,700 daily users, growing in double figures.

In the university area, the number of students enrolled has increased 26.9%, while the number of degrees starting and to start envisages that the campus will receive 3,000 students with an academic offering of close to 20 highly professionalised programmes. The influx of new students this year was 669, 20% more than the previous year. Of this figure, 87% of students have chosen TecnoCampus as their first choice, clearly illustrating the attractiveness and the quality of our studies. 2012-2013 has seen the start of two new Bachelor degree programmes in Marketing and Digital Communities, and Physical Education and Sports Sciences, which had 100% acceptance of the places offered. This offering will be supplemented with the new 5-year double degree programmes. We have also started a new University Master's degree programme in Chronicity and Dependency, which joins the existing University Master's degree in Entrepreneurship and Innovation. We have also grown in terms of international mobility through the University Community Services Unit (UACU), thanks to new Erasmus agreements. Meanwhile, teaching programmes in entrepreneurship operating across the board, and support laboratories and programmes make entrepreneurship a distinctive feature of the campus. This year we have started a social grant programme, enabling students with a good academic record and low financial income to study free at our universities. When implemented, this programme will provide support to more than 100 students. This year has also seen the start of four new transversal projects: i) Innolab, an innovation laboratory; ii) Xnergic, a project to help create technological vocations; iii) the Summer University, a platform for connecting the University and the city; and iv) Digital

UNIVERSITY CENTRE

- 3** Universities
- 11** Bachelor degrees
- 3** Postgraduate courses
- 2** University Master's degrees
- 1,835** Students enrolled
- 669** First-year students
- 166** Graduates
- 87%** Students chose to study at TecnoCampus as their first choice

CAMPUS

- 11** Social grants
- 756,864€** Allocated to research
- 12** Research groups
- 37** Staff publications
- 188** Students participating in international mobility programmes
- 35** Foreign students
- 188** University-industry cooperation agreements

Factory, online pedagogic refresher training which has created the first MOOC at TecnoCampus with 7,000 individuals registered. Major growth in the university area has required an investment of almost €500,000 in new sporting spaces for the Physical Education and Sports Sciences degree, new classrooms on campus, and laboratory equipment in the Escola Universitària Politècnica de Mataró (EUPMT).

In the Park area, the data is also positive and helps to visualise TecnoCampus as a business hub. As of June 2013, 101 companies were already installed in the Park and the business incubator was at 93% occupancy, with 25 companies in consolidation or growth phase. The premises and service area this year has full occupancy and entrepreneurial activity has been focused in the Rengle area, leaving the spaces of the Nau Minguell building for uses that give it maximum performance. More precisely, in the entrepreneurship area, a new support programme has been set up under the name Innoemprèn, which helps students to start up new businesses from innovative ideas. This year the park has started an internationalisation process, with reciprocal agreements, offering free occupancy for companies, with other Parks around the world, notably those in Toulouse and Miami. Along these lines, the OpenSpace has been created as a support infrastructure for this initiative. Two investment forums have been carried out, through an agreement with Keiretsu and BANC (Business Angels Network Catalonia), enabling investors and entrepreneurs to meet. The Park's services have also been extended this year with the integration of the Industry area within the Park's activity, and there has been a greater emphasis and focus on Ongoing Training and Technology Transfer. The Park's management has also been merged with Marketing to ensure a closer customer relationship. Finally, the Conference Centre in the Park has seen major expansion with approximately 20,000 participants at conferences.

At a corporate level, the maintenance and infrastructure service has deployed an improvement plan, which enables it to manage and reduce incidents by 80%, incorporating a ticketing system for customer service.

Additionally, the Park has been connected with the Industrial Ring, deploying new IP services and initiating the construction of a data centre for companies. In the Administration area, an IT project has started to integrate the new academic management software SIGMA with purchasing and HR (SAGE ERP), marketing, CRM, reporting and BI software. A Quality Plan has been implemented to improve services across the board, incorporating a general quality manager. Furthermore, a Savings and Efficiency Plan has enabled total spending to be reduced by close to 3%. The final stretch of collective negotiations has been started with the Workers Council, which will result in a new single works agreement for all areas of TecnoCampus.

In terms of governance, a strategic planning project has been launched in the Board with a performance system based on actions and indicators. A system of teamwork has been implemented for all employees, which starts with the annual convention and encourages active participation in strategic planning and the action plan. Finally, as regards the Foundation, the statutes have been modified to adapt them to the new reality of TecnoCampus, expanding the Board and creating the participative advisory role of the Senate, which must be capable of collecting the contributions of users and stakeholders. For the Board, it has been decided to start the university affiliation process in which the three colleges will be affiliated to Universitat Pompeu Fabra (UPF), thus bringing better organisation and new possibilities in terms of studies and transfers between different degree programmes.

This summary of activities and data will be developed in further detail in the following four chapters of this report, information that helps you to discover the work of a team of 196 individuals committed to building the future.

PARK

101 Institutions hosted at the park

2,693 Daily users of the park

25 Companies in the business incubator

287 Events held at the Conference Centre

19,000 Participants at conferences

96 Start-ups created

588 Entrepreneurs coached

1,211 Companies participating in the accelerator programmes

CORPORATION

131 Teaching and research staff

65 Administrative and service staff

9.79 Budget for spending (in millions of euro)

1. An institution committed to the city



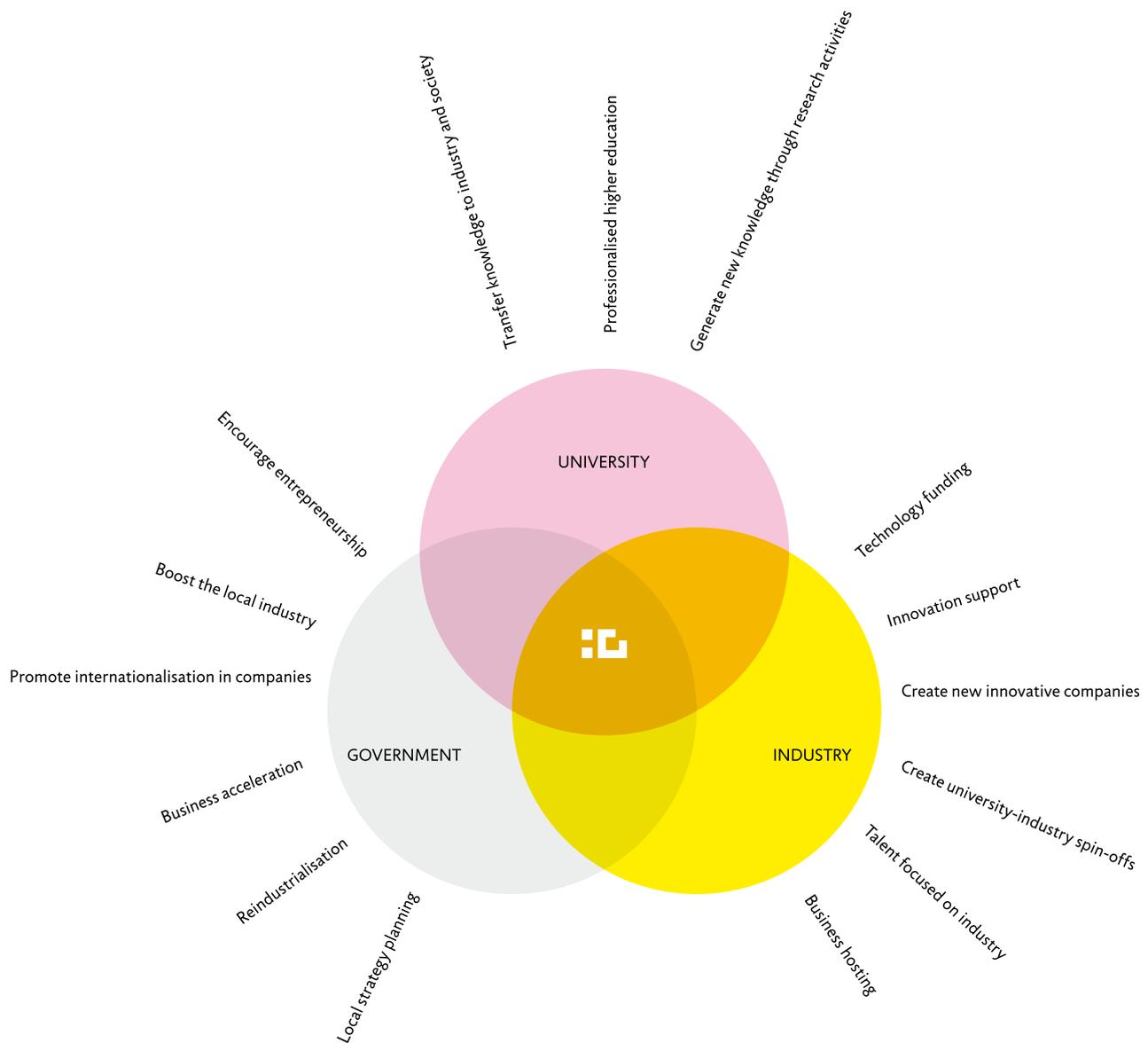


The TecnoCampus Foundation is a non-profit organisation initiated by Mataró City Council and the Maresme Regional Council, to manage the science and innovation park TecnoCampus and the three universities.

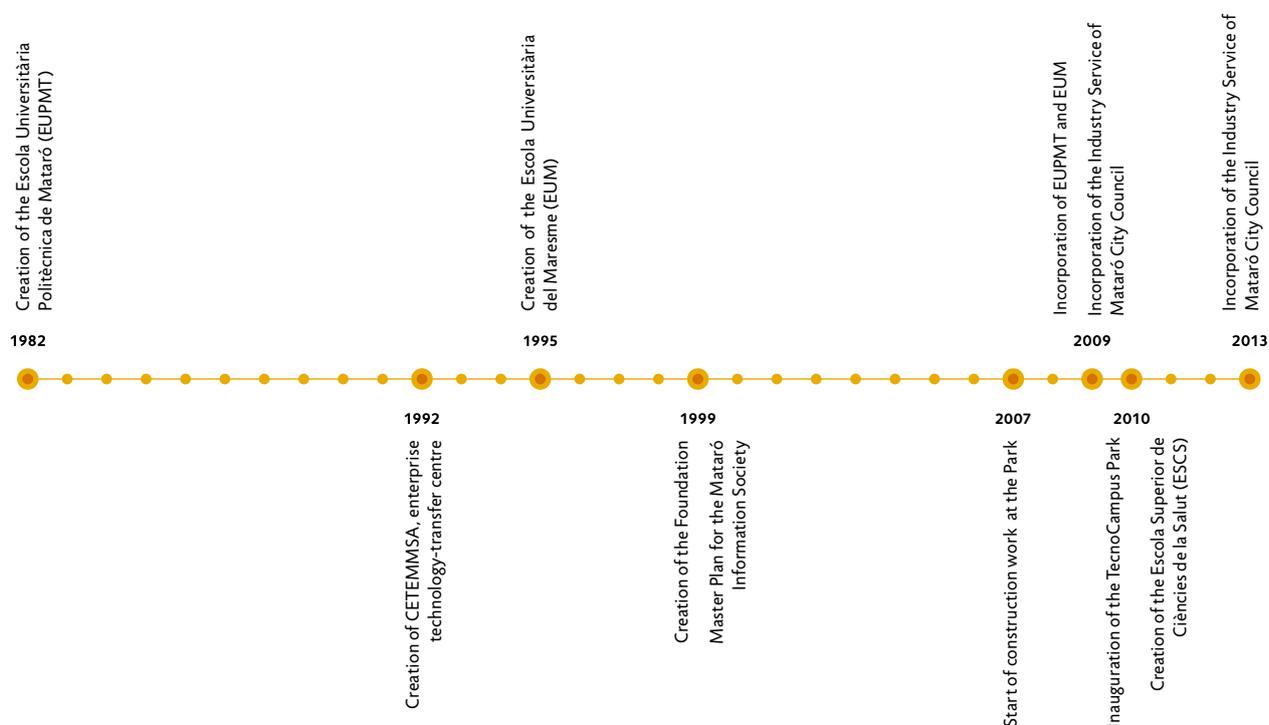
The mission of TecnoCampus is to become a territorial element in supporting the generation of wealth and economic growth, managing under a single strategy: three universities, the campus that provides service to all three, a business park with more than 100 innovative consolidated companies and a business incubator with capacity for 27 start-ups.

The added value of TecnoCampus lies in the synergies established between the government, university and industry spheres, working a triple helix model. These three spheres leverage synergies, optimise resources and promote innovation as an economic driving force, making TecnoCampus a singular project for its capacity to combine these elements.

This model benefits all parts of the system: students find a learning environment that is closely linked with industry and with a major entrepreneurial impetus; companies can access talent and knowledge transfer, and government agents can manage resources efficiently and apply effective policies for promoting industry.



An institution with history



The origins of TecnoCampus date back to 1982 with the creation of the Escola Universitària Politècnica de Mataró (EUPM), from within the already consolidated Miquel Biada Vocational Training School. The school of engineering resulted from an initiative by the Mataró City Council and local industry, at a time when which Mataró was a highly industrialised metropolis and one of the most dynamic cities in the country in terms of business creation. Another important step was made in 1994 with the creation of the Escola Universitària del Maresme (EUM), by the Regional Council and with affiliation to Universitat Pompeu Fabra. In 1999, the management team of EUPM saw that the university's future required new campus facilities and a model that had a closer relationship with the business world. Thus, the university itself, together with the City Council, set out the Master Plan for the Information Society, which defined the TecnoCampus concept. This concept finally saw the light in 2010 in the new area for expansion in the city located on the seafront.

Presidents of TecnoCampus since its foundation:

Period	Mayor of Mataró	President of the Foundation
1999-2008	Manuel Mas	Pilar González-Agapito
2008-2012	Joan Antoni Barón	Alicia Romero
2012-actual	Joan Mora	Miquel Rey



Mataró: at the doorstep of greater Barcelona

The Foundation acts in Catalonia and its scope of action covers an area of 7,570,908 inhabitants with a gross domestic product of 200,323 million euro (2012).

The Foundation's activities are focused on the region of Barcelona, where Mataró represents the northern doorstep of this area, with almost five million inhabitants. Mataró, as capital of the Maresme region, stands out for its excellent quality of life, its proximity, and good connection with the city of Barcelona.

Due to its innovative entrepreneurial spirit, the city of Mataró received the title "City of Science and Innovation" in 2010, when the Spanish Ministry for Science and Innovation recognised 30 municipalities that showed a significant effort and commitment to R&D and innovation. The TecnoCampus Park is a cornerstone of this innovation strategy.



The composition of the governing body of the Foundation, the Board, reflects this University-Industry-Government cooperation model, representing all agents of the territory equally. Mataró City Council is responsible for its presidency, aligning as far as possible the institution with its mission of being a decisive instrument in the economic and social progress of the area.

Members of the Foundation's Board

Presidency	Mataró City Council	Miquel Rey i Castilla
Vice-Presidency	Maresme Regional Council	Andreu Francisco Roger
Members	Mataró City Council	Carlos Súnico Batchillería
		Joan Gil i Sans
		M. Carme Maltas Freixas
		Víctor González Espí
		Esteve Martínez Ruíz
	Mercè Bosch i Pou	
Caixa d'Estalvis Laietana	Josep Ibern i Gallart	
Trade Union	Lluís Torrents Díaz	
	Ovidi Huertas Castillo	
CETEMMSA	Pere Merino Tarafa	
FAGEM, business association	Roser Moré i Roy	
Territorial sectorial councils	Miquel Buch i Moya	
	Andreu López i Pou	

In May 2013, the establishment of a new body with an advisory nature called the Senate was approved, its aim being to advise the Board on all activities within its foundational objectives. The Senate will be made up of twenty members, representing the staff, students, companies and institutions, and other such stakeholders in the area



"If having a university close to home is important, seeing how it progresses and grows gives us hope and makes us proud. The area's industry wins in strength and drive, knowledge and talent."

Roser Moré
President of the Federation of Maresme Business Associations (FAGEM)



The objectives of the Foundation are:

- Develop higher education studies, with an academic offering adapted to the needs of the area and in line with an educational model focused on professionalisation, entrepreneurship and internationalisation.
- Display and execute the appointment of the universities as required, at any time, for the programming of the academic offering and following the legal framework on this subject.
- Develop an educational project accessible to all social sectors that provides access to quality higher education for the maximum number of citizens.
- Provide teaching activity, understood in a broad sense as lifelong training under the umbrella of continuing education.
- Ensure research as an academic activity focused on generating knowledge, with a special emphasis on applied research and knowledge transfer.
- Ensure the dissemination and the promotion of science and technology, especially in the three main scopes of action of the Foundation: i) technical studies and engineering; ii) business studies and social sciences; iii) health sciences and welfare.
- Provide support and promote entrepreneurship, and support entrepreneurial activities through services that help create new start-ups and consolidate existing companies.
- Manage the TecnoCampus Park, property of Mataró City Council (through the local government institution TecnoCampus Park Mataró-Maresme), by means of a management contract between the Foundation and the aforementioned EPEL TecnoCampus Park.
- Participate in all activities within its scope that encourage business competitiveness, industrial development, education, industrialisation, and growth of the area's industry.

