Mondragon Unibertsitatea

Faculty of Engineering

MGEP

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RE PORT

2019/2020

www.mondragon.edu/en

Progress relies on our brain. The most important part of our brain, the neocortex, should be used to help others and not just for making discoveries

Rita Levi-Montalcini
(1909-2012)

Rita Levi-Montalcini is a neurologist Nobel Prize winner in Medicine and a role model for many of the 599 people at Mondragon Goi Eskola Politeknikoa (MGEP), the Polytechnic School of Mondragon Unibertsitatea. We come across her repeatedly in the corridors of the Garaia office and her attitude to life inspires us again and again.

The acute Covid crisis that arrived in the middle of the 2019/20 academic year has provided us with the opportunity to strengthen our mission and to focus our efforts a little more towards serving others, transforming and improving our environment through technological knowledge and its socialisation.

We have adapted, we have made an even greater effort than usual, we have implemented numerous small contingency measures and we have observed with pride how we have overcome the difficult situation and, above all, safeguarded the training of our students.

This is the first heading that we would like to highlight in this summary report of the progress of MGEP throughout the 2019/20 academic year, structured in accordance with the management units of MGEP (Regulated Training, both Engineering and Vocational Training, Continuous Training, Research and Transfer) and ending with the financial statement of the cooperative.

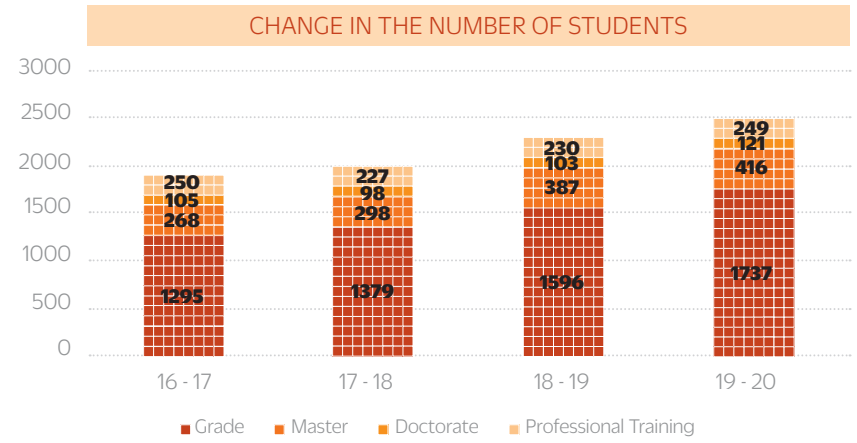
Compared to the previous academic year 2018/19, the overall magnitude of MGEP (€38.1 million) was 4.8% higher. This growth has been achieved in almost all our fields of activity: we have trained more engineers and technicians, we have done more research, and we have transferred more knowledge to industry and society in general. Some numbers:

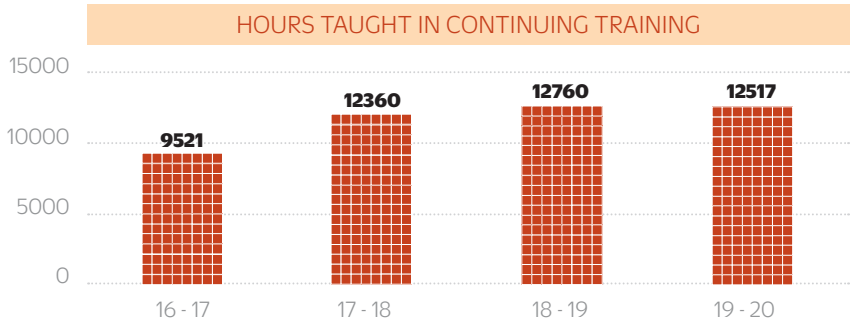
- 2,274 Engineering students, 9% more than the previous year.
- 249 students in Vocational Training, an 8% increase.
- €9.0 million on Research, a 9.5% increase.
- €7.4 million on Transfer, a 4.6% increase.
- 12,517 hours of Continuous Training, 98% of the previous year, despite the greater impact of the crisis on this activity.
- 7% of the time allocated to training and education activities.

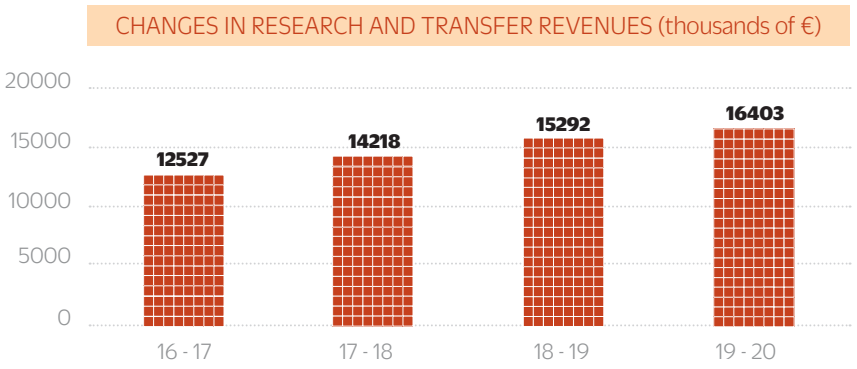
2019/20 was also a year that closed the previous Strategic Plan, took stock of what had been achieved, and prioritised and defined the challenges for the coming period, as reflected in the new Strategic Plan for the academic years 2020/21 to 2023/24.

