

Una manera de hacer Europa



Support scheme for Piloto F'' brica 4.0 projects to realize a smart Factory

Galician Institute for Economic Promotion (Igape)

Programa Operativo de Galicia

Año 2020

Fondo Europeo de Desarrollo Regional

Support scheme for Piloto Fábrica 4.0 projects to realize a smart factory

The Galician Institute for Economic Promotion (Igape) has launched a support scheme to set in motion a pilot program towards the Smart Factory, in order to transform the current industry into a more virtual one. This support scheme is called Piloto Fábrica 4.0.

Its objective is to select company projects that could serve as starting points and impulse for the digitisation of production facilities in Galicia because of their use of innovative technologies. Generally speaking, projects have been promoted that include robots, sensors, big data analysis and other actions related to the Internet.

This document will focus on the group of companies benefiting from this support scheme in the manufacturing industry sector. As an example of these, we present two projects as good practice:

The company **Aníbal Metalmecánica**, which is dedicated to manufacturing metal parts for the automotive industry, has presented a project for **Robotization and digitization of various production processes of the factory**. First, the company has been replacing paper with electronic devices (tablets) that offer greater security and availability of the stored information.

In addition, they have connected all the machines in their production processes, which has allowed them to have real-time data and thus make decisions more quickly in accordance with it.

They have also incorporated a high precision machine, capable of measuring products with an accuracy of one thousandth of a millimetre. This has entailed a significant increase of efficiency in production and a leap in quality for the company.

The company **Industrias Proa**, which is dedicated to the manufacture of paints for the automotive, construction and metal sectors, has presented the project of Development of a laboratory to carry out simulations of the application of paint with robots on sheets for the automotive industry and data processing.

The computing platform installed for this project is capable of simulating the actions carried out by customers in the manufacturing processes, with the purpose of developing new products, improving existing ones, and simplifying customer installations.

A high-speed sprayer was also installed, that has put the company at the same level as the larger firms in the sector, since it allows the application of paint on surfaces as efficiently as the industry leading companies.

The total amount granted within the framework of this support scheme for manufacturing companies was 1,820,804 euros, of which the ERDF contributes 1,456,643 euros. With this economic amount, 27 projects from different companies have been supported, mobilizing, in turn, a private investment of more than 3.2 million euros.

Both projects are considered to be examples of Good Practices since they meet the criteria established to that effect:

1. The intervention has been properly publicised among beneficiaries, potential recipients, and public at large

The company **Aníbal Metalmecánica** has announced the support received from the ERDF Fund in their website and through a brochure on the project:

Avanzamos en nuestro compromiso con la Industria 4.0. El proyecto demostrativo del CEAGA Industria 4.0, del que AMG forma parte, ha sido **premiado** por la Xunta de Galicia.

Constituido con el objetivo de sensibilizar, apoyar e impulsar la transición de la automoción gallega a la Industria 4.0, el proyecto reúne a 12 empresas que demuestran la heterogeneidad que caracteriza al Clúster, representando toda la cadena de valor de la automoción gallega. Además, cuenta con la participación del Centro Tecnológico de Automoción de Galicia y otros agentes del entorno, en calidad de proveedores de servicios 4.0.

Concretamente, el proyecto piloto de AMG desarrollará nuevas celdas integradas con la **robotización física**, se adaptarán los **sistemas de gestión** y se desarrollará una plataforma **DIGITAL FACTORY** de gestión de la información **sin papeles**.

Este proyecto recibe apoyo financiero del IGAPE, la Xunta de Galicia y el Fondo Europeo de Desarrollo Regional FEDER, dentro del Programa Operativo Fondo Tecnológico 2014-2020.