Sectorial Scopes of Action

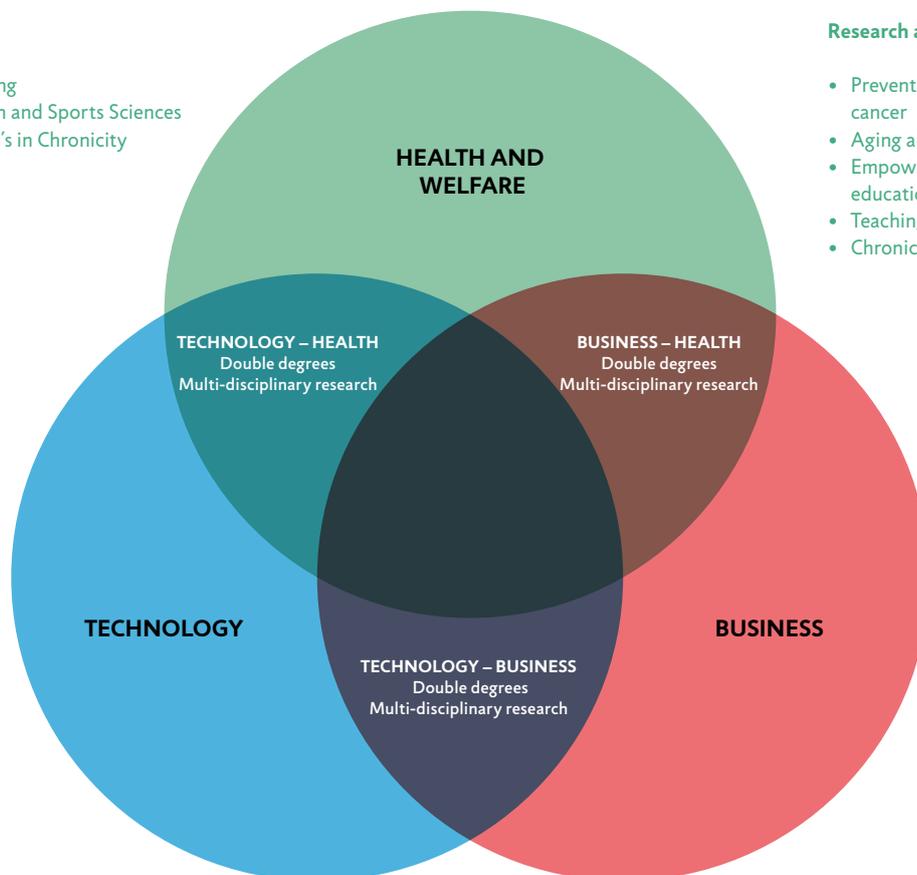
The activity of TecnoCampus is focused on three areas, through which the academic offering provided by the universities, research and transfer are organised: Information technologies and production; business and social sciences; and health sciences and welfare.

Teaching:

- Bachelor of Nursing
- Physical Education and Sports Sciences
- University Master's in Chronicity and Dependency

Research and transfer:

- Preventive healthcare and cancer
- Aging and dependency
- Empowerment and health education
- Teaching innovation in nursing
- Chronic wounds



Teaching:

- Electronic, Industrial and Automatic Engineering
- Mechanical Engineering
- Computer Engineering
- Media

Research and transfer:

- Signal processing
- Power electronics
- Innovation and territorial competitiveness (GRIC)
- Applied biomechanics and medical technologies (GREB-ITECH)
- Sound, silence, image and technology (SSIT)
- Netlab
- Centre for Urban Knowledge (CCU)
- Integration Competency Centre (CCI)

Teaching:

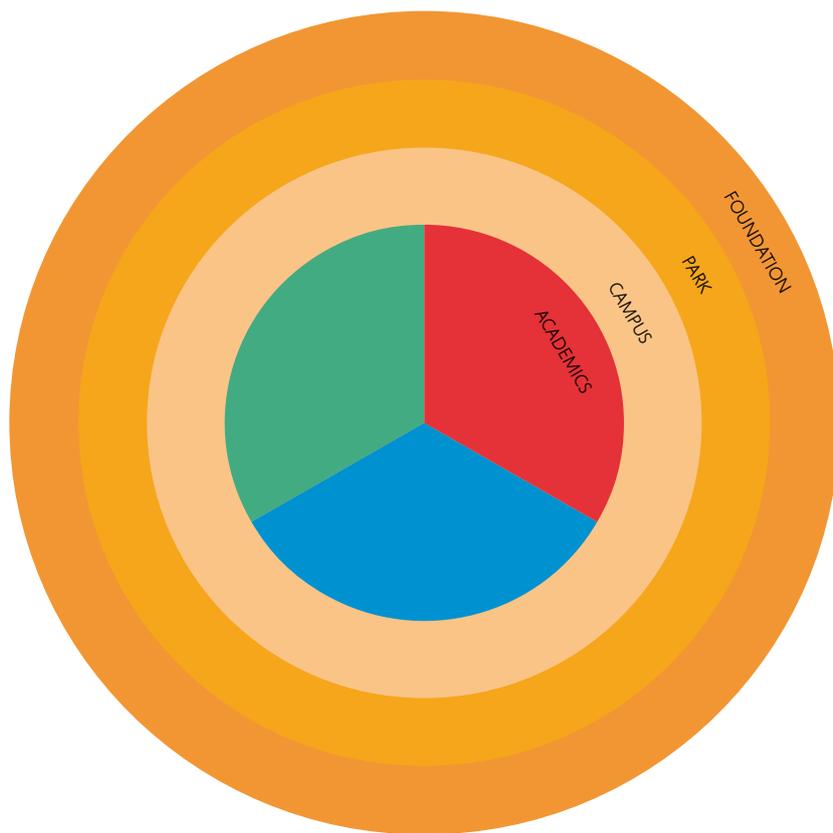
- Business Administration and Innovation Management
- Marketing and Digital Communities
- Tourism and Leisure Management
- University Master's in Entrepreneurship and Innovation

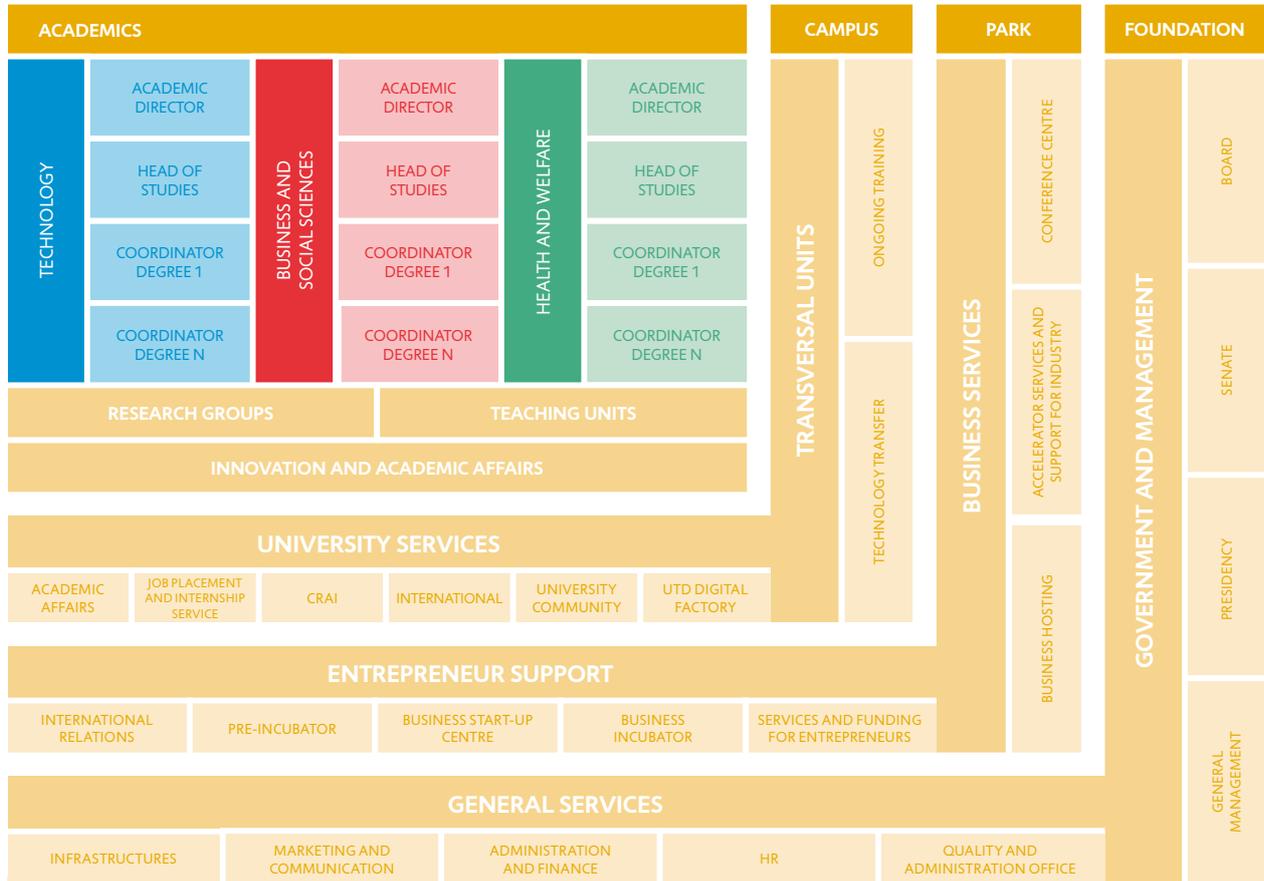
Research and transfer:

- CEO: Competences, Entrepreneurship, and Occupation
- GRABET: Applied Research in Economic Welfare and Tourism

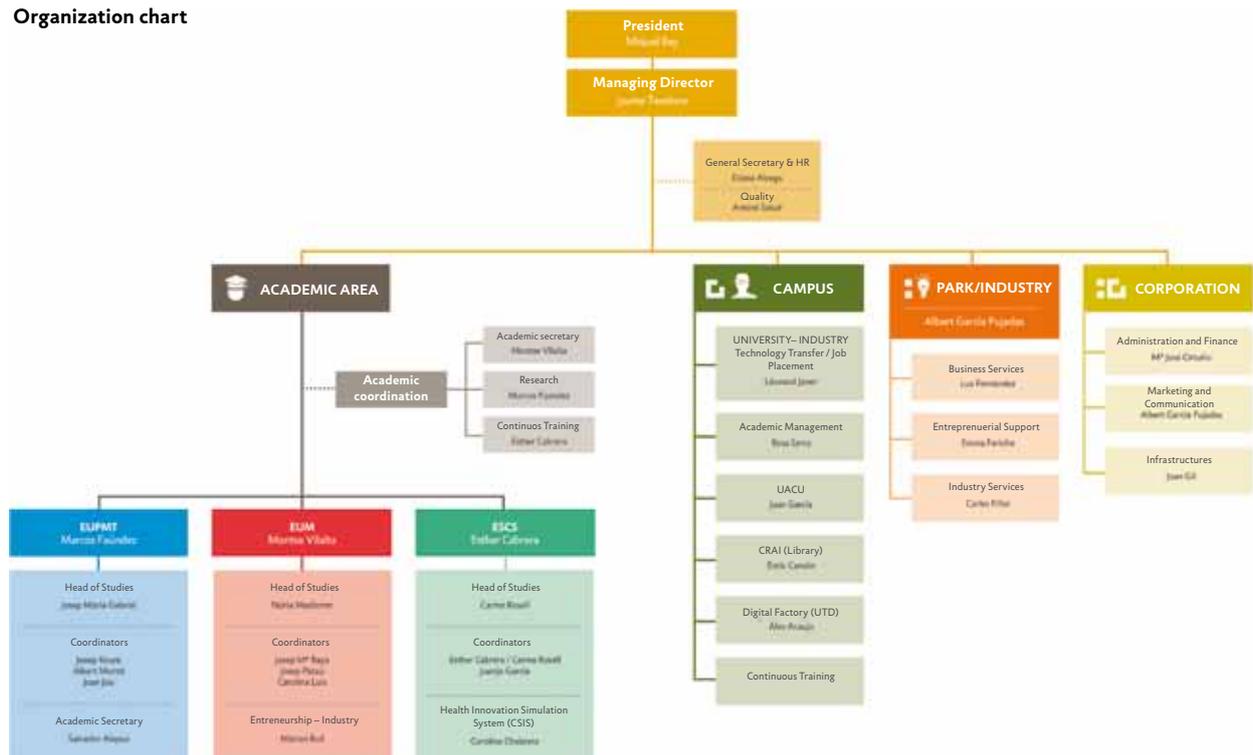
The management structure of the Foundation is based on a layered model, the nucleus of which is the academic sphere formed by the three tecno-Campus university schools: Escola Universitària Politècnica de Mataró (EUPMT), Escola Universitària del Maresme (EUM) and Escola Superior de Ciències de la Salut (ESCS). The campus area includes transversal units for technology transfer and university services for academic administration, a job placement and internship service, the CRAI and Digital Factory.

Within the park, entrepreneurial support services, business hosting services, and accelerator services for businesses with a high growth potential are also offered. Finally, the Foundation incorporates general services necessary for ensuring the correct operation of this structure (infrastructures, marketing and communication, quality, administration and finance, HR, administration office and general management).





Organization chart



2. A university campus serving the people

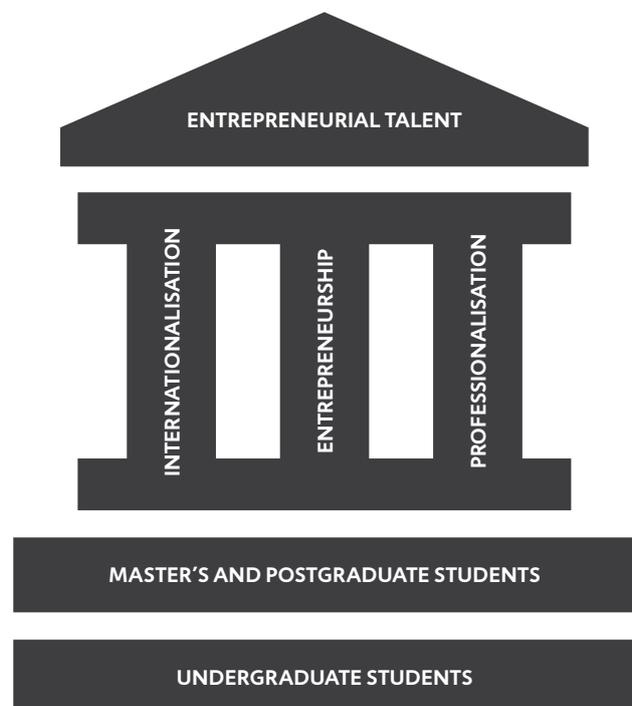




The academic offering at TecnoCampus is based on an educational project founded on three main pillars:

- Professionalisation, by offering training linked with professional practices through on-going relations with the business world thanks to the advice provided by the Academic Councils, made up of sectorial companies that provide their vision and ensure a continuous adaptation of the study programmes.
- Internationalisation, by encouraging participation in international mobility programmes, both academic and internships; by incorporating language learning in university studies; and by promoting double-degree programmes through agreements with international universities.
- Entrepreneurship, understood as being a transversal element present in all studies through core subjects and with programmes and spaces designed so that students can develop their own business ideas.

The result sought is that on completion of their education, students are capable of competing and developing their competences in a global environment, incorporating easily into the job market in their specialisation.





"Entrepreneurship is the guiding principle on which the different knowledge areas of the university studies are based".

Montserrat Vilalta
Director of the Escola Universitària del Maresme (EUM)

TecnoCampus offers official undergraduate and postgraduate studies fully ascribed to the European Higher Education Space (EEES), more commonly known as the Bologna Plan. The academic offering at TecnoCampus is organised into three schools, which teach both official undergraduate and postgraduate programmes.

As a result of the merger of the two previously separate schools in TecnoCampus, we currently offer technology degrees with the official recognition of the Universitat Politècnica de Catalunya and business and health degrees with the official recognition of the Universitat Pompeu Fabra. Both universities are positioned among the top European universities in teaching, knowledge transfer and research.

At present, the development of a single affiliation model is under evaluation, which would integrate TecnoCampus' current academic offering under a single TecnoCampus university centre, with three separate knowledge areas (technology, business, and health) and affiliated to the Universitat Pompeu Fabra. This single affiliation will provide better efficiency in resources via a shared academic organisation model and at the same time, provide significant benefits for students who can opt for new double-degree programmes.

TecnoCampus university centres

Escola Universitària Politécnica de Mataró

Affiliated to:



Escola Universitària del Maresme

Affiliated to:



Escola Superior de Ciències de la Salut

Affiliated to:



Sectorial course advisors

The sectorial councils are advisory bodies on the degree courses within the three knowledge areas at TecnoCampus. Their aim is to strengthen links with companies and institutions so they can contribute their views and ensure the continual adaptation of the syllabuses to the needs of the professional practice.

Technology studies area



Business studies area



Health and welfare studies area



Undergraduate studies

Escola Universitària Politècnica de Mataró (EUPMT):

Bachelor of Electronic, Industrial and Automatic Engineering
Bachelor of Computer Engineering
Bachelor of Mechanical Engineering
Bachelor of Media
Double degree in Mechanical Engineering and Electronic Engineering

Escola Universitària del Maresme (EUM):

Bachelor of Business Administration and Innovation Management
Bachelor of Tourism and Leisure Management
Bachelor of Marketing and Digital Communities
Double degree in Business Administration and Innovation Management, and Tourism and Leisure Management

Escola Superior de Ciències de la Salut (ESCS):

Bachelor of Nursing
Bachelor of Physical Education and Sports Sciences (CAFE)

During the academic year 2012-2013, two new official bachelor programmes have gone into operation, affiliated to the Universitat Pompeu Fabra: Bachelor of Physical Education and Sports Science, within the area of health, and Bachelor of Marketing and Digital Communities, in the area of business. For the first time, the double-degree programme in Business Administration and Innovation Management and Tourism and Leisure Management has been organised, which has had a good reception. The development of double-degree programmes is an objective towards which work will continue to be made, due to its wide acceptance among students and to the fact that it brings versatile individuals with a more comprehensive vision into the employment market.

Proposals for new official Bachelor degree programmes have also been presented, resulting in the approval of a new Bachelor degree programme that will start during 2012-2013: the double degree in Business Administration and Innovation Management, and the Bachelor of Marketing and Digital Communities. The goal of this double degree is to prepare comprehensive professionals with knowledge of management and business administration for the new economy and full mastery of today's technologies, encouraging creativity and entrepreneurship and enabling them to use social networking marketing and communication tools, establish strategies, anticipate changes, optimise resources and to analyse information in decision-making.