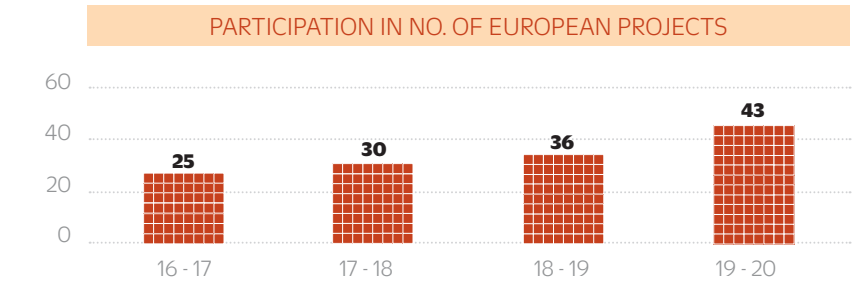
The acute Covid crisis that arrived in the middle of the 2019/20 academic year has provided us with the opportunity to strengthen our mission and to focus our efforts a little more towards serving others, transforming and improving our environment through technological knowledge and its socialisation.

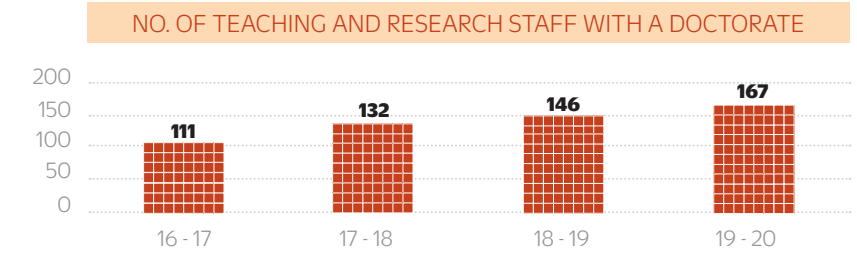
The following graphs show some of the progress made during this period:

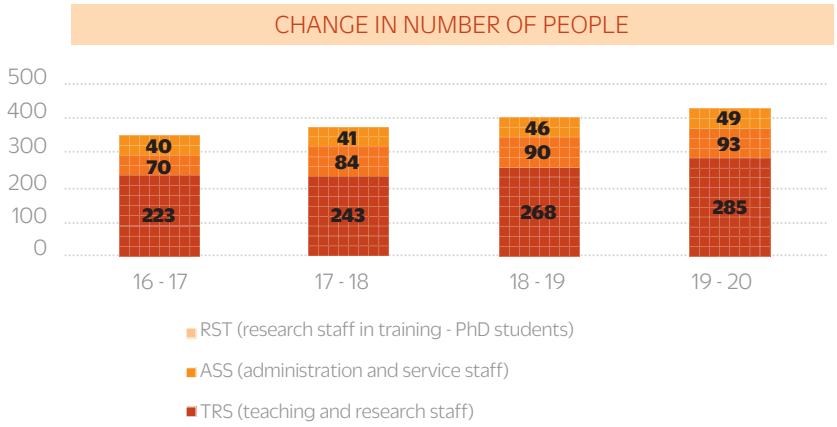


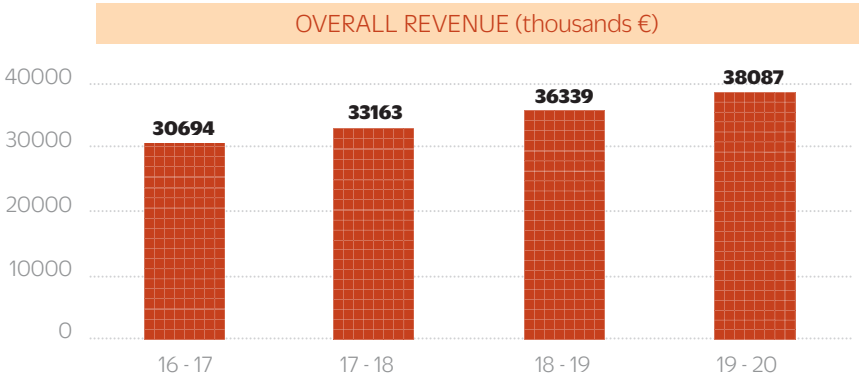












Three essential factors explain these good results: the involvement of the people who form part of MGEP, the close participation of our partner companies, especially the MONDRAGON Corporation and its cooperatives, and the stable support of the institutions, especially the Basque Government (Departments of Education and Economic Development and Infrastructures) and the Provincial Council of Gipuzkoa.

