

## THE PORTUGUESE AUTOMOTIVE INDUSTRY MOVING UP A GEAR

**Globalisation of markets, delocalisation of production, technological innovation and international competition: these may be difficult and general terms, but they represent a reality for a large number of small and medium-sized enterprises (SMEs) within the automotive industry in Portugal today.**

Why are we talking about the plight of the automotive sector if, at a first glance, it seems to be a vital and dynamic branch of the economy? As a matter of fact, in Portugal the industry currently generates more than 4,000 million Euro per year and employs more than 40,000 workers in about 180 companies. Moreover, the automotive component industry continues to attract a large number of investors and the sector is strongly supported by funds from both the Portuguese government and European Union. With more than 80% of vehicle production sold to other European countries, the automotive industry is Portugal's biggest export sector, thus playing a strategic role in the economy and representing 7% of the country's Gross Domestic Product.

However, this is only the good side of the coin. In reality, the sector is not as booming as it used to be, and the smallest and most vulnerable enterprises and their workers face today a precarious and uncertain situation. In fact, the surge in international competition has entailed a clear shift in automotive production to Eastern European countries, and to Asia. This shift abroad of whole assembly lines affects other smaller and more dependent actors of the supply chain: as in a type of cascade, it touches on the first, second and third-tier suppliers. Most of the Portuguese component suppliers – those who produce small parts such as engine components, moulds, tools, electronics, plastic parts, seats, and climate control systems - are located in the lower levels of the supply chain. These SMEs – or 'component manufacturers' or 'manufacturing assemblers' as they are technically called - all have low levels of productivity compared to other European companies and increasingly have workers with outdated skills. They therefore need to develop and improve their capacity and skills, particularly in the areas of product development and technological innovation, in order to remain competitive in the market, raise the flexibility of their production and adapt to new economic requirements. All of this is believed to 'protect' these component SMEs – and most importantly their vulnerable workers who would otherwise be at risk of redundancy - by reducing their dependency on the central assembly line and decreasing the impact of any eventual shift in production abroad.

Against this background, the EQUAL partnership *INOCOP*, led by Global Change (a consultancy with extensive experience in working with enterprises, in cooperation with a wide range of partners working in the industrial sector in Portugal) was created with the aim of supporting component SMEs and their most vulnerable workers within the automotive sector. The overriding belief of the *INOCOP* partners was that the implementation of Research and Development (R&D) plans in automotive component manufacturers would enable these companies to introduce technical improvements and would give them a greater vocation for the development and engineering of more advanced products, thereby allowing the whole automotive sector to be more cohesive and competitive. Moreover, this emphasis on R&D and technological innovation would provide a clear area and impetus for upskilling SME workers in the sector, thereby improving their employment prospects.

*"Changes in the economy generate problems for most SMEs in the automotive sector. This is due to the fact that bigger companies, big centres of production, are leaving the country. To solve this problem we have to establish a strong network that will support and help these SMEs and their workers. And to help them, we also have to develop R&D and inter-sectoral cooperation. Only in this way can we have a chance of seeing competitive products in a competitive and vigorous sector".* Such a statement summarises the common feeling among the partners.

## UNITY IS STRENGTH!

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In order to overcome the challenges posed by increased international competition and the threat of production transfer, the partners of *INOCOP* have come up with a very simple but innovative idea based on a basic principle: unity is strength! They have in fact understood that cooperation between different business sectors and clusters within the automotive industry, mainly those relating to textiles, metal, electronic components, and moulds and plastics, constitutes the essential path that leads to the development and consolidation of the competitiveness of the sector.

As Pedro Miguel das Neves of Global Change puts it: "We know that, together, SMEs can find effective solutions and innovative products to tackle the rigidity of the sector. Our goal is to bring together different companies operating in different branches so as to develop inter-sectoral cooperation and generate benefits for all workers within the automotive industry".

But how can various actors be brought together to establish sustainable cooperation? The partners of *INOCOP* have come up with an original and innovative idea: adopting and developing inter-sectoral Communities of Practice (CoPs). A CoP is a model based on different social learning processes and, at the same time, a new idea. It is neither a workshop, nor a group of professionals, it is not merely a network, nor an association. A CoP is a new approach to knowledge management based upon a basic, but strong principle: learning is social and comes largely from our experience of participating in daily life. The simplest way to illustrate this principle is to think of a group of people having a common interest in a particular subject or problem, and collaborating over an extended period of time to share ideas, find solutions, and build innovation. The *INOCOP* partners have rapidly understood that this original CoP model can be of great help if adapted to the automotive sector. They have therefore developed this model by establishing different CoPs, each of which involves staff from automotive SMEs to come up with new business creations or ideas.

But how exactly have these Communities been established? The *INOCOP* partners originally developed and sent a questionnaire to more than 100 automotive companies. The questionnaire aimed to classify the activities, products, knowledge areas and most frequent problems of those concerned. The answers gathered enabled the identification of common criteria for the development of a number of CoPs, the idea being that SMEs with sectoral affinities and/or the same problems could be grouped together within the same Community.