Another of the new developments this year has been the increase in the number of students in the Bachelor of Media programme, which hosted

Postgraduate and Master's studies

Escola Universitària del Maresme (EUM):

University Master's in Entrepreneurship and Innovation
Postgraduate diploma in Business Innovation
Postgraduate diploma in Entrepreneurship

Escola Superior de Ciències de la Salut (ESCS):

University Master's in Chronicity and Dependency
Postgraduate diploma in Health Research

an international programme with Glyndwr University. This programme, which was set up during 2009-2010, enables TecnoCampus students to study their fourth year at Glyndwr, through two four-week stays at the university and by completing an End of Course project. Students who complete the programme will receive an international double degree: a Bachelor of Media and another degree from Glyndwr University, choosing from a BA in Design, Animation & Game Art or a BA in Television Production & Technology. In total, 111 undergraduate students in Media are benefiting from this programme.

Regarding the Master's programmes, the first edition of the University Master's in Chronicity and Dependency has started, offered by ESCS. The Master's programme is organised in conjunction with UAB (Universitat Autònoma de Barcelona) and in collaboration with TicSalut, Consorci Sanitari del Maresme and Hospital Clínic de Barcelona. This year has also seen the third edition of the University Master's in Entrepreneurship and Innovation, which provides students with specialist knowledge and specific entrepreneurial skills within the framework of a University Master's programme.

Overall, the total number of students enrolled during 2012-2013 in the universities of TecnoCampus was 1,835. The degree programmes with the highest influx of students were the Bachelor of Media, with 566 students; the Bachelor of Business Administration and Management, with 403 students; and the Bachelor of Nursing, with 252 students.

Regarding the acceptance of the degree programmes among new students

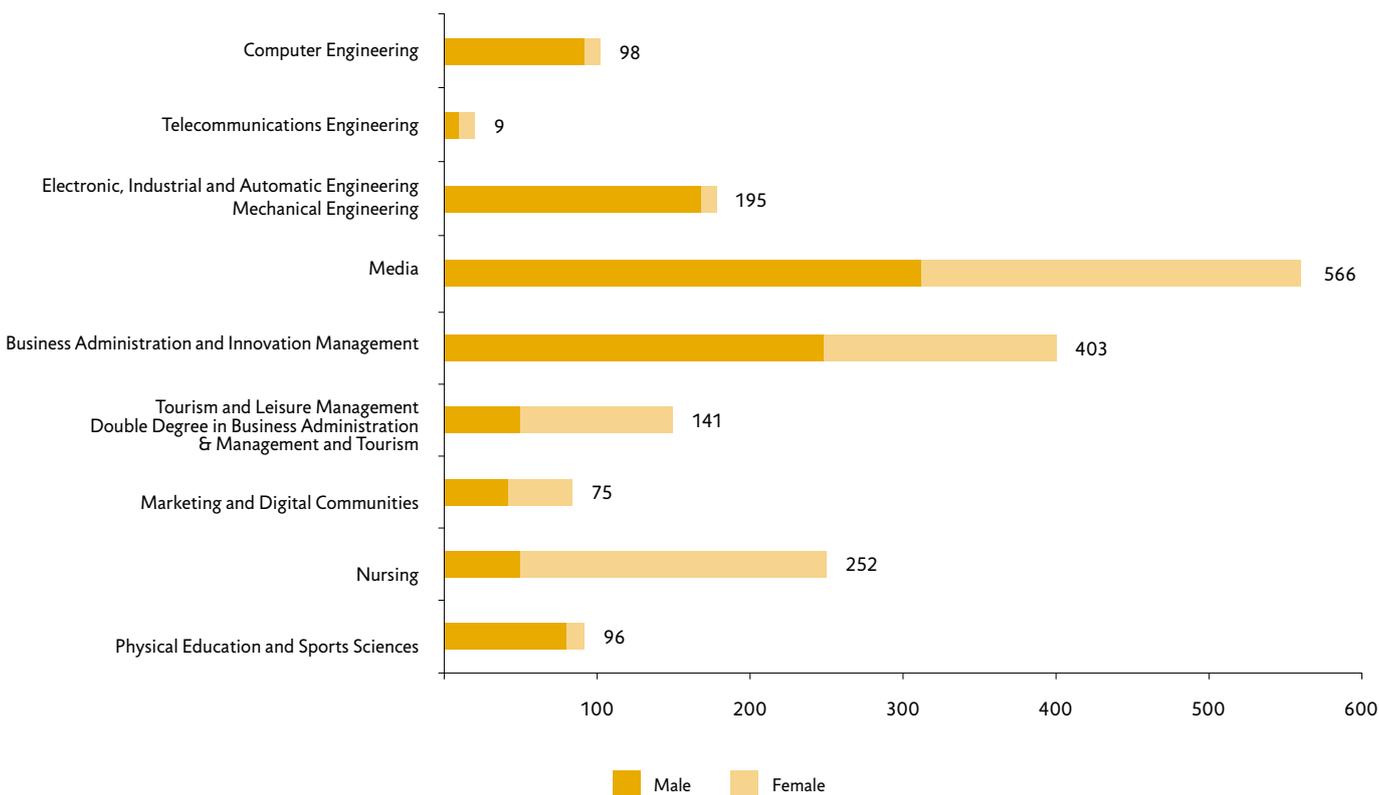
to the university, once again this year the studies at TecnoCampus have had a good reception, as shown by 87.1% of students studying at TecnoCampus, who state that it was their first choice. The programmes with the highest number of first-choice applicants were Media (97%), Electronic and Mechanical Engineering (93.5%), and Business Administration and Management (93.1%).

Regarding new students enrolled for the first time, during 2012-2013, 669 new students were enrolled at the TecnoCampus universities, an increase

of 20% on the previous year as can be seen in the graph below. As to the geographical origin of these new students, the regions providing the highest number of students were Maresme (43%), Barcelona (29%), and Vallès Oriental (11%).

With reference to the number of graduates, this year has seen 145 individuals graduate from EUPMT and EUM. Given that the Escola Superior de Ciències de la Salut was only set up in 2010, there are currently no graduates from this school.

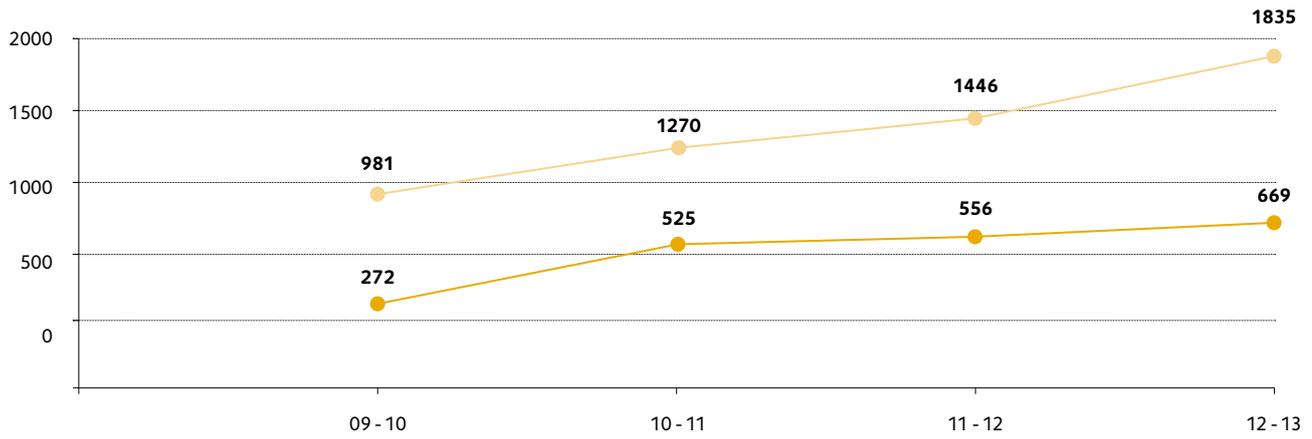
Number of students enrolled, by university centre and gender



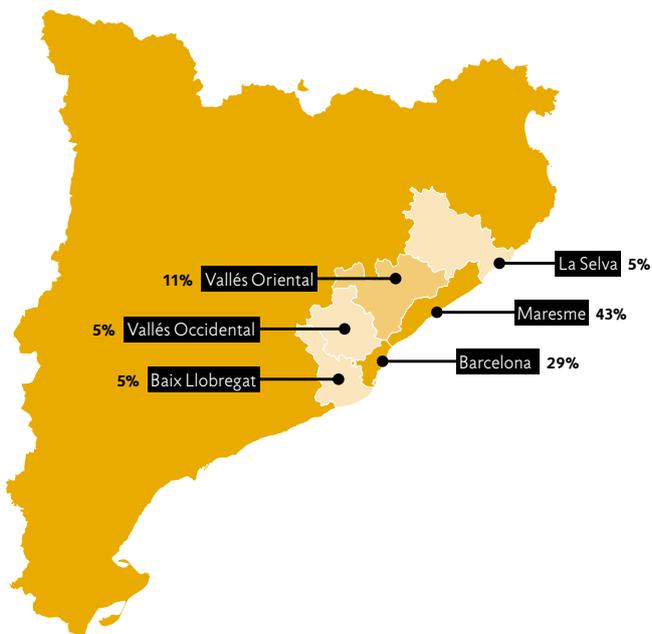
"When choosing a university, for me it is essential that it provides you with opportunities and an optimistic future. Undoubtedly, TecnoCampus provides those opportunities, day after day, unthinkable at other universities. For me, it is a customised university, tailored to each individual".

Oriol Martí
Alumni of the TecnoCampus universities.

Evolution in the number of new students enrolled from 2009-2010 to 2012-2013



Geographical origin of new students

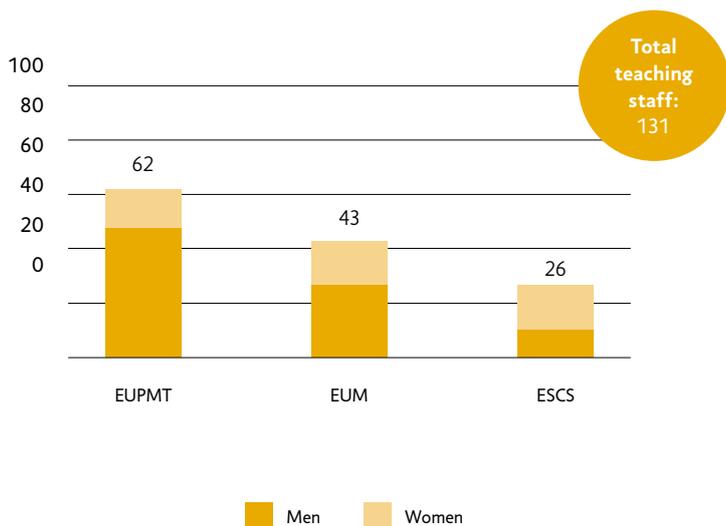


669 New students

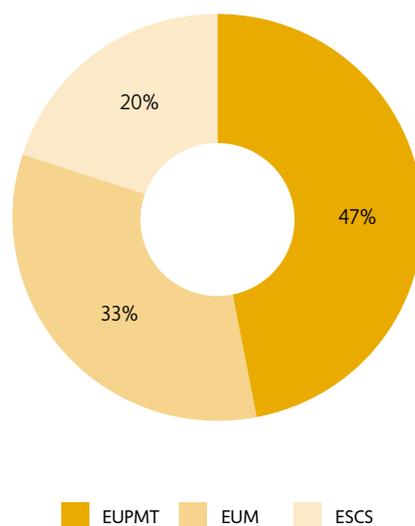


166 Graduates

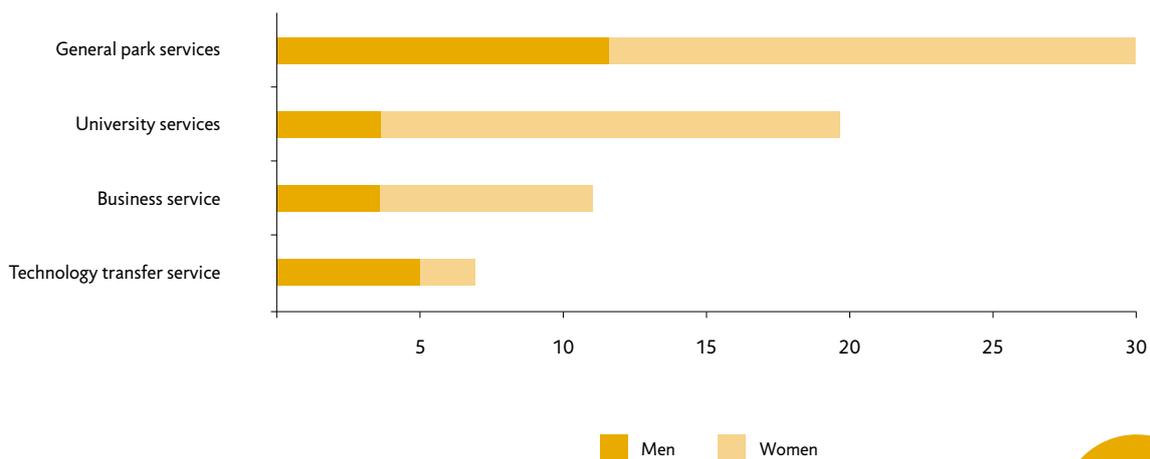
Teaching and research staff



Teaching staff by university



Administration and service staff



Classrooms and laboratories

TecnoCampus has a network of state-of-the-art facilities for teaching and research activities. All degree programmes have next generation laboratories in order to assist students' learning and practice, aid the assessment of competences acquired on completing the course, and ensure innovation in teaching and learning methods.

The university building has a total of 25 fully equipped classrooms, covering a total area of 2,536 square metres, with a capacity for more than 1,600 students at the same time. All the classrooms are equipped with multimedia projectors and hi-fi sound systems, which ensures teaching is supported by the best technology. Internet access and other resources are available thanks to the high-speed connection available in the classrooms and Wi-Fi coverage, enabling students to access learning resources from the classroom itself. In addition to these classrooms, the "Graduate Room" is equipped with fine furniture and designed for teaching on Master's programmes or the presentation of End of Course or Master's dissertations.

Mechanical and Electronic Engineering Laboratories

- Control and Communications lab
- Physics lab
- Materials lab
- Manufacturing and Mechatronics lab
- Mechanical Design lab
- Electronics, Electric Machines and Power Electronics lab
- Mechanisation space

Computer Laboratories

- 4 Computer labs with 16 computers in each one
- 1 Computer lab equipped with 27" iMacs

Audiovisual Laboratories

- Semi-anechoic chamber
- 2 radio control desks and 2 radio studios
- Television control unit
- Television set
- 8 sound post-production rooms
- Audiovisual material hire service

Nursing Laboratories

- Intensive care unit
- Hospitalisation unit
- Paediatric-neonatal care unit
- Emergency service
- Primary health care unit

Health Innovation Simulation Centre (CSIS)

The CSIS of the Escola Superior de Ciències de la Salut was set up with the aim of assisting and promoting the development and comprehensive training of students and health professionals using innovative learning methods. Three main lines are developed at the centre: a) teaching and training, both for university students as well as others through the on-going training programmes offered there; b) assessment of students to ensure that they acquired the required competencies and c) execution of investigation projects to design and identify more advanced and efficient educational methods focused on simulation with patients.





"We want to transmit the importance of monitoring health, physical activity and the quality of life of individuals in order to have a more healthy society".

Esther Cabrera

Director of the Escola Superior de Ciències de la Salut (ESCS)

During 2012-2013, a new Social Grant scheme was implemented in order to ensure that students with excellent academic performance experiencing financial difficulties can continue their university studies at TecnoCampus. In this first edition, 17 grants were announced to fully finance the registration fees during the four years of the degree programme, of which 11 have been awarded.

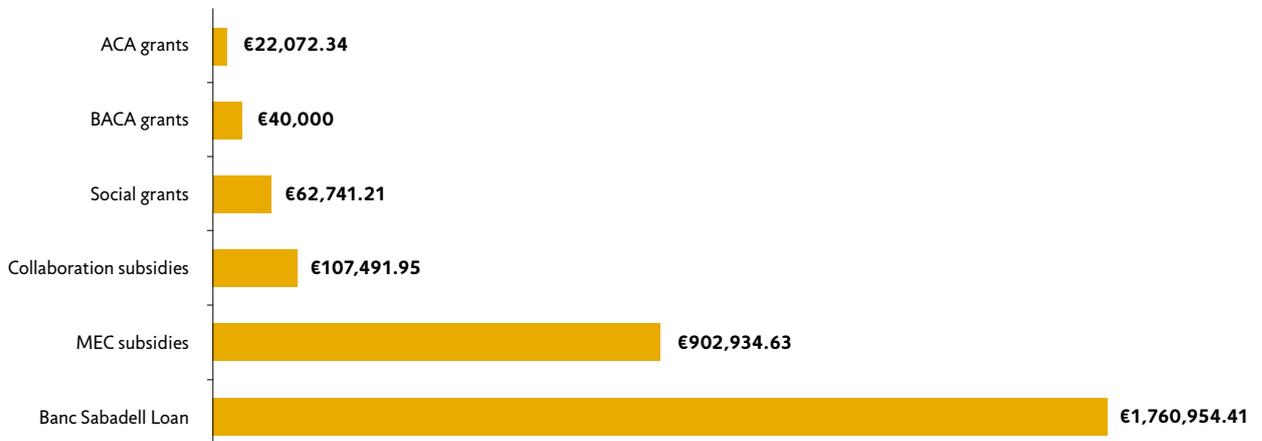
This new grant scheme joins other schemes already in operation at TecnoCampus: the subsidies of the Ministry for Education; the ACA grants of the Directorate-General of Universities of the Department of Economy and Knowledge; the international mobility grants; and University-Industries grants, in which different companies award study assistance grants to students with an excellent academic record who are highly motivated. This year 10 University-Industry grants were awarded, for a total value of €40,000, thanks to the companies Procter&Gamble (P&G), Beiersdorf, Aqua Hotels, Golden Hotels, and Bòboli.