Something good had to come out of Covid, and that is that we are finally beginning to understand that we must radically transform our relationship with the planet Earth and rationalise our environmental impact. Undoubtedly, MGEP must play a leading role in this transformation. In this vein, we would like to recall an old observation that is surprisingly topical in these times of economic and social crisis:

Education is the natural and indispensable springboard for promoting a new social, human and just order.

José María Arizmendiarrieta
(1915-1976)

ENGINEERING

The 2019/20 academic year has been affected by the pandemic and the health crisis caused by Covid-19.

In the academic field, there are four important events that have taken place in the wake of the health and economic crisis that we have experienced:

1. Firstly, distance teaching, with all that this entails; the adaptation of teaching material, learning and adjustment to the use of technology in record time for both teaching and research staff and students.

2. Adaptation of evaluation activities to the new situation; preparation and use of a guide for online evaluation that was used during the months of confinement and until the end of the academic year.

3. Management of the Dual Programme activities (work placements, Dual Training and End of Degree and End of Master's Projects), in a scenario where the restriction of mobility has affected some of the activities of a large number of students.

4. Mobility management (study and work experience).

The attitude and work conducted by all the workers and students of MGEP to ensure that the academic year continued and was concluded with the minimum possible academic impact deserves special recognition, although it is inevitable that other areas of work have been affected to a greater or lesser extent.

During the 2019-20 academic year, 9 Bachelor's degrees, 7 Master's degrees and one Doctorate degree, adapted to the European Higher Education Area (EHEA), were offered. The qualifications offered on the Mondragon, Goierri and Orona-Ideo (Galarreta) campuses were:

Degree in Mechanical Engineering	Dual Itinerary	EUR-ACE Label
Degree in Industrial Design and Product Development Engineering	Dual Itinerary	EUR-ACE Label
Degree in Industrial Organisation Engineering	Dual Itinerary	EUR-ACE Label
Degree in Industrial Electronics Engineering	Dual Itinerary	
Degree in Computer Engineering	Dual Itinerary	
Degree in Energy Engineering	Dual Itinerary	
Degree in Engineering in Ecotechnologies in Industrial Processes	Dual Itinerary	
Degree in Biomedical Engineering	Dual Itinerary	
Degree in Mechatronics Engineering	Dual Degree	
Master's Degree in Business Innovation and Project Management		
Master's Degree in Strategic Design of Products and Associated Services	Dual Itinerary	
Master's Degree in Industrial Engineering	Dual Itinerary	EUR-ACE Label
Master's Degree in Energy and Power Electronics	Dual Itinerary	
Master's Degree in Biomedical Technologies	Dual Itinerary	
Master's Degree in Data Analysis, Cybersecurity and Cloud Computing	Dual Itinerary	
Master's Degree in Robotics and Control Systems	Dual Itinerary	
PhD in Applied Engineering		

Yet another year, in collaboration with UNIBASQ (Agency for Quality Assessment and Accreditation of the Basque University System), the evaluation of Teaching and Research Staff (TRS) has been carried out within the framework of the DOCENTIA Programme. The programme includes an assessment of the teaching activity of the TRS, based on the criteria of attitude, initiative, relevance and level of responsibility. In this third year, a total of 103 TRS have been assessed, all of them obtaining a favourable evaluation.

45 students in Bachelor's degrees and 90 students in Master's degrees have joined the programme or Dual Degree in the 14 engineering qualifications that are part of the university Dual Training activities certified by UNIBASQ and are therefore candidates for Dual Certification at the end of the respective programme.

Thus, we take another step in our Dual model, with over 50 years of history, towards an objective to reinforce quality experiences for our students, to meet the needs of companies and to follow the European criteria that are being defined.

ENGINEERING DEGREE:
1,737

MASTER'S
416

PHD
121

At the same time, in collaboration with ANECA (National Agency for Quality Assessment and Accreditation) and following the strategy of accrediting our degrees and master's according to the International Seal of Quality, EUR-ACE® seal, during the 2019/20 academic year the degrees in Mechanical and Electronic Engineering have been working on the application for this seal and last July we received a visit from the assessment panel; a process of re-accreditation for the Mechanical Engineering Degree and first accreditation for the Electronic Engineering Degree. If the accreditation is officially confirmed, there will already be 5 degrees accredited in accordance with the International Quality Seal, EUR-ACE®.

As part of our commitment to train competent young people, 2,274 students, 9% more than last year, have pursued their academic engineering studies at the following levels:

- Engineering Degree: 1,737
- Master's: 416
- PhD: 121

From a qualitative point of view, it is worth mentioning the work carried out in defining and implementing the last two qualifications that have been incorporated into the Masters programme; the University Master's Degree in Robotics and Control Systems and the University Master's Degree in Data Analysis, Cybersecurity and Cloud Computing.