The creation of new business products through the CoP presumes that newborn ideas run through, what is known as, an 'innovation funnel', a procedure developed within each CoP emulating the production process of the automotive sector itself. This means that every product or idea goes through different steps, from its very conception, development and analysis to its implementation and launch on the market. This CoP "funnel" can be divided into three main phases, each one involving different actors and activities. The first step involves the staff of the SMEs working in different branches of the automotive sector. At this stage, workers from different companies share their knowledge and identify potential ideas or solutions that could bring an innovation to the sector (for example, the introduction of new materials, improvement of a process or introduction of ICT in the production chain). The second step involves representatives of SMEs, as well as external experts in the field, as well as members of the project. Thanks to their advice and help, the product is further developed and its feasibility is tested. During this phase in fact, SME staff and experts produce and develop together a 'prototype' aimed at testing and exploring both its potential and impact on the ground. The third and last stage of the CoP is the phase of validation, production and launch of the product. Apart from the experts, this step entails the participation of SME managers who have to decide if the idea is going to be adopted by the company and launched on the market. In this respect, the CoPs can be seen as 'factories' or 'laboratories' of new business products!

Through the whole CoP process, the role of the *INOCOP* partners is that of back-up, support and facilitation within the different CoPs. As Sandra Almeida, from the Managing Authority says: "*The project's aim is to trigger a new dynamic. It is then up to the workers and managers themselves to design and develop their own products*".

Even if the full added value of this innovative model has not yet been fully materialised (owing to the relatively early stage of the project), the CoPs can already be seen as spaces where learning, empowerment, cooperation and innovation are stimulated through the participation in a collective process. What is even more important is that the CoPs stimulate forms of self-organisation and management, and create trust among the partners involved. As Pedro Miguel das Neves says: *"For people to cooperate firstly we need trust. In the present situation there is none, companies are merely concerned with their own business. Instead, the model that we are developing, thanks to EQUAL, focuses on interactions and one's ability to develop activities and projects through cooperation between companies. The CoPs bind people together and facilitate relationship and trust. This dynamic is meant to overcome the inherent problems within a slow-moving traditional sector and help SMEs and their workers move towards a fast-moving and flexible economy"*.

## A KEY TO OPEN EVERY DOOR

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As the partners have declared, the goal of the *INOCOP* project has been very ambitious, not only as it has aimed to develop an original concept and trigger a new dynamic, but also because it has targeted the vast majority of SMEs in the Portuguese automotive sector. Reaching such a vast audience would not have been possible without an extensive and broad partnership with complementary skills and competences linked to the sector.

Together with Global Change, the managing partner, the EQUAL partnership embraces a vast range of actors. Each of them has special competences and qualifications in different, but interconnected sectors of Portuguese business life: INETI a public centre, part of the Ministry of Economy and Innovation, is the largest R&D laboratory in Portugal; CENTIMFE and CITEVE are technological centres supporting the mouldings, plastic and textile sectors; ADETTI and IESE are both institutes for the development of communication and information technologies and socio-economic studies; while AFIA is the Portuguese Association of Automotive Suppliers linking and representing automotive suppliers, both at the national and international level.

The partners' aim has been to design and realize R&D activities for SMEs, providing expertise and advice, sharing know-how directly with the companies involved in the project through the medium of the CoPs. The partners have given a range of inputs. They have been facilitators of a CoP, assuming the role of proxies or informers between the participating SMEs and the external world (institutions, experts and policy makers). Moreover, the *INOCOP* members have played an important role in the second phase of the Community process, that of developing a product prototype. At this stage, the input of the technological centres and institutes, in particular, has been of vital importance in assessing the feasibility of the business product and enhancing the effectiveness and originality of the developed idea.

Global Change and INETI have also elaborated a written methodology for the integration of knowledge generated in each CoP into organisational business practice and processes. This methodology explains in detail how to decrease obstacles, and increase trust and connectivity in order to implement new products and improve the performance of SMEs. It also highlights how existing tacit knowledge can be made explicit through the implementation of Communities, and how knowledge generated within the context of the CoPs can be incorporated into organisational business practice and processes. In other words, the tool explains every step to undertake and the right procedure to adopt to put into practice a new business product. This tool has proved extremely helpful for future mainstreaming opportunities, as the partners explain here: *"This written methodology is a tool that could perfectly apply to other sectors of the industry, especially those composed by different branches"*.

Last but not least, the partners of *INOCOP* have worked to build a network, bringing expertise and assistance to the Portuguese automotive industry. This has been done in two ways. Firstly, by involving key players within the sector, thematic experts, industry representatives, as well as policy makers (from ADI, the Governmental Organisation for Innovation and the Excellence Centre for the Automotive Industry). These are not involved in CoPs, but work together within a "High-level Advisory Board", a body especially designed to foster the management and increase the impact of the project. Secondly, the partners are currently developing an Internet platform, which will comprise an extensive database with information on the automotive companies, research centres, academic institutes and consultancies. This tool is being developed in order to

support the virtual functioning of the CoPs and is believed to be particularly helpful for SMEs looking for support or cooperation opportunities.

The experience of the partners working within *INOCOP* has been an essential asset to reach a maximum number of companies within the automotive sector. As Joaquina Barrulas from INETI puts it: "*The fundamental strength of our project stays in its structure: we are all different in our nature but somewhat complementary*".

In conclusion, the partners of *INOCOP* are now well placed to strengthen cooperation between automotive SMEs by developing a new dynamic and opening new doors through an exciting CoP model. This model now also means that vulnerable automotive workers have an increased opportunity to develop new business insights and skills, and ultimately to become more adaptive within their workplace. Everything is clearly in gear. It's now just a question of stepping on the accelerator...

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