Furthermore, there has been an increase in the number of beneficiaries of the Banc Sabadell loans, a scheme tailored to TecnoCampus students to finance the registration fees of the degree programmes in six or twelve monthly payments at zero per cent interest. During 2012-2013, 436 students, 23.7% of total students at TecnoCampus, benefited from this scheme.

Finally, 38 TecnoCampus collaboration subsidies were awarded, representing a total sum of €107,491.95. As part of these subsidies, the beneficiary students registered in Bachelor or University Master's programmes perform collaboration tasks in the different departments of TecnoCampus in exchange for financial assistance.

Grants awarded and other financial aids	Number	Amount
Ministry for Education subsidies	355	€962,934.63
ACA grants ¹	73	€22,072.34
Banc Sabadell 0% interest loan	436	€1,760,954.41
TecnoCampus Social Grants	11	€62,741.21
TecnoCampus collaboration subsidies	38	€107,491.95
University-Industry Grants		€40,000

¹ At the close of this report, the figures of the ACA grants for 2012-2013 had not yet been finalised, therefore the amount given in the table corresponds to the year 2011-2012.



The Enginy Awards recognise the top research projects by secondary school students

On 17 June, the awards corresponding to the sixth edition of the Enginy Awards were presented, recognising the top research projects by secondary school students. Organised by the movement Xnergic with the support of EUPMT, the winners received a year of free registration fees in any of the university Bachelor programmes associated with the engineering specialisations taught at TecnoCampus.

The winners were:

- **1st prize:** Dídac Garcia Rodríguez, from Institut Puig i Cadafalch, Mataró, with the investigation project "Creation of a magnetorheologic suspension system for bicycles".
- **2nd prize:** Sergi Colomé and Alexis Buza, from Institut La Llauna, Badalona, with the project "The Intelligent Car".
- **3rd prize:** Daniel Sagrera Ramos, from GEM, Mataró, with the project "Creation of a domotics home".

Students of the Bachelor of Media receive the Miramar award in the radio category

The Radio Miramar award this year was won by a group of students from the Bachelor of Media with the piece "Self-managed Cultural Facilities: Occupations". The awards were presented at the Parliament of Catalonia at a ceremony presided by the President of the Parliament, Núria de Gispert.

The winners were Guillem Carnós, Oriol Corbella, Bruno De Fabrízis, Sara Avilés, Álvaro Geerts and Jordi Casamayor. The piece they presented was a shorter version of a report they made in the last practical session of a class on self-managed cultural facilities. Part of the award includes an internship at RTVE.





"Research and its real application in society will play an increasingly important role".

Marcos Faúndez

Director of the Escola Universitària Politècnica de Mataró (EUPMT)

In the area of research and knowledge transfer, work has continued to provide support to the activity of TecnoCampus' own research groups, with the aim of developing a quality investigation activity that generates new knowledge, and consequently transfers such knowledge to the companies located in the park and to society. Currently TecnoCampus is 306th in a total of 977 organisations that undertake research in Spain, and for the first time, it is positioned within the first third of the ranking by the specialised social network Research Gate.

TecnoCampus research groups

EUPMT

- Signal Processing research group
- Power Electronics research group
- GRIC (Innovation and territorial competitiveness) research group
- GREBITECH (Applied biomechanics and medical technologies) research group
- SSIT (Sound, silence, image and technology) research group

ESCS

- Preventive healthcare and cancer
- Aging and dependency
- Empowerment and health education
- Teaching innovation in nursing
- Chronic wounds

EUM

- GRABET (Research group in welfare, economy and tourism) research group
- CEO (Competencies, entrepreneurship and occupation) research group

Research groups in the area of Technologies

The Signal Processing research group, set up in 1995, investigates areas associated with pattern recognition, with a special emphasis on human biometric recognition, from face, hand, voice, online signature and fingerprints. This group is recognised as a consolidated research group by AGAUR of the Catalan Local Government (Reference GRC-1318).

The line of research in Power Electronics, with scientific contributions dating back to 1998, is focused on multi-level converters applied to wind and/or solar generation. It is currently collaborating in two projects "Advanced Wide-Band Gap Semiconductor Devices for Rational Use of Energy (RUE)" and "Advanced Techniques for AC Multilevel Power Converters Applied to the Rational Use of Electrical Energy".

The GREBITECH (applied biomechanics and medical technology) research group carries out investigation and development activities in applied biomechanics and medical technologies, using the latest innovations in

movement analysis, interpretation and correlation techniques with the functional alteration of the patient. The group's specific lines of research include: a) improvement in the design of prostheses in paediatrics; b) implementation of innovative technologies in the area of functional assessment; c) implementation of 3D representation to assist in specialist interpretation; d) design of clinical protocols to assist in the interpretation of cinematic and kinetic data by the medical community; e) design of ICT applications to implement biomechanical parameters in clinical history; and f) design of videogames that provide the patient with biofeedback and target information on the evolution of the pathology.

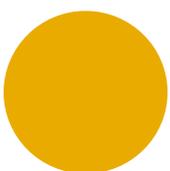
The fourth research group in this area is the GRIC (innovation and territorial competitiveness) research group, whose aim is to generate knowledge on the innovation process and its impact on productivity and competitiveness in companies and regions. The main lines of research with which it works are the geography of innovation, territorial development in the entrepreneurial process, and the determining factors of competitiveness in SMEs.

Finally, the SSIT (sound, silence, image and technology) research group is an independent group with university lecturers from different training backgrounds and origins. SSIT promotes and carries out research projects in the area of audiovisual communication and advertising, notably on sound, music, and silence in relation to image and technology, taking these last elements of acoustic utterance as determining and transmission factors and means. Its three main lines of research include: a) thought and the aesthetics of sound and music; b) technological context of utterance; and c) music, sound and media communication.

Research groups in the area of Business

The GRABET (applied economic welfare and tourism) research group started in 2008 and was recognised as an emerging research group in 2009. GRABET performs applied economic research on different areas associated with social and economic welfare, placing a special emphasis on tourism as a concept close to leisure. These areas are mainly: tourism, transport (air and maritime), housing/urbanism and the employment economy, although occasionally it carries out applied economic research on other areas.

The CEO (competencies, entrepreneurship and occupation) research group, set up in 2011, organises its lines of research around three main areas: a) education - entrepreneurship, which includes lines of research on the conditions, restrictions, and the potentialities of educational systems; competencies and skills needed in the business world; and institutions and agents linked with entrepreneurial education; b) economy - education, which includes research lines on education level and occupational integration; on-going training in the economics area; and quality in occupational integration; and c) entrepreneurship - economy, which studies issues such as the level of success in emerging and consolidated companies; new company start-ups and management models and macroeconomic institutions; economic cycles; and entrepreneurship - national and international political and economic situations.



Grups de recerca en l'àmbit de l'Empresa

Grup de Recerca Aplicat a Benestar, Economia i Turisme (GRABET)

Coordinator: Dr. Josep Maria Raya

Group members:

- Dra. Catia Nicodemo
- Paula Garda
- Dr. Francesc Sastre
- Dra. Catalina Juaneda
- Dr. Carlos Pestana
- Dr. Joan Ripoll
- Dra. Esther Martinez
- Dolors Celma

CEO (Competencies, entrepreneurship and occupation) research group

Group members:

- Dr. Aleksander Kucel
- Dra. Núria Masferrer
- Màrian Buil
- Dr. Noemí Ruiz
- Dr. Peter Robert
- Ivette Fuentes
- Dr. Montserrat Vilalta-Bufí
- Dr. Montse Vilalta-Ferrer

El Grup de Recerca Aplicada en Benestar Econòmic i Turisme (GRABET) va néixer el 2008 i està reconegut com a grup de recerca emergent des del 2009. El GRABET realitza un recerca econòmica aplicada en diverses àrees que tenen a veure amb el benestar social i econòmic, realitzant especial èmfasi en el turisme entès com a concepte proper al lleure. Aquestes àrees són principalment: turisme, transport (aeri i marítim), habitatge/urbanisme i economia laboral, tot i que de forma puntual també es fa recerca econòmica aplicada sobre altres temes.

El grup d'investigació Competències, Emprenedoria i Ocupació (CEO), constituït l'any 2011, organitza les seves línies d'investigació al voltant de tres eixos principals: a) educació – empenedoria, que inclou les línies de recerca sobre condicions, restriccions i potencialitats dels sistemes d'educació; competències i habilitats necessàries al món empresarial, i institucions i actors vinculats a l'educació empenedora; b) educació - economia, que inclou les línies de recerca en grau d'educació i inserció laboral, formació contínua en l'àmbit econòmic i qualitat de la inserció laboral, i c) empenedoria – economia que estudia temàtiques com el grau d'èxit de les empreses emergents i consolidades, els nous models de creació i gestió d'empreses i institucions macroeconòmiques, els cicles econòmics, i empenedoria – conjuntures polítiques i econòmiques nacionals i internacionals.

Grups de recerca en l'àmbit de la Salut i el Benestar

Preventive health and cancer research group

Group members:

- Dra. Esther Cabrera
- Dr. Ignacio Blanco
- Carolina Chabrera

Ageing and dependency research group

Line of research in the care of dependent senior citizens

Coordinator: Dra. Adelaida Zabalegui

Group members:

- Dra. E Cabrera
- Dr. A Gallart
- Dr. MA Escobar
- Dra. Bardallo

Line of research in Chronic Wounds

Group members:

- Carme Rosell
- Dr. José Verdú Soriano

Line of research in informal care

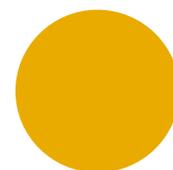
Group members:

- Dra. E Cabrera
- Griselda Manzano
- Carolina Chabrera
- Carol Rosell
- Susana Santos

CSIS (Health innovation simulation centre) research group

Group members:

- Carolina Chabrera
- Eva Diago
- Carme Rosell
- Laura Curell
- Sandra Arco



Research groups in the area of Health and Welfare

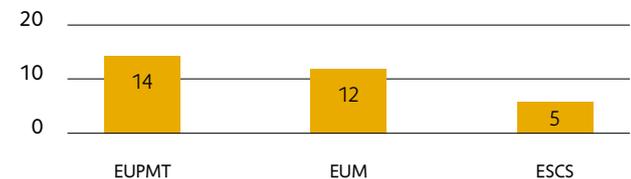
In the area of research, the ESCS is currently undertaking projects in the area of aging, physical activity and health, and dementia and cancer, and participates in numerous disciplinary projects, one of which falls under the European Union Seventh Framework Programme of the Hospital Clínic, Barcelona and seven European countries.

The ESCS also participates in a consolidated research group on dependent elderly care, together with the Fundació Clínic per a la Recerca Biomèdica, Barcelona.

Regarding the participation of teaching staff in research activities, 23.6% of full-time lecturers at TecnoCampus regularly perform research activities. Of these, 41% belong to one of the technology research groups, 39% to business research groups, and the remaining 16% participate in research projects on healthcare and welfare. In gender terms, 42% of full-time staff who perform research activities are women.

Number of publications by teaching staff	37
Number of publications presented at national and international research conferences	26
Participation of teaching staff at national conference activities	8
Participation of teaching staff at international conference activities	16

Full-time teaching staff who perform research activities, by university centre



Group project by TecnoCampus and Consorci Sanitari del Maresme to develop a software program applied to diagnostics

A group project between engineers from TecnoCampus and Consorci Sanitari del Maresme has developed computer software for the tissue analysis of colon biopsy samples from patients with diverticulosis. The project represents a cooperation initiative between a group of Czech engineers directed by the director of the EUPMT, Marcos Faúndez, as part of a European subsidy in the Seventh Framework Programme.

Collaboration of students and lecturers from ESCS in virtual nursing project

During March, the first two parts of a series of videos on the Virtual Nursing healthcare portal of the Barcelona Official College of Nurses (COIB) on healthy habits during cancer treatment were released. A TecnoCampus student (Oleguer Rocafull) was responsible for preparing the material with the support of the Regional Delegation of the COIB in Maresme and Mataró Hospital, who lent their facilities for the filming. One of the nurses who forms part of the delegation is Laura Curell, a lecturer on the Bachelor of Nursing programme at ESCS. The major advantage of this initiative is that it provides patients with easy access to information, as the recordings can be viewed at any time and consulted as often as required by the patient.

Doctoral theses submitted during 2012–2013

As a result of the efforts carried out to increase the number of doctors at the universities of TecnoCampus, during 2012-2013 three new EUPMT lecturers have submitted their doctoral theses and it is expected that three more will do so in the next three months.

- On 20 September 2012, the EUPMT lecturer Enric Sesa went before a viva voce for his doctoral thesis entitled "An online writer recognition system based on in-air and on-surface trajectories" before the Department of Computer Architecture of the Universitat Politècnica de Catalunya and was awarded Apte cum laude.
- On 30 May 2013, the EUPMT lecturer Xavier Font went before a viva voce for his doctoral thesis entitled "Visible, Near Infrared and Thermal Hand-Based Image Biometric Recognition" before the Department of Computer Architecture of the Universitat Politècnica de Catalunya.
- On 14 June 2013, the lecturer Virginia Espinosa went before a viva voce for her doctoral thesis entitled "Face recognition by means of advanced contributions in machine learning" before the Department of Signal Theory and Communications of the Universitat Politècnica de Catalunya and was awarded Apte cum laude.

Technology Transfer

The knowledge and technology transfer project section of the TecnoCampus Foundation aims to provide support in the implementation of innovative systems and technology transfer in companies, and in research and development centres at local, national and international levels.

Knowledge Transfer groups

- Integration Competence Centre (CCI) of the Office of Standards and Interoperability (OFSTI)
- Centre de Coneixement Urbà (CCU)
- Netlab

The CCI (Integration Competence Centre) focuses its activity on the application of ICTs in the healthcare sector, providing consulting, training, development and maintenance services to suppliers, companies and government bodies. The centre bases its expertise on the knowledge of standards and regulations, both national and international, and on the different tools used to manage or apply them: HL7 messaging, SNOMED CT clinical terminology, DICOM image digitalisation standard, and integration platforms such as Mirth and Ensemble.

More specifically, during 2012 it developed the following projects:

Maintenance of the pre-production, production, acceptance and the development environments of HC3 (Shared Clinical History in Catalonia), and collaboration in defining the data structure of HC3 to include SNOMED-CT.

- Definition of the interoperability framework of the personal health record, and the interoperability requirements and compliance criteria for different products and services.
- Development of several verification tools for ECG and spirometer interoperability and support of the Catalan Health Institute, through the OFSTI, in integrating spirometers in the e-CAP software according to CDA-R2 spirometry.
- Promotion of CDA and HL7 standards for different medical devices and active participation in the PHR Spain committee and definition of requirements.
- Collaboration in the creation of the Catalan extension of SNOMED-CT terminology. Support of its deployment: standardisation and extension of the Anatomical Pathology, Allergies and Vaccinations subset.
- Maintenance and update of STERMCAT.
- Accreditation of the interoperability of different applications and devices: spirometers, PACS, applications for anatomic pathology, etc.

The CCU (Urban Knowledge Centre) has been working on projects carried out in conjunction with Mataró City Council to update and improve the functionalities of three core databases with geographic information



“Knowledge transfer at TecnoCampus already has tangible examples in the field of ICT applied to healthcare”.

Léonard Janer

Director of the Technology Transfer Centre of the TecnoCampus Foundation

systems: the map of Mataró, the municipal register of inhabitants, and the database of commercial waste and the land registry. Furthermore, actions have been carried out to set up a shared space in the City Council’s network with a single database of the different facilities in the city, so that each unit can update it. On a more theoretical level, work has been done on revising the city’s pedestrian traffic model. The project documents the traffic speed according to the street type and pedestrian age. In addition, it also documents the generation of slopes from the digital elevation model (MDT).

Finally, Netlab, which, together with CCI and CCU, is one of the research and technology transfer groups integrated within the Transfer Projects section of the Foundation, has undertaken the following projects:

- Development of a pilot scheme for the implementation of a remote reading system to manage 15 counters for the population of Cusco (Peru) through a standard communications protocol DASH7. Project carried out by Wayra Networks.
- Development of an action plan to reduce urban noise (2013–2018). Project carried out in conjunction with the Acoustics Area of TecnoCampus with the Barcelona Provincial Council and Mataró City Council.
- Development of a noise map by Mataró City Council and Sant Cebrià Town Council. Project carried out in conjunction with Barcelona Provincial Council.
- Development of a study on noise produced during the collection of OTHER WASTE by waste collection lorries in the municipalities of Prat de Llobregat, Terrassa, Mollet del Vallès, Igualada, Vilassar del Mar, and Sant Cugat del Vallès. This project was carried out in conjunction with Barcelona Provincial Council and the Town Councils of the municipali-

ties where the project takes place.

- Collaboration in the project M2MEverywhere. This project develops a new communications card for Orange, where Netlab participated in the development of the microphone software and the communications transceiver.
- Communication protocol of the Lifewear project, developing the communications protocol between DASH7 nodes in order to improve effective communication between fire fighters during a mission and their truck.
- Development of a platform to offer a real-time notification service for the UACU Mobile app.
- Development of an alarm system for articulated lorries. The purpose of this system is to detect any manipulation of the curtains on the side and top of the trailer and of the back door. This project was carried out for the company Powered Cub.
- Development of a tablet that allows the trailer to be unblocked when connected to the tractor (cabin). This project was carried out for the company Powered Cub.
- Execution of two training sessions for the Mataró police force to explain the operation and tools to detect possible alterations in the installation of sound limiters in beach bars.
- Participation in the project “Development, prototype and experimental testing of a network of interactive urban communication devices for Smart Cities”, led by Alooha and co-funded by the Plan Avanza of the Ministry for Industry, Energy and Tourism.