It is also worth mentioning the signing of the Collaboration Agreement with the Somorrostro Training Centre, with the aim of establishing coordination mechanisms between the parties for the launch of university activity in Engineering in Bilbao. As a result of this collaboration agreement, throughout the 2019/20 aca-

demic year, teams of teachers from both institutions worked together to plan and implement a new group for the Degree in Mechatronics Engineering at the new Mondragon Unibertsitatea campus in AsFabrik-Zorrozaurre (Bilbao) in the 2020/21 academic year.

The level and pace of implementation of the above-mentioned qualifications is proving to be appropriate. In the case of the new Master's, a total of 44 new students have begun their studies. In the Mechatronics Engineering Degree, there are already 92 students studying, with 43 students coming from Vocational Training.

Thanks to the support of the Provincial Council of Gipuzkoa, a pilot project has been set up with the aim of promoting STEM skills among young people and bringing them, above all, into these professions. As a result of this project, ZTIMULab has been created, a space, both physical and digital, where a multitude of activities are offered both to teachers of secondary and high school students and to guidance counsellors so that together we can contribute to the above-mentioned objective or, at least, make STEM professions an option for young people.

Our institution is characterised by providing practical, business-oriented training within an increasingly international framework. The total number of engineering students who combined study and work in the 2019/20 academic year was 362. Meanwhile, the total number of students who completed the End of Degree/Master's Project during the 2019/20 academic year was 396.

ENGINEERING STUDENTS WHO COMBINED STUDY AND WORK

362

As mentioned in the introduction, many of our students have been directly affected by the health and economic crisis in the partner companies. Of the total number of students who were participating in any of the Dual Programme activities in March 2020, 78.2% went on to undertake them via teleworking while 20.8% saw their agreements interrupted. When the situation so allowed, 20% of these agreements were reactivated, so that around 675 students were able to complete their work experience in alternation, Dual training or Final Degree or Master's Project in the collaborating companies. The students who saw their agreements suspended did not suffer any academic impact, since additional activities were devised to complement the work they had already begun in the previous months.

With regard to the doctoral programme, on 24 July 2019, UNIBASQ gave a favourable response to amending the current name of the "Mechanical Engineering and Electrical Energy Doctorate Programme" to the "Applied Engineering Doctorate Programme", with the result that in the 2019/20 academic year the new name has been made public. This modification allows the inclusion of doctoral students with new entry profiles in accordance with the new lines of research included in the programme.

STUDENTS HAVE HAD AN EXPERIENCE ABROAD THROUGH THE STUDY MOBILITY, WORK EXPERIENCE AND DOCTORATE PROGRAMMES

119

Third cycle (doctorate) activity has been intense and as a result, 121 doctoral students are working on their theses, of which 35 are new recruits. 24 theses have been read.

The International Relations activity in the 2019/20 academic year continues to develop the actions indicated in the previous year. In this academic year, 119 students have had an experience abroad through the study mobility, work experience and doctorate programmes. Meanwhile, 52 students from abroad and from other parts of Spain have studied at the Higher Polytechnic School as part of the ERASMUS+, SICUE, programmes and through inter-university agreements, despite the difficulties caused by the pandemic.

A good indicator of a job well done is given by the results of the two employability surveys conducted on the latest MGEP Engineering graduates: the Lanbide survey in December 2019, which interviewed 78% of the students who had completed their studies in the 2015/16 academic year, indicated that 3% were unemployed; the Ikerfel survey of 47% of the total number of graduates in the 2018/19 academic year indicated that the percentage of people who were unemployed was 6% among Bachelor's graduates and 4% among Master's graduates.

The Biteri hall of residence has not been able to develop the planned cultural and sports activities, social gatherings, tutoring programmes and free choice subjects as in other years. On 14 March 2020, with the publication of the state of emergency, the 110 students housed at the Biteri Hall of Residence returned to their homes to continue their online academic activities.

In view of this new situation, the resources of the Biteri Hall of Residence were made available to the Osakidetza health service.

PROFESSIONAL TRAINING

Professional Training continues to be an important part of our academic activity.

STUDENTS

249

During the 2019/20 academic year, 249 students were trained in the following Higher Level Training Programmes, which are directly related to the industrial sector that surrounds us: Mechanical Manufacturing, Electricity and Electronics, IT and Communications and Installation and Maintenance:

- Advanced Technician in Industrial Mechatronics.
- Advanced Technician in Mechanical Manufacturing Design.
- Advanced Technician in Mechanical Manufacturing Production Programming.
- Advanced Technician in Network Computer Systems Administration.
- Advanced Technician in Industrial Robotics and Automation.

