

Cooperative research in manufacturing

From research into production...

The manufacturing industry is one of the economic pillars of the Basque Country. To retain the competitiveness of the Basque region at a high European manufacturing position, it is essential to raise the level of innovation and ensure the transfer of these innovations to Basque companies. The aim is to increase competitiveness in order to be able to compete with emerging countries.

CIC marGUNE believes that research is the highest form of innovation and its main objective is to generate new knowledge on a specific manufacturing technological area.

Therefore, the actions of CIC marGUNE are focused on basic research oriented to high performance manufacturing. In this context, we consider 'manufacturing' as the production of products taking into account the machinery and the required processes for material transformation by means of removal,



cladding, joining, casting and forming technologies.

CIC marGUNE in pursuit of excellence of Basque manufacturing is open to the forefront, innovation and global developments, aiming to increase economic competitiveness in order to transfer it to companies to provide them with added value.

What is CIC marGUNE?

CIC marGUNE is the Basque Centre for Cooperative Research in High Performance Manufacturing. It was

set up to raise the competitiveness of Basque companies in the field of manufacturing through excellent research to gain knowledge, which is subsequently transferred to the industrial sector, and thus improve technological capability and maintain and/or improve global competitiveness.

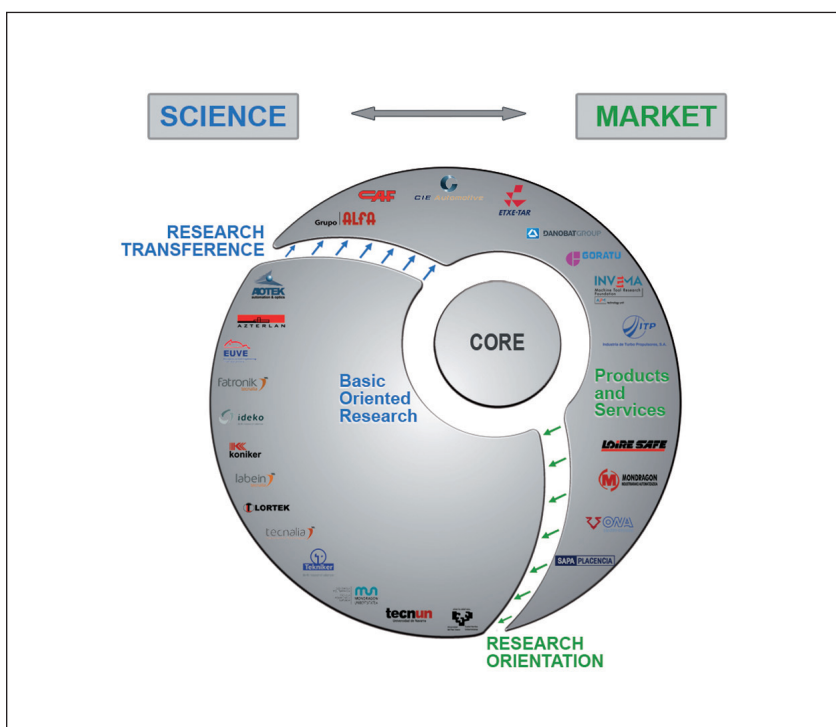
Through this work, we have become the guarantor of Basque policies in the field of manufacturing and the meeting point of different fields related to manufacturing (machine tools, aerospace, automotive, rail, etc.).

In addition, we have become a forum for discussion between companies, technology centres and universities in the area of manufacturing, so that we connect science, technology and the market.

How do we work?

The strategy we pursue in CIC marGUNE is to combine the efforts of a large part of the research mass in our area of expertise, as well as of major corporations and leading business groups in their respective sectors from different niches of activity.

Knowing what is happening in Europe and worldwide and participation in international organisations like CIRP and European projects enables us to keep abreast of the last research and



advanced innovative developments in our sector.

One of the biggest potentials of CIC marGUNE is the combination of basic scientific research skills, typical of universities, with approaches closer to industrial reality, characteristic of technology centres. This, coupled with a focus on industrial needs provided by leading companies, ensures a bright future.

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So, our philosophy is based on the cooperation of our members, combining the efforts of companies, technology centres, universities and local institutions. All in all, collaboration on every level:

- The most important companies of different strategic sectors for manufacturing focused research projects to generate competitive value;
- Technology centres and universities conduct basic research in areas and trends that may be interesting to pursue in the future in the Basque Country;
- The participation of the public administration ensures a focus of the activities corresponding to strategic lines of the Basque Country.

Besides this, CIC marGUNE counts on the scientific committee, which guarantees the quality of research activities on an international level. This committee provides expertise and vision on projects, and advice on areas and trends that in the future may be of interest to pursue. It is formed by European experts in different



fields of manufacturing technology, all members of CIRP (International Academy for Production Engineering).

Research excellence

The research activities developed collaboratively by CIC marGUNE agents are guided by partner companies to add a significant value.

Our strategic research lines are:

The main activity of CIC marGUNE is the development of basic research along the lines of the strategic sectors of the Basque industry, which is performed in the framework of specific research programmes of the Basque Government (Etortek). Nowadays we are working in a project called Manufacturing 0,0. The aim of this project is to transform materials into products demanded by market, not only effectively by making quality products, but also efficiently by avoiding downtimes and material waste, thus providing a solution based on non-manufacturing. Developments are carried out in the technological fields of EDM, control of joining processes, machining special materials for the aeronautics and automotive industries, high precision in five axis machines, green sand casting, laser cladding technologies, etc.

This project is being carried out, since July 2008, by the universities' and research centres' members of CIC marGUNE in order to increase scientific-technological and industrial excellence. In this context, in 2009, we have published 35 articles in indexed magazines, 30 in non-indexed ones and 72 papers at various conferences. Five patents have been registered as well.

As result of the policy of CIC marGUNE, in 2009 we carried out 64 technology transfer projects to 65 different companies. This means transformation of research into tangible results.



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