Area	Contracting authority	Object of the contract	Amount
State	Ministry of Economy and Competitiveness (MINECO)	Undirected essential research projects	€98,131
		Technology transfer project, INNPACTO contract	€280,017
Catalan	Barcelona Official College of Nurses (COIB)	Research projects	€6,600
	Badalona Cancer Control Foundation	Research projects	€5,000

TecnoCampus participates in an international event in France on eHealth

During July, TecnoCampus participated at eHealth Summer University held in Castres (France). The CCI (Integration Competence Centre) participated in a round table on interoperability on an international scale, which discussed how the different personal health records could be shared on a European level, so that when European citizens travel around Europe, both they and medical staff have access to their medical information. The CCI also participated in a round table with Barcelona Mobile World Capital to present solutions in mHealth and discuss the topic. The participation of TecnoCampus this year was rounded off with an awards ceremony, at which the Park's Managing Director, Jaume Teodoro, gave a speech.

TecnoCampus participates at Smart City World Congress

The event on 30 November enabled entrepreneurs, spin-offs, companies, technology and research centres at science and technology parks to present their projects to the directors and delegates of companies and investors present at Marketplace at a personal interview. TecnoCampus participated, through its Technology Transfer Director Léonard Janer, in the selection of the projects that could participate, from a total of 155 projects (from Algeria, Argentina, Denmark, Spain, Finland, France, Italy, Poland and the USA). Of those selected, 36% were focused on technology and innovation, 14% on energy, 13% on collaborative partnerships, 12% on mobility, 10% on the environment, 4% on planning, and 3% on governance. In addition, Léonard Janer accompanied the company Accenture during its B2B meetings with the selected projects.





Campus management is made up of a set of university services that provides transversal support to academics. Without these services, the academic area would not have meaning, like for example the Learning and Investigation Resources Centre (CRAI) or the management of international mobility programmes for students and lecturers. At the same time, these services give the TecnoCampus an added value, reinforcing the university-industry relationship, like for example the job placement and internship service for students, the university entrepreneur programmes, the Alumni service or on-going training.

Learning and Investigation Resources Centre (CRAI)

The Learning and Investigation Resources Centre (CRAI) is a service for the entire educational community at TecnoCampus, offering quiet study and group workspaces, as well as a library catalogue suitable for all the studies taught. More specifically, the CRAI has seven individual study rooms, two computer rooms with 10 computers per room, two general-use common rooms for group work and study, and a space for consulting the periodicals collection.

The library is open to students, alumni, teaching staff, and administration and service staff of TecnoCampus. It is part of the Library, Publication and Archive Service of the Universitat Politècnica de Catalunya.

During 2012–2013, more information and advice on learning resources has been provided to students, increasing the number of training sessions. Several general assistance sessions have been scheduled at the start of the course, and up to four sessions have been carried out for the study programmes at EUM and ESCS. For EUPMT, two general sessions have been held for media studies, and four for computer and electronics studies within the transversal competence framework included in the curriculum “Responsible use of information resources”.

Facilities

Total surface area (in square metres)	1,198
Public-use computers	20
Study rooms	11
Reading areas	225

Library

Total surface area (in square metres)	1,198
Public-use computers	20

CRAI operation

Total loans	2,068
Users who have visited the library	102,523
Users who have visited the library on public holidays and weekends	13,289
Use of study rooms	5,714

Loans between Catalan public universities

Requested	
Received	114



"I chose TecnoCampus for the differentiated offering compared to other centres, with subjects better focused on my area of interest".

Abigail Morales
Student at Escola Universitària del Maresme (EUM)

Job placement & internship service

During the period, 83 job offers and 296 internships were published. Of these, 188 were done as part of academic cooperation agreements with companies: 106 for EUM students and 82 for EUPMT students. The degree programmes with the highest number of students working under academic cooperation agreements are the Bachelor of Business Administration and Management and Innovation Management (66 agreements signed), the students of the Bachelor of Media (45 agreements signed), and the Bachelor of Tourism and Leisure Management, with 30 cooperation agreements.

The ESCS has its own internship programme, given the special impact that training periods have in nursing with a total of 80 credits. For this reason, a total of 15 health centres form part of the internship network of the ESCS, where notably the Consorci Sanitari del Maresme with Mataró Hospital are the main recipients of student interns.

The main new development this year, however, is the implementation from 1 January 2013 of a new web application. This application allows the entire cooperation agreement process to be managed more efficiently, as well as assisting coordinators in monitoring the internships of the different study programmes. With this new application, students can receive an email each time a job offer associated with their studies is published and companies can directly view the profiles of students interested in the job offer. At the end of this year, 477 students and 205 companies had registered.

296

Internships published

83

Job offers published

188

Academic cooperation agreements managed by EUM and EUPMT

Operation of the web application of the Job Placement Service

Total students registered in the application	477
Number of companies registered	205
Number of EUM students registered	229
Number of EUPMT students registered	241
Number of ESCS students registered	7

Innoemprèn University

Innoemprèn University is a project mentoring initiative for students in which the University and Industry areas of TecnoCampus work in conjunction. The three-month programme started in April 2013 and finished at the end of June 2013.

This programme, taught outside the scope of the academic curriculum and teaching hours, received the voluntary participation of more than 40 students, from the Bachelor programmes in Business Administration and Management, Marketing, Tourism, Media, Computer Engineering and Electronic Engineering. The participating students share their entrepreneurial spirit and desire to transfer their business idea into a value-added proposal for the market.

One of the results obtained was the group of entrepreneurial students were provided with a range of tools and knowledge shared by experts, which has helped them to reflect on and develop their idea. Students have been able to approach the market and thus correctly define their business model. In total, they have worked on 20 projects.

Thanks to the learning achieved during this period, 25% of the projects have almost completed their minimum viable product (MVP) and are preparing for their first real taste of the market. The remaining projects are working on developing the MVP or comparing their hypotheses with the market. The goal sought is that 40% of the projects are established and operating in the market by the end of 2013.

Innoemprèn University is free for all students registered in any of the Bachelor programmes taught at TecnoCampus universities (EUPMT, EUM, and ESCS).

TecnoCampus entrepreneurs Sara Giménez and Rosendo Garganta, winners of the Yuzz awards

TecnoCampus students Sara Giménez (double degree programme in Business Administration and Innovation Management/Tourism and Leisure Management) and Rosendo Garganta (Master's in Entrepreneurship and Innovation, and winner of the last edition of the Cre@tic awards) won the Yuzz awards. After being selected for their entrepreneurial projects, they were awarded with a trip to Silicon Valley, together with 31 other entrepreneurs, where they could refine and start up their business project. In the case of Sara Giménez, her project received advice from the technicians and mentors at TecnoCampus through the Innoemprèn University programme.





"Xnergic connects adolescents passionate about technology with engineers of the future".

Emma Feriche

Head of the Entrepreneur Support Service at the TecnoCampus Foundation

Summer University

The Summer University was held at TecnoCampus from 25 June to 19 July 2013. Eleven courses and workshops were organised in the different knowledge areas of TecnoCampus, at which 89 people participated, with the Universitat de Mar i Ultramar seeing 80 participants. Three conferences were held "Sport, Doping in Health", "Logistics and Maritime Businesses", and "The Electricity that moves us", at which relevant topics of the respective sectors were discussed, with a total participation of 245 people.

In addition, several nautical activities, an alumni reunion, the Senior Classes, and the Xnergic Technology Campus were held during the period. In total, seven courses were programmed with 97 participants. The framework of the Summer University was also used to host the 34th Maresme Summer School of Educational Movement (MEM), with the participation of 300 lecturers.

The Summer School finished with UniSantes, a live music event organised by the TecnoCampus Students Union that was programmed as part of the pre-Santes events and held in the main square of TecnoCampus, with a large number of young people from the city.



Encouraging entrepreneurship among school children

For several years, the TecnoCampus Park has been leading and participating in different entrepreneurial schemes held at several schools in the area, at both primary and secondary level, to encourage an entrepreneurial spirit among school children. More specifically, it has collaborated in two programmes:

- At primary level, since 2012, TecnoCampus has been participating in conjunction with the Municipal Education Institute (IME) in the "Cultura Emprenedora a l'Escola" programme, an initiative led by the Economic Development and Occupation and the Knowledge and New Technologies areas of the Barcelona Provincial Council. The school, Escola Àngela Bransuela participated for the second year running with students in 6th class, and the school, Escola Josep Manuel Peramàs participated for the first time with 5th class students.
- The "Emprendre a la Meva Escola" programme is pioneer in that it aims to encourage an entrepreneurial culture in schools. The initiative is based on a real project creating, organising, managing and closing a manufacturing cooperative of handcrafted products, which will be sold in a craft market in the city, and requesting a microcredit for the project. This year a number of entrepreneurship awareness sessions have been taught with 876 students from eleven secondary schools in the area (ESO, Bachillerato, and CFGM and CFGS levels). The schools valued the programme very positively, giving it a global evaluation (between 0 and 10) of 9.

Xnergic

Xnergic is a technology community for pre-university young people, from 11 to 17 years old with a passion for technology. The aim is to bring young people closer to technology through entertainment. Xnergic was devised in September 2012 and put into practice in December of the same year with a Robotics Campus that took place during the Christmas holidays.

After the success of this first activity, other activities were organised throughout the year, such as regular learning groups on Saturdays on robotics and game programming, one-off activities such as technology invention demos, workshops, competitions and intensive campuses during holiday periods, such as the summer campus. In total, more than 250 teenagers participated in one of these face-to-face activities, a more than considerable number given that the initiative is in its first year.

Apart from the face-to-face activities, the essence of Xnergic lies in its virtual community, which connects young people passionate about the tech world and keeps them up-to-date with the latest developments. In short, it is a reference point for young people who want to learn to program or to start out in electronics. Xnergic is an unusual proposal, as it combines technology with strong values through its foundational Manifesto, which promotes the use of technology to provide social transformation by opting for open knowledge, teamwork and respect for the individual and others.

This initiative has awakened the interest of the different media and secondary schools, which recommend Xnergic to their students in order to extend specific technological knowledge (e.g. in performing research projects).

TCM Alumni

The TCM Alumni network was created by TecnoCampus in an effort to foster the former students' community of the park's university centres and there are currently 231 members registered on the group's page on LinkedIn.

On 11 July 2013 the Alumni group held another meeting to speak about false myths and the opportunities the Internet has to offer, and Genís Roca, who is an expert in digital transformation was invited to lead the talk.

Series of lectures in economics

In February and March the Escola Universitària del Maresme (EUM) organised the series "Lectures in economics at TecnoCampus". The initiative was backed by important figures from the academic world who in many cases, currently hold or have held positions of responsibility in different institutions and the talks dealt with the major challenges posed by the current complex economic situation.

In this year's series of lectures in economics Muriel Casals, Carles Sudrià, Xavier Fageda, Antón Costas, Jordi Pujol, Antoni Serra Ramoneda, Antoni Castellà, Antoni Castells, Guillem López Casanovas, Ramon Tremosa, Lluís Saurí, Josep Oliver and Joan Ramon Rovira spoke about different themes ranging from the reform of the financial system to the production model and also covered the shortcomings of the country's financing model and its infrastructure.

Lectures in economics at TecnoCampus



Education Fair

TecnoCampus had a stand at the Education Fair which took place from the 13-17 of March 2013 at the pavilion in Montjuïc, Barcelona. This allowed us to offer first-hand information to 858 students on the range of undergraduate and postgraduate degrees available at the three university centres.

Open Day

About 800 people, including prospective students and their families, took part in the Open Day at TecnoCampus on Saturday 13 April, where lecturers from the three university centres spoke about each of the undergraduate degrees on offer at the university and the special characteristics of each course.

ESCS students, together with their lectures, took part in the event by checking the blood pressure; body mass index and soundings on the physical activity of some 100 people. The EUPMT students, who act as coaches at the Xnergetic technology club, spoke about their activities related to robotics and video games. Of particular interest was the robotics demonstration in one of the labs with a robot programmed to simulate clapping movements and doing gymnastics.

Career Guidance & Information Week

TecnoCampus held the 7th Career Guidance and Information Week (SIOP) from the 8-13 of April 2013 at the Burriac hall in the TCM2 building with the opening session led by Ismael Palacin, director of the Jaume Bofill Foundation.

TecnoCampus also contributed by organising 11 workshops to generate interest in different areas such as IT, mechanical engineering, health sciences, technology, marketing and advertising. The Innovation and Creativity workshop deserves special mention as it used case studies and practical examples to demonstrate ways of creating business ideas and innovative business projects.





University Sports

The University Community Support Unit (UACU) encourages TCM students to take part in the sports competitions organised by the Universitat Politècnica de Catalunya (UPC) and the Universitat Pompeu Fabra (UPF). During the academic year several students from TecnoCampus were involved in different activities such as mountain biking, athletics, swimming and table tennis. We also organised internal sports competitions at TecnoCampus, which included the 3rd seven a side football league with 17 teams taking part, basketball matches and table tennis and paddle tennis tournaments.

Other activities organised by the University Community Support Unit:

- 3rd TCM Photography Competition and the 11th IAESTE Photography Competition.
- Support to groups, associations, castellers teams and student led initiatives: castellers, theatre, robotics, the Aula 103 group, entertainment groups, music bands, etc.
- Promotion and support in campaigns and events like blood donations to the Blood and Tissue Bank, the Food and Health Conference Day, the UNIDESERT Rally, the TCM Castellers Day, CineFòrum and the TCM Campaign to collect food and toys for Caritas.
- UACU workshops and classes in shiatsu, guitar, makeup, yoga relaxation, etc.
- Voluntary agreements and cooperation. New agreements signed with UNICEF and the Vicente Ferrer Foundation.
- TCM Card. We now have 75 agreements in place for benefits and discounts with different organisations in Mataró and the surround area.
- Support for activities organised by different groups in the university centres.

UACU Mobile

Netlab, the TecnoCampus technology transfer group has this year developed an Android application called UACU Mòbil. The app allows students to receive information about activities being carried out by the TecnoCampus Foundation University Community Support Unit. Notifications are shown in a list format and received in real-time by users and can then be easily shared via social networks. The app is available for Android smartphones using versions 2.2 and up until 4.1, and the beta version is currently free to download.

TecnoCampus Fakedub

A group of students and lecturers from the Audiovisual Media Degree course presented the first TecnoCampus lipdub with many people in fancy dress for the occasion. TecnoCampus Fakedub was posted online in May 2013 and in only 3 days was watched more than 6,300 times on YouTube.

“Els Passerells” celebrate its first year with a rehearsal in the main square of TecnoCampus

The TecnoCampus castellers team, also known as els Passerells, celebrated its first year in existence with a dress rehearsal in the main square of TecnoCampus on 17 February 2013. To commemorate the anniversary, “els Ganàpies”, one of the leading teams of university castellers from the Universitat Autònoma de Barcelona attended the event.

Els Passerells started out as an idea from a group of students at the park and together with help from “Capgrossos de Mataró”, another castellers team, became more established and began to grow as the year went on. The Mataró university team started out with a 4 level pillar at the “Emboirats de Vic” day of celebration and in less than a year had developed its first tower with six levels at the Emboirats winter day of celebration.



3. A park for companies and entrepreneurs





The TecnoCampus scientific and innovation park is a complex covering 47,849 square metres with several unique buildings: the U-shaped university building (10,818 m²) where most of the classes take place and where we also find the CETEMMSA research centre; the twin towers (TCM2 and TCM3) which are home to the business hosting and advanced services and the incubator and the conference centre (TCM4) with capacity for events of up to 350 people.

101

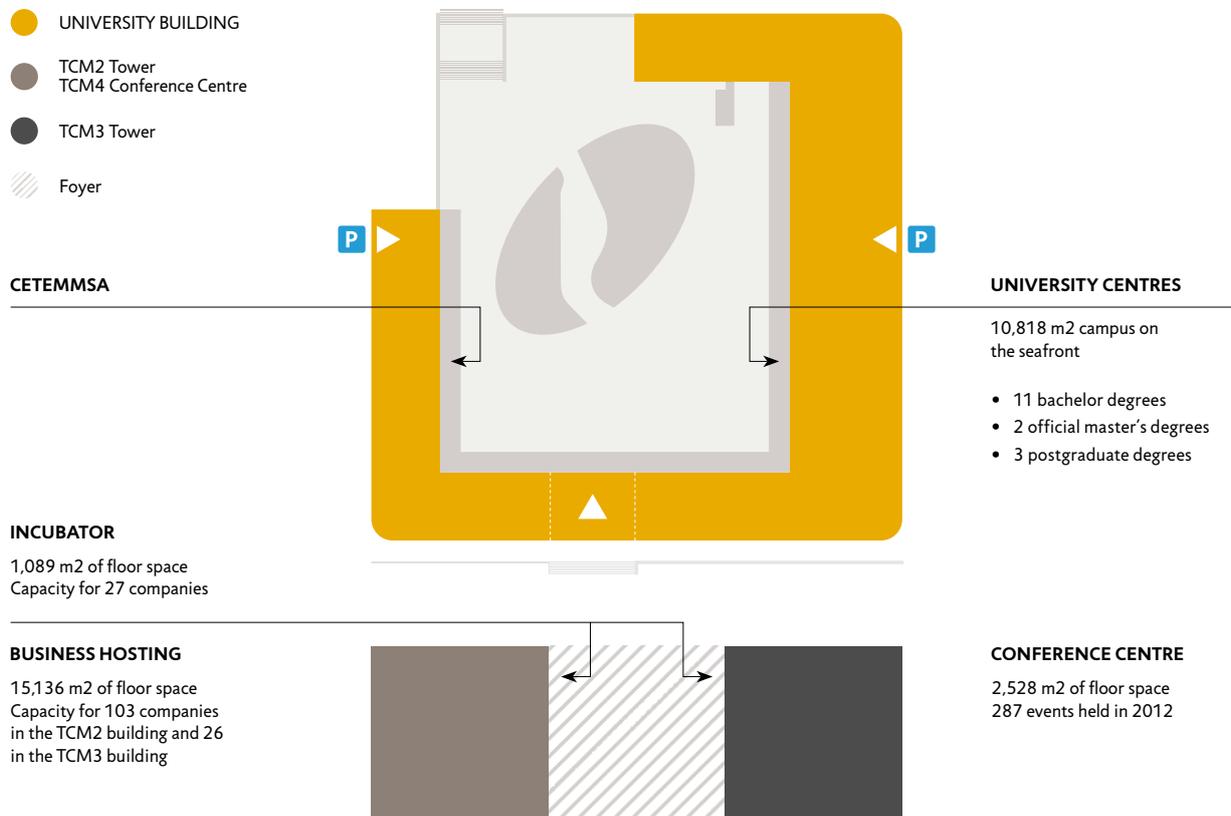
Companies and institutions

170

Affiliated companies

2,693

Daily users



TecnoCampus directory of companies





"TecnoCampus has provided us with the perfect place to start our business, both in terms of facilities and complementary services and the treatment received by the staff has been excellent".