It is also worth mentioning the launch of the second group of Industrial Automation and Robotics, planned during the previous academic year.

Meanwhile, in collaboration with the MONDRAGON Corporation and the Deputy Council for Professional Training of the Basque Government, we continue with the training in partial offer format in the Industrial Mechatronics qualification (combining studies with work) to respond to the training needs of the cooperative members of the MONDRAGON Corporation and workers in the local companies. In total, 33 workers are being trained by us. This format is also open to workers from other companies.

The Dual Programme for students in Higher Level Training Courses, promoted by the Basque Government, is a highly enriching learning model based on the acquisition of skills in a working environment. We have a clear commitment to this programme, where the close relationship between MGEP, students and companies means that both our students and companies obtain

ADVANCED TECHNICIAN IN
INDUSTRIAL MECHATRONICS

ADVANCED TECHNICIAN IN
MECHANICAL MANUFACTURING DESIGN

ADVANCED TECHNICIAN IN **MECHANICAL MANUFACTURING PRODUCTION PROGRAMMING**

ADVANCED TECHNICIAN IN **NETWORK COMPUTER SYSTEMS ADMINISTRATION**

ADVANCED TECHNICIAN IN **INDUSTRIAL ROBOTICS AND AUTOMATION**

COMPANIES HAVE RECEIVED OUR STUDENTS FROM HIGHER LEVEL TRAINING CYCLES IN DUAL TRAINING

32

a more than satisfactory result. This year 57 students have graduated, 46.72% of the total, and another 60 have started the programme at the end of the first year. A total of 32 companies have received our students from Higher Level Training Cycles in Dual Training.

This year we have undertaken 5 technological innovation projects with Tknika (Innovation Centre for Professional Training) and Hetel (Association of Social Initiative Professional Training Centres).

At the request of the Vice-Ministry of Vocational Training and Tknika, we continue to lead the Digital and Connected Factory Node, which involves guiding vocational training centres in the Basque Country in response to the challenges posed by Industry 4.0

We are also making progress in active teaching-learning methodologies in vocational training based on the ETHAZI project, driven by Tknika. During this academic year, this new learning methodology based on challenges has been applied to all the degrees, as well as continuing with a contrast with the companies in our area to validate the professional skills that our students need to acquire.

As regards vocational training graduates, the rate of students registered with the employment exchange is 8.54%.

We cannot sign off without saying that, in the Vocational Training area, MGEP has made a major effort to adapt the training of our students to the situation of confinement caused by Covid19, ensuring that our students have acquired the skills foreseen at the beginning of the course. This adaptation has basically consisted of an online-format training supplemented by the practical learning during the last three weeks. In this respect, the efforts made by workers and students to complete the curriculum planned at the beginning of the course deserve to be recognised.

CONTINUED TRAINING

In the 2019/20 academic year, 2,320 professionals participated in the 207 training programmes carried out, totalling some 12,517 hours of training.

More and more companies are coming to us to obtain tailored training combined with a professional development plan and support in the use of methods and tools. Throughout this year, 182 companies have relied on us. 133 University teachers and 35external experts accompanied these professionals in the learning process, and the average satisfaction score was 8.45.

THE AVERAGE SATISFACTION SCORE

8.45

In the area of Industrial Organisation, the 28th edition of the **Professional Master's Degree in Production Management** and the 18th edition of the **Advanced Course in Maintenance Management** commenced in the 2019/20 academic year at Mondragon. This course also marked the start of the third edition of the **Advanced Course in Industrial Management**, in collaboration with Goierri Eskola. Various courses have also been held and seminars organised in which experts have presented different tools, methodologies and good practices in industrial organisation. The alliance signed with Global Lean is designed to award Green, Yellow and Black Belt certificates and the first tailor-made training has been carried out in a company.

Project management is a key skill for the development of our companies, as it is an essential part of their plans for change and innovation. During the 2019/20 academic year, a new edition of the **PMP (Project Manager Professional) Certification Programme** was held in partnership with the Bilbao Chamber of Commerce. There are already more than 220 certified professionals. Also, an **Expert in Project Management course** has been delivered at the Orona-Ideo campus, in addition to various open training courses and seminars. More and more companies are carrying out these tailored training courses and they include an implementation and support phase as part of the training. Within this scope, a partnership agreement has been signed with Berriprocess and we have registered as a Kanban University to offer Kanban certified courses. A partnership agreement has also been signed with Ynspira and Partnos Consultores for obtaining the Certified Scrum Master's. Also, in the second term, the first edition of an **advanced course in Project Management** was given online and in English.

Within the Mechanical Engineering knowledge area, 35 courses have been given on topics such as mechanical design, forming, applied mechanics, machining, materials, manufacturing processes, maintenance, among others. Meanwhile, 18 in-company courses have also been organised in this area. The **"Design Faktoria 2019"** seminar was held in which the participants met with the objective of creating a space to reflect on research on and for design.