Marc Martinell

Founding partner of Minoryx Therapeutics, based at the TecnoCampus Park Incubator

Incubator

TecnoCampus has an incubation area specially designed to house new start-ups working on innovative and/or technology based activities linked to the Park's clusters. This platform offers a modern plug&play type infrastructure and a range of added value services to help transform projects into consolidated and competitive companies. The incubator has space for 27 companies with independent spaces, open space and co-working areas all available.

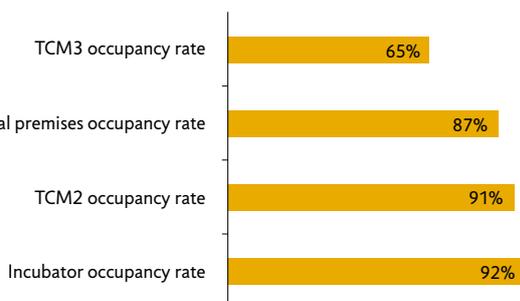
For a project to enter in the incubation space it must meet certain requirements, including, present a business plan, be starting out or in business for less than 12 months, be able to create new jobs and have an innovative and/or technology based activity in mind. In 2012, 25 companies were welcomed into the incubator, meaning we reached a 92% occupancy rate.

The incubator is part of the National Business Incubation Association (NBIA) and the CREAMED incubators network, a project led by the Mediterranean Euroregion and focused on the creation of synergies between business incubators in Catalonia, the Balearic Islands, Languedoc- Roussillon and Midi-Pyrénées region.

Business Hosting

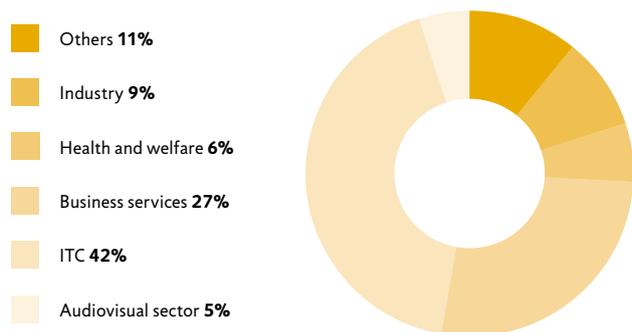
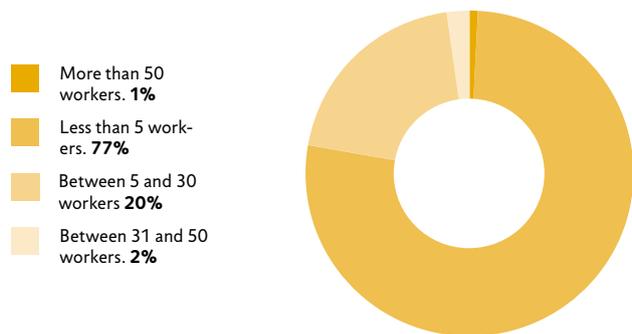
The commercial department worked throughout 2012 to achieve full occupancy of the different rental units at the park, which is now hovering about 84% and we have the following units available:

- TCM2: offices to rent from 23-56 m2, aimed at individual entrepreneurs, micro-enterprises and SMEs.
- TCM3: offices to rent from 200-800 m2 for more established companies with a greater need for space due to their business activities.
- Commercial premises: ground floor spaces in the TCM3 building, geared towards businesses providing added value to the park's community.



In total, there were 98 companies in the park in 2012 providing employment for 620 individuals. The majority of these businesses (77%) have less than five employees, 20% are companies employing between 5 and 30 people and the other 3% have more than 30 workers. If we look at the sectors, we can see 42% are working in information technology and communication, 27% in business services, 9% in industry, 6% in health and 5% in the audiovisual sector.

Among the new arrivals in 2012, it is important to mention that the consultancy firm Everis and the Barcelona Chamber of Commerce regional office have both relocated here, which now means that TecnoCampus is firmly established as a strategic model for both SMEs and larger companies with international stature.



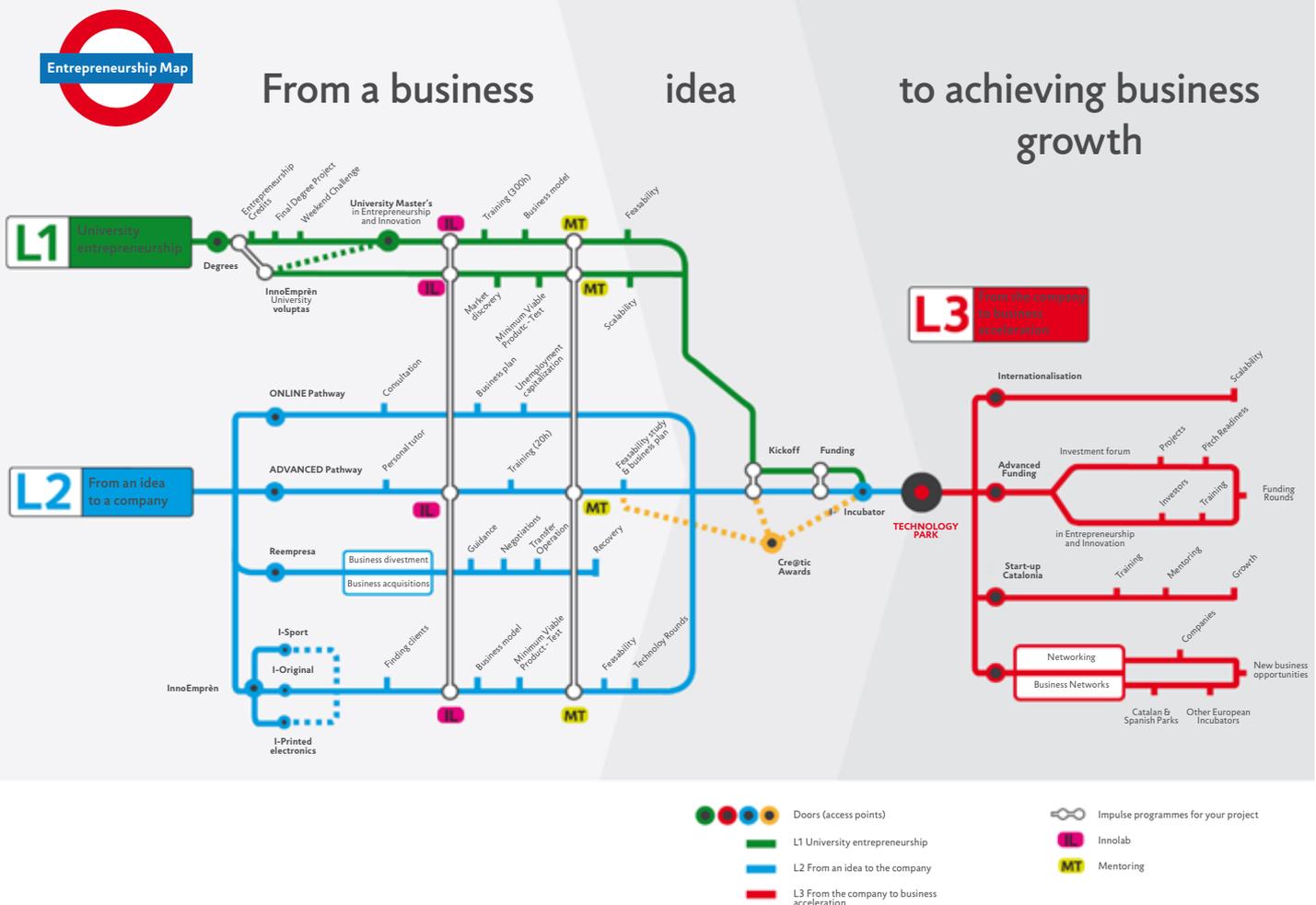
From a business idea to achieving business growth

One of the added values at TecnoCampus is the extensive support we provide to companies and entrepreneurship at every stage. Firstly, the park acts as a facilitator in creating innovative ideas through the university entrepreneurship pathways, special areas to foster creativity such as Innolab or through regulated training programmes like the Entrepreneurship Masters or with the transversal credits in all the bachelor degree courses at TecnoCampus.

Later, we provide advice, support and training so that these new ideas are transformed into newly created companies. And then, depending on the type of support required and the company's sector we implement either online or advanced pathways, the InnoEmpren programme or the Reempressa programme.

Finally, the accelerator services come into operation so that these new companies manage to achieve business growth. Here, among the portfolio of growth services we have networking and company services, support services for internationalisation and services for access to public and private funding for new projects.

This year the programme has been extremely successful and we would like to mention the creation of 96 new companies at the end of 2012 and TecnoCampus Park being selected as one of the four regional growth accelerators in the Start-up Catalonia programme developed by the Catalan Business Support Agency (ACCÍO) and the Catalan Government.



The mission of the TecnoCampus Entrepreneurship Service is to support entrepreneurship as we firmly believe it is a key factor in the competitive growth of the region's economy. During 2012 it provided advice to 562 individuals with business ideas and this in turn resulted in the creation of 93 start-ups.

In 2012 we launched the first edition of InnoEmprèn, a high-return programme tailored towards technology based or innovation entrepreneurs with the funding and support of the Spanish Ministry of Industry, Tourism and Trade, Barcelona Provincial Council and ACC1Ó.

This programme, which we started in June, aims to transform innovative ideas into businesses through intensive tutoring, advice, mentoring, coaching, access to funding, support in registering patents and brands, initiating contacts and advanced level training through participation in the entrepreneurship masters. In 2012 we received 24 candidates and 15 of them were selected.

In addition to the InnoEmprèn programme there are also two other lines of support for entrepreneurs: the basic and advanced pathways. Both of these offer the possibility to transform ideas into a value proposition in the scope of a feasible business model, correctly scale the financial and economic variables and to analyse the economic viability of a project. The basic pathway is free and carried out online; it provides the tools to develop a business plan, build a financial and economic plan and also offers information on tax, labor, commercial and financial issues. The advanced pathway, on the other hand, is classroom based and developed with the support of a personal tutor who supervises and provides advice throughout the entire process.

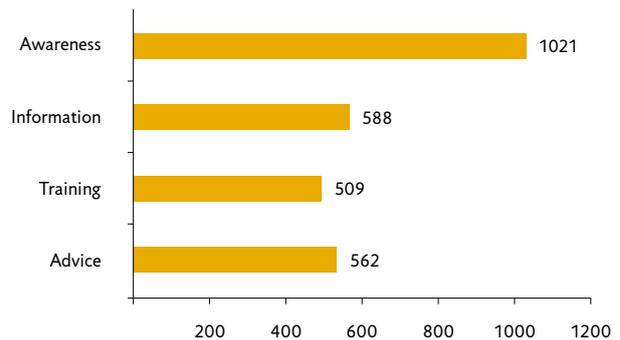
Furthermore, other training programmes have been developed and tailored for the seed phase so that entrepreneurs starting out can prepare themselves for the undertaking. In total, there are 137 hours of training given by top-level experts, where students work on areas such as entrepreneurial attitudes, business models, sales techniques, managing budgets and digital market research tools. To date 509 people have benefited from this programme.

In 2012 we also worked towards attracting technology based engineering projects with a high added value. One of the operations carried out was to sign a collaboration agreement with all the School of Engineering in Catalonia and offer support related to entrepreneurship and business acceleration to the collegiate members who requested it.

Creation of companies

Number of companies created	93
Number of business plans started	158
Number of business plans successfully completed	84
Number of participants in the InnoEmprèn pathways	55

Number of people who benefited from the company creation service





"Being an entrepreneur is difficult and full of obstacles, we have a lack of comprehension from a section of society and added to this the difficulties of labor, tax and administrative issues. For these reasons I really value what TecnoCampus is doing by creating an environment that understands and encourages entrepreneurs".

Fernando Pruñonosa
Partner, Imaxel Lab, located in TCM2

The advanced business accelerator services offered by TecnoCampus include: training, consultancy, community or networking services, advanced funding and the organisation of the cre@tic awards in recognition of the best business projects in the territory.

Training and information services

These consist of a group of short seminars and workshops based on topics of interest to help improve entrepreneurial growth strategies. In 2012, 353 people attended 15 workshops and some of the highlights were the talks from entrepreneurs such as Jil Van Eyle, director of the crowd funding company Teaming and others related to innovation in traditional sectors from the Verdical and ForeverUs companies. We also held sectorial workshops on internationalisation and innovation in human resources with David Monreal, director of innovation at Infojobs.

Consultancy services

In the area of consultancy it is firstly worth noting the work carried out by SECOT (Seniors for Business Cooperation), who provide technical support and mentoring services to 26 companies located at the park. Secondly, the tutoring service given to companies in the incubator, and finally we must also mention the Successful Business Accelerator programme, co-financed by the Barcelona Provincial Council, which allows seven companies to develop plans for expansion with the assistance of the consultancy company Ernst&Young.

Community or networking services

This area aims to promote links and synergies between companies within the TCM Business Network. Apart from the bimonthly meeting with companies in the park, another important factor was the innovation and entrepreneurship large-scale networking event which took place in June with more than 83 companies taking part. TecnoCampus also collaborated with different business associations such as AIJEC and FAGEM to organise events like Business and Beers Networking.

Communication services

TecnoCampus contributes in the publication of news related to companies located in the park with the assistance of different media groups. We are currently collaborating with El Punt newspaper, where companies with more growth potential are regularly interviewed and also in the Capgròs newspaper, which publishes an article every month about one of the companies hosted in the incubator in the "New Entrepreneurs" section.

Advanced funding services

In 2012 we launched the Advanced Business Funding Programme, this was a decisive step in terms of supporting funding policies as it brings innovative business projects closer to private funding, from seed capital to capital risk, by proving access to funding forums. It has also led to the creation of a territorial investment club which aims to make private investors more visible in the Maresme area by creating an ecosystem where entrepreneurs and investors from the region gather together.

The funding forums have become a major attraction for entrepreneurs and companies in the territory that are searching for private funding (Business Angels, Family Offices, etc.). We held three investment forums during 2012 and at the start of 2013, the first was carried out with the collaboration of Ernst&Young on 11 April, the second with the expert guidance of the Business Angels Network Catalonia (BANC) on 5 July and the last forum was backed by Keiretsu Forum on 15 January 2013.

Furthermore, the TCM Investment Club contacted private investors in the Maresme area who have shared training and best practices in the managing of private investments. The methodology used involves organising a bimonthly programme of talks on investment with the collaboration of partners linked to the investment world who provide the training content and their experience. The talks finished with a networking lunch to encourage sharing experiences between the community and the club members in a relaxed setting. In total, three meetings have been organised since the TCM Investment Club was created.

Regarding advice on public sources of funding, a mediation session with the ENISA company was held again this year so that innovative start-ups have access to a specific line of funding.

Users of the business accelerator services

Training and information	353
Consultancy	73
Networking or community	670
Communication	7
Business projects submitted for advanced funding services	19
Investors participating in advanced funding services	89

Cre@tic Awards for the best business initiative

The Cre@tic Awards in recognition of the best business initiative are well-established in the region and year after year are more visible and relevant. The awards are aimed at those people who have a technological and/or innovation business idea and companies from the sector that started out in 2012.

More than 39 projects were submitted this year (the largest number to date), all hoping to land one of the three cash prizes on offer (10,000 euro for the winner, 4,000 euro for second place and 2,000 euro for third). The winners also received a 50% discount on rental space at the incubator for a 12 month period.

The winners this year were Global Health Home Devices in first place with a project on remote medical self-diagnosis and treatment, Twinboards picked up second prize and Mint Labs were third. The award for the best seed project from students was given to the Bookeat project. The awards were presented at the Nit amb Futur gala ceremony which took place on 15 November 2012 in the Conference Centre at the park and were presided over by the Mayor of Mataró. The event was attended by more than 370 people, including companies, entrepreneurs and economic development representatives from local and regional public institutions.



The 4th Fem Empresa brings more than 100 entrepreneurs to TecnoCampus

This is the third consecutive year we have held the business networking meeting known as FEM EMPRESA at TecnoCampus, our approach is based on Getting Contacts and this year 156 business people got together to discuss business and cooperation possibilities.

Jaume Teodoro, managing director of the TecnoCampus Foundation, led the event and highlighted the strong commitment TecnoCampus is making to entrepreneurship within the city of Mataró, which has a long history in this area. Teodoro also emphasised the fact that opportunities in today's economic climate lie in innovation and internationalization.

Innovation and Competitiveness Conference

The 1st Innovation and Competitiveness Conference held at TecnoCampus gathered together experts from the university, government and industry to discuss ways of improving the connection between these three areas and promoting economic growth. Promoting talent, and attracting it from elsewhere and creating a conducive environment that encourages entrepreneurship were some of the items discussed by those participating on the day.

Lluís Jofre, managing director of the universities, pointed out that "research alone is not enough, we need an environment that promotes the transfer of knowledge". "We have to find the mechanisms that allow universities and industry to work and interact together". Jofre highlighted the fact that TecnoCampus is a unique model in the country with a board as a governing body, which is something the Catalan Government wishes to drive home to Catalan universities. The general secretary of Industry and Competitiveness, for his part, added that we need to resolve the issue that "there are too many similar initiatives spread out over the territory with very little commitment to join forces".

During the event the EUMPT lecturer, Julián Horrillo, presented the book "10 steps to becoming an entrepreneurial university" in which different lecturers from TecnoCampus also collaborated.

As a result of the city's will to unite different support service for companies, the TecnoCampus Foundation has teamed up with the Industry Services Section of Mataró City Council on 1 January 2013 and it is now fully integrated in TecnoCampus, developing projects, programmes and services to support and promote competitive improvement within companies by acting directly with priority sectors (textile & maritime), special groups (women and freelancers) or depending on the development area, industrial estates, cooperatives, etc.

Actions carried out during 2013 can be grouped into different areas: promoting the maritime sector, supporting the textile sector and reindustrialisation projects.

Promoting the maritime sector

TecnoCampus Foundation actively participates in promoting and activating existing synergies between the sea and socio-economic activities from the maritime and nautical sector as a series of emerging activities with great value. It aims to promote and enhance the economic activity of the maritime and nautical sector in the Maresme so new activities are started, which in turn create employment, improve professional qualifications, and diversify the region's economy.

The two main lines of strategic action are:

1. The Maresme Maritime Association, which aims to foster all socio-economic activities related to the world and culture of the sea in the Maresme area. This association is open to people, companies and institutions that are interested in participating in these aims. The Maresme Maritime Association is a member of the Catalan Maritime Forum (FMC).
2. The MaresMés Project is funded by the Catalan Employment Service (SOC) and the European Social Fund and works to promote the maritime business sector, bring new methods and create employment in the Maresme. This project is being carried out in collaboration with Mataró City Council, Maresme Regional Government, Arenys de Mar Town Council, Masnou Town Council, the Federation of Business Guilds and Associations in the Maresme (FAGEM), TecnoCampus Foundation, Maresme Coast Tourism Board, Balís Sailing Club and Mataró Port Consortium, and the following actions are earmarked for development:
 - Nautical tourism
 - Fishing tourism in the Maresme
 - Linking strategies with economic and social partners
 - Maresme maritime observatory
 - Emerging professional profiles in the Maresme maritime and nautical sector
 - Design and roll-out of the university's own official degree courses related to the sea and sailing

The Maritime Logistics and Business conference brings together leading government representatives and companies from the sector

At the closing of the event the Mayor of Mataró, Joan Mora, finished by stating that the city is committed to making a big effort in promoting the sea and this will begin to show results in the medium term and "will allow us tap into the vast amount of opportunities the sector has to offer".

The President of the TecnoCampus Foundation, Miquel Rey, emphasised the importance of the recently created Maresme Maritime Association, which has managed to bring together the private sector, public administrations and the ports to give a fresh impetus in opening up Maresme to the sea.

Ricard Font attended the meeting together with company representatives, directors from the Catalan Maritime Forum, Barcelona port, Tarragona port and the secretary for Infrastructure and Mobility of the Catalan government.



Stimulating the textile sector

The overall objective of the ACTE project: Cooperation, Creativity and Innovation, is to improve the competitiveness of the textile sector and create new opportunities for future development. To achieve this goal, two particular objectives have been established corresponding to two specific projects:

- The creation of cooperation dynamics between companies, professionals and agents within the textile sector.
- To increase the possibilities of employment for two specific groups: young designers and the long-term unemployed with a medium-high level profile in the textile sector.

This project is funded by the SOC and the European Social Fund in accordance with the subsidy programme for innovative and experimental projects regulated by the Order EMO/312/2012 from 8 October.

Reindustrialisation

TecnoCampus's strategic line of reindustrialisation involves positioning the native industrial sector of the territory as a central point in the design and implementation of support policies driven by the public administration and its officials. This gives more value to the territory, and helps with coming to terms with the real problems faced by SMEs (recapitalisation, debt reduction, access to credit and favourable taxation) and also brings research, universities and industry closer together. It allows for a reduction in energy costs, promotes competitiveness and internationalisation among SMEs, builds up an entrepreneurial, industrial and manufacturing culture and develops research initiatives.

The most noteworthy actions in this regard are developed through the Reempresa programme and the promotion of economic activities in industrial estates.

The Reempresa programme promotes the continuity of economically viable companies and seeks out ownership and management change. This programme connects entrepreneurs, companies and business people who wish to relinquish their business and provides support by advising them on their decisions and ensures technical and legal proceedings which are bound to the strict examination of business variables. In this way, both parties (entrepreneurs and those selling their business) benefit.

TecnoCampus has worked throughout 2013 to meet the challenge of providing a strategic drive to industrial estates with economic activity in Mataró in order to promote improved competitiveness and increase dynamism by strengthening the industrial areas and the companies within this group. The proposed revitalisation and modernisation of these areas includes, among others, measures to commercialise and promote industrial estates in Mataró, improve the localisation service for companies in industrial areas and the creation of associations and organised networks of business people from the industrial estates that may be set up to act as interlocutors before the public administrations and other stakeholders.

Located on the seafront, the Conference & Meeting Centre has a surface area of 2,200 square metres. Facilities include the auditorium of 950 m², a 900 m² foyer, four multi-functional modular rooms ranging in size from 45-150 square metres and top-level classrooms of different sizes.

The centre is also a member of the Barcelona Province Convention Bureau, which this year falls under the heading "The success of an event depends on its location". It has improved its promotion with an innovative 360° catalogue for both the website and Ipad and the weekly listing of the planned public events that is sent out to a distribution list of more than 400 people.

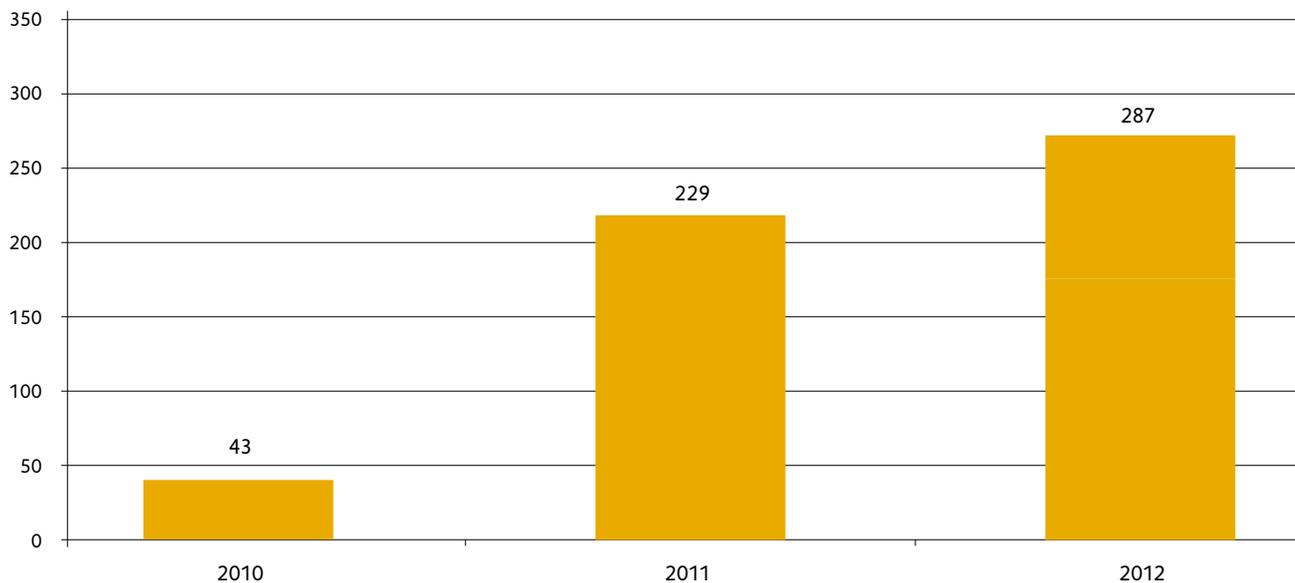
In 2012 the TecnoCampus Park Conference & Meeting Centre hosted 287 events, which attracted some 19,000 people, representing an increase of 25% with respect to the previous year.

If we examine the total number of events, we can see 62% were from institutions and companies from outside of TecnoCampus. And of these events, 33 were for conferences and awards ceremonies, 101 were corporate training sessions, 4 were business conventions, 6 conferences and 30 business meetings.

The highlights from 2012 included Angiomaresme, the 19th edition of the Wedding Fair, the 14th Congress of Young Socialists in Catalonia, the Recuwatt Congress on recycling and energy and the Organic Electronics Association (OE-A) international conference. Clients such as Procter & Gamble, Hartmann, International House, DHL and Schunk Intec have availed of our facilities.

TecnoCampus also organised or co-organised 110 events, including the TecnoCampus Investment Forum, the interpretation workshops, the actor and the camera, the 2nd session of Nestlé exchange visits, the Cinefòrum, the Nit amb Futur gala event and B&B Networking.

Evolution in the number of conferences held between 2010-2012



CETEMMSA Technological Centre

CETEMMSA Technology Center carries out applied research activities on the process of flexible electronics by printing electronic circuits on flexible substrates, Printed Electronics.

CETEMMSA transfers knowledge and technology to companies to improve their competitiveness through innovation. Emitting light, capturing energy and physical or biological signals or interacting with people or objects in a different and innovative way is now possible. CETEMMSA is capable of doing all of this thanks to its integrated chain that ranges from applied research to the engineering and industrialization of products.

CETEMMSA is organised into three main research and development processes:

- **Surface treatments and material deposition**
A deposition process of different active elements by formulating functional inks on flexible substrates to achieve new capabilities.
- **Industrial-scale process**
Development process of pre-industrial scale devices through roll-to-roll printing and deposition equipment.
- **Smart Engineering**
The integration of printed electronic devices and hybrid electronic devices in end products using competitive prototypes.

Technological lines

- **Photonic devices.** The development of flexible devices for producing energy (OPV - Organic Photovoltaics) and research in the field of lighting through printing electroluminescent (EL) and hybrid LEDs (HYLEDs).
- **Printed electronics.** Developing electronic circuits and components using different printing techniques.
- **Printed sensors.** Printing different types of sensors - pressure, movement, biopotential respiratory, extensometrics, etc.
- **Surface biofunctionalisation.** The controlled immobilisation of biomolecules to obtain complex biological surfaces with tailor-made designs and applications in biosensors, biomimetic substrates or biocides
- **High-performance textiles – Smart Textiles.** Developing technical textile substrates as a principal base to obtain new features in different fields of application.

Tecnio Network

CETEMMSA is a member of the TECNIO network that brings together the main players in applied research and technology transfer in Catalonia and aims to consolidate and strengthen the technology transfer model. It aims to create a Catalan technology market that gives companies competitiveness and provides them with the technology to offer added value to their projects and acts as a springboard for their projection overseas.



TicSalut Foundation

The TicSalut Foundation is an agency within the Ministry of Health that works to promote the development and use of ICT and networking in the field of health. It acts as an observatory for new trends, innovation and monitoring of emerging initiatives and provides services for the standardisation and accreditation of products.

The TicSalut Foundation is made up of various public departments involved in the areas of health, social wellbeing and ICTs, as well as groups of hospitals and health centres.

Mission

To be agents in facilitating the transformation of the healthcare and social assistance model through ICTs.

Vision

To become a reference in the health and social sector that promotes innovation in the use of ICTs as a tool for transforming the assistance model.

The Foundation's activities:

- **Observatory**
The TicSalut Foundation conducts an annual survey to know the current situation regarding the level of adoption of ICT in Catalan health-

care centres together with an analysis of international trends in ICT and health by revising reference sources, monitoring social networks and carrying out online surveys with industry experts. Its inventory of projects, entitled Experience in ICT and health, offers a comprehensive viewpoint of the situation of innovative projects throughout Catalonia and detailed information regarding each project, which may be interesting for other agents involved in the health system who are starting innovative ICT and health projects.

- **Innovation**

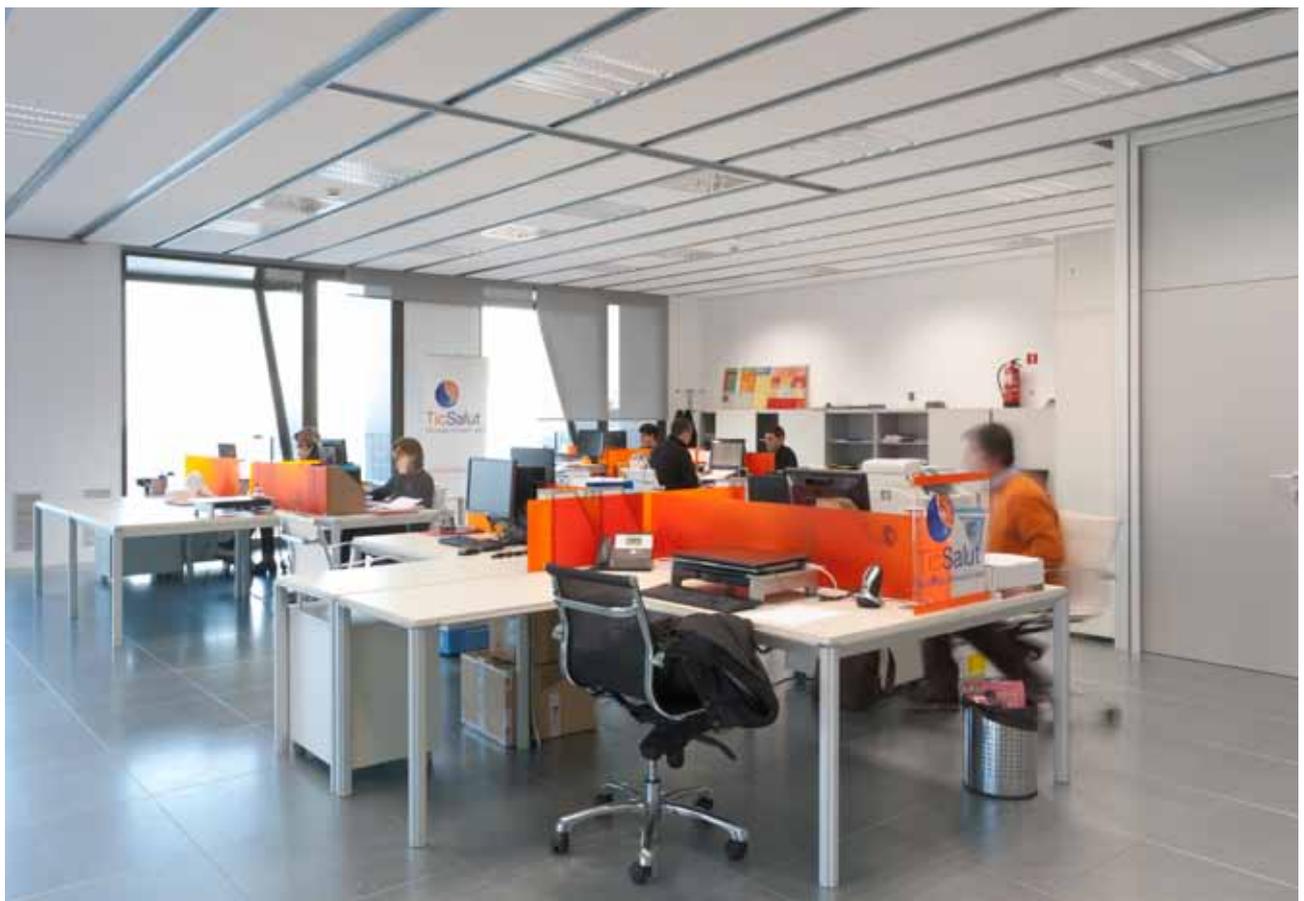
Streamline projects and offer advice so they can develop. We promote actions in a health 2.0 context and participate in European projects to push ICT in health and promote technological alliances with networks and regions around the world, ICT business directories and products developed and/or approved in the health sector.

- **Standards and Interoperability**

The Office of Standards and Interoperability works to achieve the interoperability of health workers in Catalonia, focusing on the development and deployment of ICT standards for health. It has created the Integration Competency Center together with Tecnocampus Mataró-Maresme to encourage a faster integration of all the centres and clinical data in a national network.

- **Knowledge**

Collaboration agreements with universities in the region to enhance training incentives to develop eHealth and promote training activities and workshops to update knowledge, improve professionals and new formulas and employment opportunities.



4. An open project connected to the world





Internationalisation

In the Strategic Plan, TecnoCampus Foundation defines internationalisation as one of the key strategic areas in the activities it organises. For the students, internationalisation leads to preparing them to grow professionally in a global environment through the exchange of academic mobility, the teaching of language skills and the development of double degree programmes with European universities. Furthermore, for companies linked to TecnoCampus, internationalisation means promoting agreements with parks and agencies around the world to facilitate setting up collaboration systems and rapidly efficient business developments in other countries with reciprocal landing areas.

Academic mobility

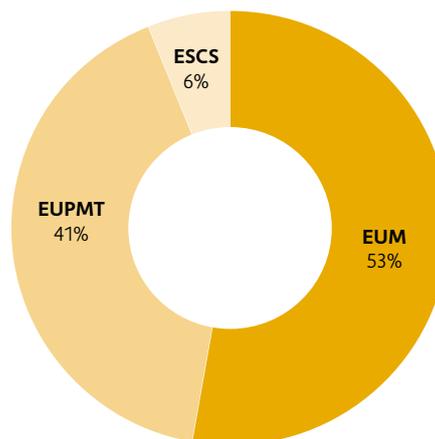
During 2012-2013 the International Mobility Service has worked to promote international mobility for both students and teaching staff by organising informative activities and also by increasing the number of agreements signed with foreign universities.