During the 2019/20 academic year, the second edition of the **Master's Degree in Industrial Additive Manufacturing** was held in collaboration with Lortek and Goierri Eskola. Both the students and the companies in which they carried out their internships and final master's projects valued this training very positively.

The Information Systems team at the Higher Polytechnic School organised and held 46 seminars and workshops within the framework of **Enpresa Digitala** on the subject of **Digital Marketing**. It participated in Gipuzkoa Encounter, Araba Encounter, Euskal Encounter, Araba TIC, Vitoria-Gasteiz Council, Digital Transformation ICT Week Bergara and Tolosaldea. The Indusmedia, Indussec and KaixoWorld conferences were organised. Special mention should be made of the many workshops and conferences that have been organised in the field of Cybersecurity: Urola costa, Basque Government, Helduen Hitza, Kutxa, Caritas and Ulma.

Various **Technology Barnetegis** were also conducted in the areas of Industry 4.0, Tourism, Data Analysis, Digital Marketing, Cybersecurity and Digital Transformation.

As an addition to the training, the ICT team of teachers provided support to a number of companies in the application of these Digital Marketing tools, methodologies and strategies in their companies.

The Data Protection Officer is a key figure in the new General Data Protection Regulation (GDPR) that began to be applied on 25 May 2018. Companies that handle a large amount of personal data or sensitive data should include the DPO role in their organisations. In order to respond to these needs, the Information Systems team has designed training, recognised by IVAC INSTITUTO DE CERTIFICACIÓN, S.L. with file number RF-X3-0020-180/2019, which complies with the AEPD-DPD scheme. The third edition was held during the 2019/20 academic year.

One of the most important challenges for the ICT team during the 2016/17 academic year was to design, together with the Provincial Council of Gipuzkoa, a **Master's degree in Cybersecurity**. The third edition was held in the 2019/20 academic year, with the participation of both students who had recently finished their university studies and active professionals. This was one of the first experiences in which professionals with more than 3 years of experience and a Higher Level Degree were able to access the Master's programme and obtain the Master's degree.

From March onwards, it has been difficult to maintain the continuous training activity. During the second half of the academic year, the training courses that had already begun were changed from a classroom format to online, thus adapting to the new situation. With the aim of responding to the need to make the format more flexible, during the 2019/20 academic year various online courses were provided, including Lean Manufacturing, Integrated Logistics, Quality in Manufacturing Processes, Steel Designation, Quality Tools for Project Management, Classical Project Management and Agile Project Management. In addition, the first edition of the Business Intelligence course was given: data analysis and visualisation with 68 hours of Power BI online and the Advanced Course in Project Management. These courses amount to a total of 848 hours of training.

To cater to the demand arising from the implementation of the new undergraduate degrees, a new edition of the online courses for adaptation to the **Degree in Mechanical Engineering** and **Degree in Industrial Electronic Industrial Engineering** has been launched, in which 20 professionals participated.

During the 2019/20 academic year, in the calls published by Lanbide, three courses associated with professional certificates were taught: Mechanical maintenance and assembly of industrial equipment, Design of mechanical manufacturing products and Management of production in mechanical manufacturing. These three courses add up to a total of 1,520 hours of training, in which 36 people participated.

Finally, during the 2019/20 academic year, new courses were designed for the 2020/21 academic year. All this information is available on the web platform **www.mondragon.edu/profesionales.**

RESEARCH AND TRANSFER

R&T
GROWN
7.2%

The Basque Country is the Spanish autonomous community that invests most in R&D activities as a percentage of its GDP, close to 2% (INE 2018 data). Data on R&D investment in the Basque Country in the last available reference period (2018) published by Eustat also shows an increase of 4.4% over the previous year, reaching an all-time high of 1,423 million euros. However, in relation to GDP, the Basque Autonomous Community's internal R&D expenditure is still below that of the EU-28 as a whole, meaning that this objective must not be neglected, even in this situation which is dominated by the current pandemic.

In this respect, we believe that MGEP plays an important role in terms of its research capability and its knowledge transfer model. Even in this situation, MGEP has been able to continue strengthening its research and knowledge transfer activity during the 2019/20 academic year. This was, on the one hand, thanks to the support of the companies that have relied on us to conduct research with them, and on the other hand, thanks to our success in the various calls for research projects, especially in Europe, Provincial Council of Gipuzkoa and Competitiveness Department of the Basque Government.

Despite suffering a drop in revenue in the last months of the year due to the effect of the pandemic, in R&T we have grown by nearly 7.2% compared to the previous year, reaching 16.4 million euros for research and transfer. Approximately half of this amount comes from private investment; the rest is due to income obtained from competitive R&D tenders which, due to our transfer model, also includes application of the knowledge acquired in our partner companies.