There are currently 47 bilateral Erasmus agreements signed with 41 European universities, which are distributed as follows: 25 agreements for the Escola Universitària del Maresme, 19 agreements for students of the Escola Universitària Politècnica de Mataró and three for the Escola Superior de Ciències de la Salut. The countries with more collaboration agreements signed are the UK, Italy, France and the Czech Republic as can be seen in the map of distribution agreements.

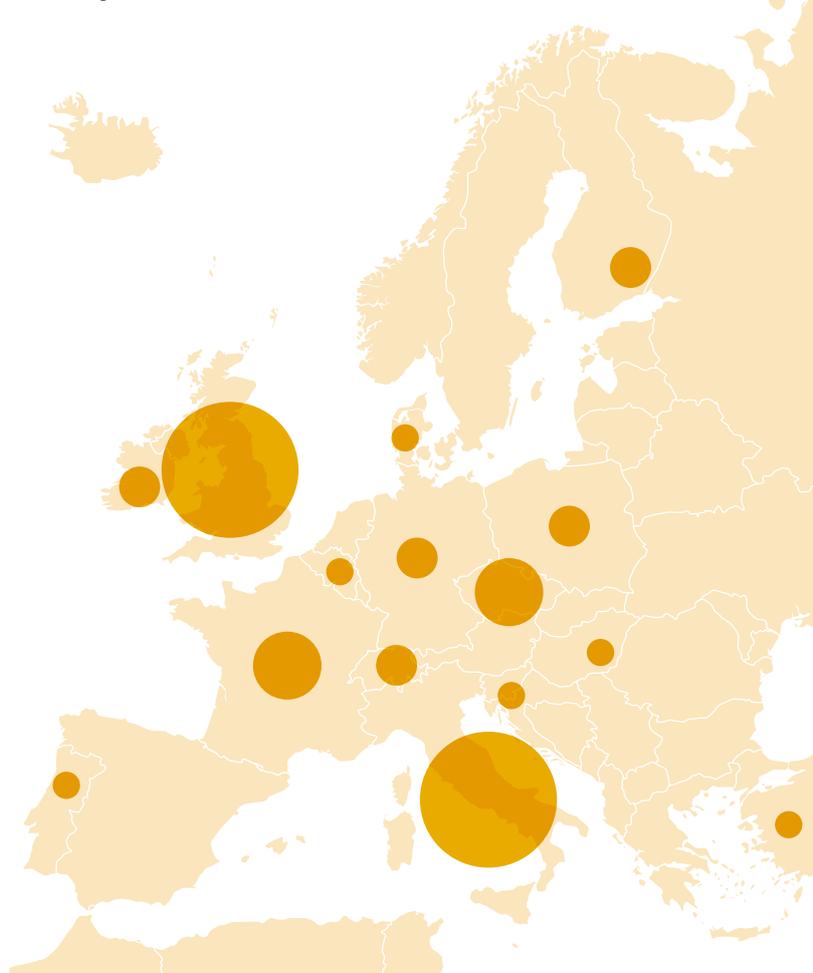
During 2012-13 TecnoCampus took part in the Erasmus programme by sending 29 students to other European universities, this represents an increase of 38% from the previous year, and TecnoCampus also played host to 15 students from different universities around Europe.

Regarding the mobility of the academic staff, 18 European lecturers visited us and 12 of the teaching staff from TecnoCampus university centres travelled to the UK, Italy, Finland, Germany, Turkey and the Czech Republic.

Erasmus Bilateral Agreements signed by the different university centres



Distribution of the signed Erasmus bilateral agreements



In addition, students and lecturers from TecnoCampus took part in different Erasmus Intensive Programmes (IP). These are short study programmes that last from 10 continuous full days up to six weeks and bring together students and teaching staff from higher education institutions in at least three different participating countries.

This year TecnoCampus took part in the following programmes:

- Hof University IP, Germany: 10 students and 2 lecturers
- Yasar University IP, Turkey: 6 students and 2 lecturers
- Skoda Auto University IP, Czech Republic: 6 students and 2 lecturers

The other Sicue-Séneca bilateral agreements (involving exchanges with other universities in Spain) only apply to the EUPMT. We currently have 12 agreements signed with the following universities: Universitat Jaume I in Castellón, Universidad de Alicante, Universitat Rovira i Virgili in Tarragona, Universidad de Extremadura, Universidad Carlos III in Madrid, Universidad CEU San Pablo also in Madrid, Universidad de Valladolid, Universidad de Vigo, Universidad de Las Palmas in Gran Canaria, Universidad de Salamanca, Universidad de Jaen and the Universitat Politècnica de València.

It is also important to note that we now also have six bilateral agreements with universities in Latin America and one in China.

Thanks to the IAESTE work exchange programme students from TecnoCampus were able to apply for 25 work placements and travel to Germany, Brazil, Sweden, Russia, the Czech Republic, Slovenia, Poland and Turkey. Foreign students, were also welcomed to TecnoCampus with 20 students from other countries taking part in work exchange programmes with companies linked to the university.

TecnoCampus Mobility Programmes	IN	OUT
Erasmus students	15	29
Erasmus lecturers	18	12
Sicue-Séneca	2	1
IAESTE traineeship	20	25
Erasmus IP – Students		22
Erasmus IP – Lecturers		6
Glyndwr University, double international degree		111

Visits from international universities delegations

- Hogeschool Gent – University College Ghent (Belgium)
- Glyndwr University, Wales (UK)
- Skoda Auto Univeristy (Czech Republic)

New international agreements signed in 2012-2013

- Germany – Jade Hochschule - Jade University of Applied Sciences
- Denmark – VIA University College
- France – Université du Littoral Côte d’Opale
- France – ISIS Castres
- Hungary – Széchenyi István University
- Italy – Second University of Naples
- Mexico – Monterrey Institute of Technology
- UK – University of Stirling
- UK – University of East London
- UK – Glyndwr University
- UK – Edinburgh Napier University
- UK – Manchester University

International Week

The 3rd TecnoCampus International Week, which took place from 22-26 of April 2013 is one of the key activities in promoting international mobility and making it more visible. During the week different conferences, seminars and workshops are given by students and lecturers from foreign universities that TecnoCampus has signed agreements with. This year we had 16 visiting lecturers from 8 European universities in the UK, Ireland, the Czech Republic, Poland, Germany and Belgium.

The International Week finished with the traditional international breakfast, offering traditional dishes from the different countries to the TecnoCampus exchange students.

International Entrepreneurial Seminar

The 3rd edition of the International Entrepreneurial Seminar took place at TecnoCampus Park from 13-17 of May 2013. The seminar welcomed 36 students and 12 lecturers from different European universities that are part of the project centred on social entrepreneurship.

To mark this occasion representatives from the TecnoCampus university centres met with five European universities: Hogeschool Gent - University College Ghent (Belgium), Université du Littoral Côte d'Opale-ULCO (France), Jade Hochschule - Jade University of Applied Sciences (Germany), Mälardalens University (Sweden) and East London University (UK).

Throughout the week students from the participating centres (six from each one) worked in different areas of TecnoCampus in mixed teams from different countries with the help of 12 lecturers from all around Europe to share knowledge and experiences related to entrepreneurship.





Company internationalisation support programmes

TecnoCampus Business Landing

TecnoCampus Business Landing is a twinning programme between two technology parks that provides a temporary exchange for incubated companies interested in making business contacts and opening up new markets. During a period of between 10 days and 3 months companies have a shared office space free of charge and access to the park's business accelerator services, training and networking sessions and conferences.

TecnoCampus currently has two established partnerships in place: one with the Technology Park at the Florida Atlantic University in the USA and the other with the Castres-Mazamet Technopole in France.

South Florida

Due to its strategic location the South Florida region (Broward, Miami and Palm Beach) is one of the world's most important gateways for industry and business and places special emphasis on information and communication technologies, aerospace, creative industries, maritime and health sectors. Miami is also considered the number one city in the world for doing business with Latin America.

Because of this vast wealth of potential, TecnoCampus decided to sign an agreement with the Research Park of the Atlantic University in May whereby companies from both sides of the Atlantic can avail of free stays for up to three months to explore the possibilities of promoting business opportunities abroad and also receive advice on the best way to arrive to this market.

Castres-Mazamet

The other permanent link is with the Castres Mazamet Technopole, which is close to the city of Toulouse in the Midi-Pyrénées region in France. This park provides support to business projects and develops its talent across three areas of expertise: innovation in fine chemistry, the digital world and health.

The collaboration set up with TecnoCampus launched a series of common actions made available to companies admitted to the programme. In the case of companies in the start-up and knowledge phase the collaboration involves a landing programme for entrepreneurs with no financial outlay, welcoming services made available to the companies by the park and training modules and business support services in the country of destination. This has been made possible thanks to the involvement of the two organisations in the CREAMED project to support business networks and incubators in the Mediterranean Euroregion.

Trade Missions

A trade mission was held in South Florida from 11-15 of June 2013 together with the GM&L consultancy firm. The aim of the mission was to introduce the group of entrepreneurs participating to a pool of potential clients, distributors, partners and investors in a reasonable time frame and with short-term in situ results so that each of the companies taking part had the option to present their projects to different agents in the North American market. The programme was designed for a maximum of 10 companies to ensure effective and efficient matchmaking. In addition to this advice each of the participating companies received a travel grant of 1,200 euros.

Internationalisation Express

The Internationalisation Express programme was designed by the TecnoCampus Industry Service to provide small and medium sized businesses with little or no export experience with advice and support in the early days of exportation.

The programme consists of two tailored work sessions with the company to examine the strengths and weaknesses it has in terms of export, to offer advice on defining strategies for entering new markets, tools and information to better understand foreign markets, the competition, procedures and the information available about different institutions that provide support in internationalisation and the main subsidies and grants available. At the end of second session each of the companies receives a personalised final technical report with specific information of interest and recommendations for the company.

TecnoCampus is a member of the following networks

- International Association of Science Parks and Areas of Innovation (IASP)
- Association of Science and Technology Parks of Spain (APTE)
- Network of Science and Technology Parks of Catalonia (XPCAT)
- National Business Incubation Association (NBIA)
- CREAMED, Mediterranean Euroregion network of incubators

TecnoCampus networking

As part of the networking carried out with other parks and regional institutions we have participated in what is known as the Fem Talent project in the Network of Science and Technology Parks of Catalonia (XPCAT). This is an innovative project that aims to promote equal opportunities for both men and women and manage female talent.

Additionally, we have taken part in several meetings organised by the Association of Science and Technology Parks of Spain (APTE) in order to address the problems faced by the recent cutbacks in grants for research and innovation. We have also collaborated in preparing informative presentations and techniques on just exactly what TecnoCampus is capable of doing and in the preparation of other informative documents.

We would also like to highlight the participation of TecnoCampus in the 29th Annual World Conference on Science and Technology Parks organised by the International Association of Science Parks (IASP), which took place from June 17-20 in Tallin (Estonia). This meeting brought together science and technology parks from around the world to discuss the most recent issues affecting the sector.





"The Internet and open resources are transforming the world of higher education and MOOC courses are currently leading the way.

Alex Araujo
Head of Digital Factory, TecnoCampus Foundation

In the era of the information society, the Internet and globalisation, information technology and communication are part of our daily lives whether for work, to communicate or interact with others people. Digitalisation offers great advantages: information is available at any time, we have different ways and formats to explain it, new tools to create and expand knowledge, etc.

TecnoCampus has made a huge effort in recent years to take advantage of the benefits these technologies have to offer by designing a tailored digital strategy for companies and students from the university which is called TecnoCampus Digital. It offers courses and digital resources that provide new ways of learning and entrepreneurship and a genuine digital culture as a way of understating and connecting to the world and modernisation.

In practice this objective has been deployed, in the case of the university centres to create a virtual campus where anyone can connect to educational contents adapted to new formats from any place in the world. This is an academic offering adapted to blended methods and new tools for innovative teaching. It also offers new possibilities for students to interact using social networks and the opportunity to spread the knowledge created at TecnoCampus throughout society here in Catalonia and in other countries through the implementation of the Massive Online Open Courses (MOOC).

Additionally, the digitalisation strategy has meant we can offer the best possible service to companies located at the park in the use of networks and technology by facilitating the paradigm shift in many sectors and creating new business models.

Digital Factory

The day-to-day activities of this digital strategy are driven by the Digital Factory, which acts as a support unit to the university community and the companies at TecnoCampus Park. The three central points that the Digital Factory works on are innovation in education through technology and didactic support for the teaching staff, the production, publication and dissemination of digital contents and TIC & TAC services (Information and Communication Technologies and Learning and Knowledge Technologies).

Technical and educational support

The mission of the teaching innovation unit is to provide university communities with a dynamic service for teaching and learning from a technical and didactic viewpoint by supporting the design of subjects and in innovative teaching methods, in the development of new educational programmes which do not require the student to attend classes in-person and in the design of MOOC courses.

In the area of educational support we are working to provide support and advice in the approach to subjects and improvements in student participation by creating educational resources and material for teaching both inside and outside the classroom (problem solving, visual thinking, the presentation of theoretical contents, etc.).

We also train our academic staff on how to use the virtual classroom and to analyse and assess the introduction of new versions and features of the Moodle application that is used for this purpose. During the 2012-2013 academic year we held six training sessions for the lectures, two sessions for new teaching staff that joined us during the course and four sessions that were open to all the academic staff at the EUM and ESCS.

Design and roll out of the online training programmes (B-Learning)

TecnoCampus firmly believes in this learning model that has resulted in a range of educational programmes in both undergraduate degrees and masters in the areas of business, tourism and health. In the business area, the third year of the degree course in Business Administration and Innovation Management has been launched in a blended learning format. At the end of the course 80% of the teaching staff involved had made inquiries and said they support the implementation process and 65% requested different audiovisual production pieces.

Furthermore, in the area of health and welfare we have continued working to roll out the blended learning model of the degree in Physical Education and Sports Science and the Master's in Chronicity and Dependence.

Offer of official blended studies

- Business Administration and Innovation Management (EUM)
- Physical Education and Sports Science (ESCS)
- Master's in Chronicity and Dependence

Creation, coordination and management of Massive Online Open Courses (MOOC)

In March 2013 TecnoCampus began with Innotools: a course to convert business ideas into unique value propositions and the first massive online open course was developed together with the Pompeu Fabra University working on the Miriada X platform.

The Innotools course aims to provide all those taking part with a range of innovative tools such as Empathy Maps or the Business Model Canvases to work on business ideas and is complemented with several endorsements from people explaining their vision and experience. The course has 7,297 people registered and regarding the participation in different areas of debate, one of the most interesting indicators in this type of course exceeded 1,950 participants of which 300 were in the creation of ideas by sectors.



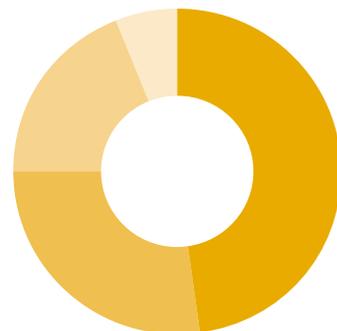
Digital content production, publication and dissemination

Production of audiovisual contents has increased since 1 January 2013, and we are now producing contents for both the university and the park area. To be more specific, 80 pieces have been produced, 48% of which are aimed towards one of the TecnoCampus university centres; 37% for Business Services and 12% for Marketing Services.

Concerning the type of pieces produced, 38 of them (48%) covered the conferences or talks that took place at the TecnoCampus conference centre. Content from the speakers was broadcast via streaming; the material was also recorded and subsequently edited before publication. Another content type that is regularly produced is the recording of educational materials (27%) used in the courses which are generally technical or practical explanations or demonstrations and video games. The remaining pieces are related to interviews (6% of the total) with important figures who visited TecnoCampus and promotional material for the TecnoCampus Park (19%).

Percentage of audiovisual pieces (according to type)

- Events 48%
- Promotional material 19%
- Educational material 27%
- Interviews 6%



Social network presence

Today, TecnoCampus is present on the following digital channels:

- Facebook TecnoCampus, set up in December 2009 and now has 3,587 "Likes".
- TecnoCampus Blogs (<http://blocs.tecnocampus.cat>), updated regularly to explain the every day activities at TecnoCampus. In total there are 16 blogs with some 364 posts published. There have been 20,825 visits and 93,060 page views since September 2011.
- LinkedIn. The TecnoCampus page on this professional network has two groups: TecnoCampus Talent Network has 686 members and TecnoCampus Alumni with a community of 230 people.
- Twitter profile, started in 2010 to inform about day-to-day activities and interact with users in organised activities. Today, there are 3,380 followers and more than 3,000 tweets posted.
- Youtube Corporate, was launched in March 2009 and we currently have 123 videos that have been viewed 44,160 times.
- VIMEO Video Channel. Here we have uploaded 182 videos that have been watched 15,400 times and downloaded 318,000 times in the last year.

- Prezi profile, this account was set up to offer support and resources to the teaching staff when preparing presentations.
- Pinterest profile, created during the 2011-2012 academic year, it has become a visual area full of audiovisual and image contents.

Digital infrastructure

The TecnoCampus community enjoys a high-end digital infrastructure that assists with the progress of business, innovative, educational and research activities. The network sizing supports a daily transfer of close to 300GB and more than 7 million connections every day with peaks of 30GB. Companies have advanced voice and data IP services in all areas of the Park. The university community is connected to the Catalan Scientific Ring through the UPCNET with a capacity of 10Gbps and the Park is connected to the Catalan Industrial ring and forms part of the network that includes Parks throughout Catalonia and the most innovative companies in the country. The Data Processing Centre at TecnoCampus provides network security services and virtual private networks for remote access and servers.