These figures make us the university with the best relationship with companies in terms of the percentage of research financed by companies, and various studies attest to us being the most highly valued in Innovation and Technology Transfer. For example, U-Multirank (2020) qualifies us as once again as "excellent" in parameters such as: research income from private sources or external financing for research. One of the keys has been, once again, the success of research personnel in aligning their technological capabilities with the needs of the company. The main proof of the value we add to the company is that approximately 50% of the research financed by companies, mainly from the industrial sector, is related to the existence of a long-term collaboration research programme. The projects undertaken within the framework of these collaborative research and transfer programmes range from oriented basic research to industrial research and experimental development projects, which eventually lead to innovative products, processes, and services. Additionally, a long-term relationship allows us to align our basic research with the company strategy and train the talent they require. This results in a model with proven efficiency in the provision of a comprehensive, multidisciplinary solution to business requirements by an effectively coordination between the generation and transfer of knowledge. We use this model when working with leading companies in their sectors, such as Orona (Vertical Transport), Ingeteam (Energy), División de Componentes (Appliances), the CAF Group (Railway, Electric and Hybrid Buses), the Velatia Group (Energy), AMPO (Energy), ITP AERO (Aeronautics), Fagor Arrasate (Capital Goods), Matrici (Capital Goods), Batz (Capital Goods), Shuton (Capital Goods), the Ederlan Group (Vehicles), Goizper (Capital Goods), MSI (Automation), Arestant (Storage Solutions), GH (Cranes and Components), Open Cloud Factory (Cybersecurity), Irurena (Chemicals) and Grifols (Healthcare) but also with SMEs such as Ulma Embedded Solutions (Embedded Systems), Ubikare (Healthcare), Ekide (Engineering), Developair (SW Development) with fewer resources and which demand personalised attention.

During the 2019/20 academic year, new activities were designed around entrepreneurship and the entrepreneurial culture. Among them, it is worth mentioning the final master's projects geared towards entrepreneurship that several teams carried out during the course until they were established as a cooperative. Meanwhile, a new edition of the Enpresa Sortu initiative was launched with a call for students (and ex-students) in engineering and technological training programmes to present their business ideas within the field of engineering.

Regarding the funding of research in competitive calls, the CRUE (Conference of University Rectors) R&T report indicates that we triple the average funding per TRS of Spanish universities. In this respect, the 2019/20 academic year was very positive in the European calls, from which we obtained 19.2% of the revenue for the research and transfer activity with a total of 43 active projects, with MGEP being a leader in seven of them. In the 2019/20 academic year, 15 new European projects were awarded, representing revenues of around 1.7 million euros over three years. Also noteworthy is the funding obtained in calls for entries from the Provincial Council of Gipuzkoa, amounting to 8% of the research and transfer budget with 37 active projects from its various entries. In the calls from the Basque Government we are represented in a total of 41 Hazitek projects and in another 15 Elkartek ones in the 2020 call from the Basque Government's Department of Competitiveness, leading in 4 of them. Elkartek accounts for 17% of the external revenue received for the research and transfer activity in this academic year.

In terms of scientific production, the 2019/20 academic year saw the publication of 67 articles in journals indexed in the Journal Citation Report (JCR) and documents with impact in GII-GRIN-SCIE (GGS). Our publications stand out (U-Multirank, 2020) for their impact index, number of joint publications with foreign universities, and co-authorships with industrial partners. Most of these results are linked to ongoing theses and are proof of the good work carried out by the researchers. It is also worth mentioning the 24 doctoral theses defended and the 121 theses under way, the large majority of which are financed by private entities.

Another essential instrument, which allows our Research and Transfer Groups to remain at the forefront of knowledge, is the Specialisation Plan, financed by the Department of Education of the Basque Government, and which we managed to maintain during the last academic year. One of the most important actions introduced with the previous strategic plan, in the 2016/17 academic year, is the implementation of a Doctorate Plan aimed at significantly improving the qualification of the MGEP TRS through the submission of a doctoral thesis. During the 2019/20 academic year, 22 theses have been financed under this plan and it is expected that, in the medium term, this measure will mean a qualitative leap, in a staggered way, of the following indicators: improvement in research and teaching quality, the international dimension of the MGEP TRS, the number of high-impact publications (collected in the JCR) by TRS and by course, the size of the research activity, and the size of the transfer activity. This programme provides researchers with attractive working conditions to carry out their doctoral theses, that should improve the growth potential of the researcher, the teaching quality, the R&T Group and the strengthening of alliances.

In conclusion, 11 of the MGEP research groups, 2 more than in the previous call, are recognised by the Basque Government Department of Education as Excellent Research Groups in the Basque University System, 8 of them in the A Category (the maximum level of recognition) and 3 others in the B Category. It should be noted that these achievements are attributable to the researchers who make up the 18 Research and Transfer Groups organised into the following Scientific-Technological Units:

SCIENCE, TECHNOLOGY AND MATERIAL TRANSFORMATION PROCESSES

- Plastics and Composites Technology
- High-Performance Machining
- Advanced Material Forming Processes

MECHANICAL BEHAVIOUR AND PRODUCT DESIGN

- Structural Mechanics and Design
- Acoustics and Vibrations
- Fluid Mechanics
- Surface Technologies

ELECTRICAL ENERGY

- Drives applied to traction and the generation of electrical energy
- Electronic power systems applied to electrical energy control
- Energy storage.

INDUSTRIAL MANAGEMENT AND DESIGN PROCESSES

- Innovation – management – organisation
- Diseinu Berrikuntza zentroa
- Productive Logistics Operations Management
- Circular Economy and Industrial Sustainability

EMBEDDED SYSTEMS AND SMART SYSTEMS FOR INDUSTRIAL SYSTEMS

- Software and Systems Engineering
- Robotics and Automation
- Data Analysis and Cybersecurity
- Signal Theory and Communications

ECONOMIC AND FINANCIAL SITUATION

Total turnover for the 2019/20 financial year reached 38,087,530 euros, which represents a growth of 4.8% over the previous year.

GLOWTH

4,8%

The legal surplus before the provision for COFIP and after the remuneration of interest on contributions was 256,774 euros.

Ordinary investment made and committed during the year amounted to 2,030,980 euros, 11% higher than the figure for the previous financial year and was financed mainly by subsidies from the MONDRAGON Corporation's Inter-Cooperative Education and Promotion Fund (FEPI), the Basque Government, the Provincial Council of Gipuzkoa and Europe.

With regard to the Balance Sheet, as at 31-08-2020, it reached a figure of 65,723,970 euros and the solvency (1.52) and independence (2.81) ratios can be positively noted.

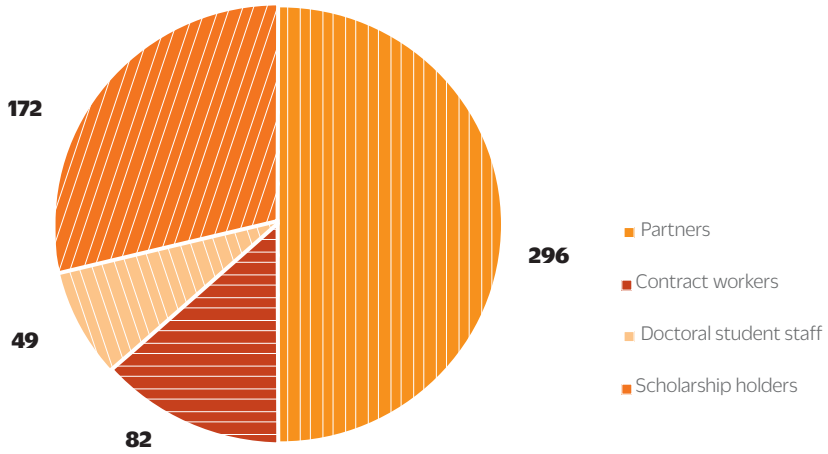
PERSONNEL

The development of all these activities would not have been possible without the involvement of the 599 people (partners, contract workers, doctoral students and scholarship students) who, with enthusiasm, commitment and responsibility, have driven the Mondragon Goi Eskola Politeknikoa project, the legal titleholder of the University of Mondragon's Polytechnic School. This is an educational project geared to the development of a free society, committed to its future.

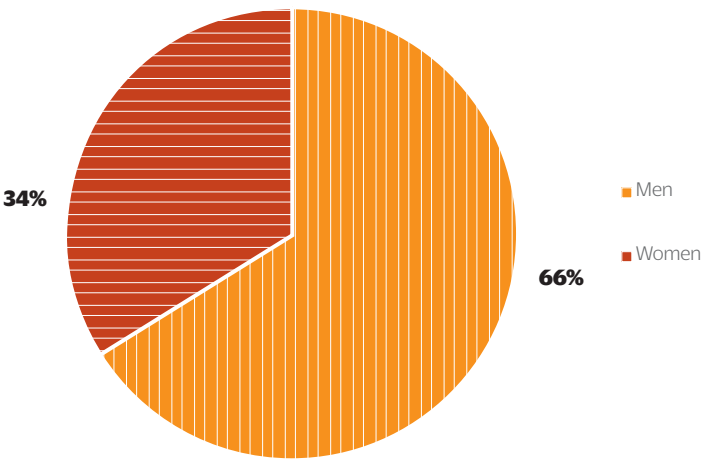
PARTNERS, CONTRACT WORKERS, DOCTORAL STUDENTS AND SCHOLARSHIP STUDENTS

599

PEOPLE



DISTRIBUTION MEN AND WOMEN



Mondragon Unibertsitatea

Faculty of Engineering

MGEP

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SPONSORING ENTITY:

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LABORAL kutxa