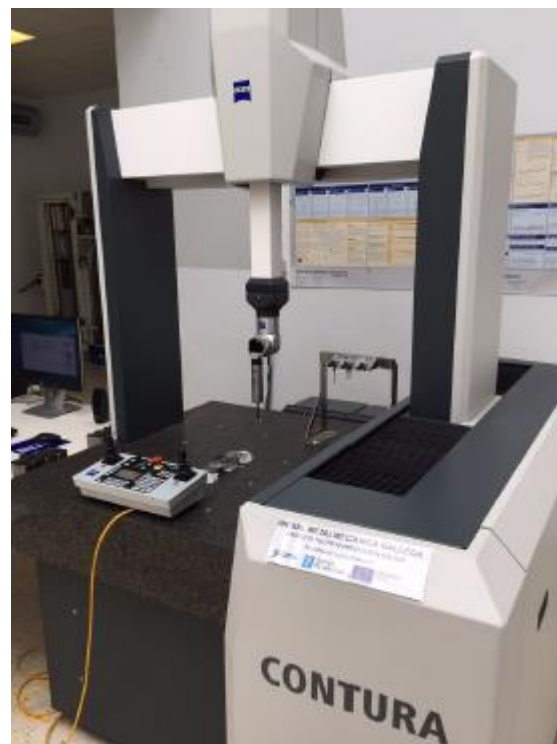
Ficha técnica



- Nome: Aníbal Metalmecánica
- Sector: Corte, mecanizado e conformado para o sector do automóbil.
- Tipos de produtos/servizos: Fabricación de compoñentes metálicos de aceiro inoxidable, aceiro carbono e aluminio para a industria automotriz.
- Ano de fundación da empresa: 2010
- Número de empregados: 47
- Facturación anual: 4.237.000 € (2017)
- Países aos que exportan: Estados Unidos, México, Portugal, Francia, República Checa e Alemaña.
- Enderezo: R/ R.M. Esperanza 25, Parque Industrial San Cibrán das Viñas, Ourense
- Teléfono: 988 384 960
- Email: info@amgmetalmecanica.com
- Páxina web: www.amgmetalmecanica.com
- Proxecto Industria 4.0
- Proxecto promovido por: Clúster de Empresas de Automoción de Galicia (CEAGA).
- Síntese: O proxecto Industria 4.0 da empresa ourensá Aníbal Metalmecánica consistiu na progresiva dixitalización e robotización para chegar ao modelo de fábrica dixital. Para iso, incorporáronse tabletas dixitais que substituíron o papel, adquiriuse unha máquina tridimensional de CNC e monitorizáronse todas as máquinas implicadas no proceso de produción para ter toda a información conectada en tempo real.
- Obxectivos: A empresa logrou mellorar a eficiencia da produción. Os procedementos foron simplificados, o que provocou un aforro nos custos de fabricación e unha maior fluidez nos procesos de xestión interna, ademais de garantir a seguridade da información anteriormente feita en papel. Doutra banda, a conectividade on-line das máquinas posibilitou ter información en tempo real para tomar decisións de forma máis rápida e eficiente.
- Investimento mobilizado: 129.948,50 €



In addition, the co-financing received has been publicised through the placement of different advertising posters in the company's facilities:



On their part, the company **Industrias Proa** has released an explanatory video of the project:



They have also published an informative brochure and placed various posters highlighting the co-financing received:

Ficha técnica

- Nome: Industrias Proa
- Sector: Pinturas e vernices.
- Ano de fundación da empresa: 1941
- Número de empregados: 80
- Facturación anual: 13.600.000 €
- Datos de exportación: 12%
- Dirección: Polígono industrial Gándaras de Prado S/N. O Porriño (Pontevedra)
- Teléfono: 986 346 525
- E mail: proa@pinturasproa.com
- Páxina web: www.pinturasproa.com
- Proxecto Industria 4.0
- Proxecto promovido por: Fundación Clúster Empresas de Automoción de Galicia (CEAGA).



- Síntese: O fabricante de pinturas para o sector do automóbil, Industrias Proa, desenvolveu un laboratorio para realizar simulacións da aplicación de pintura con robots sobre chapas para a industria do automóbil e o tratamento de datos. Tamén se incorporou un "Pulverizador rotativo de alta velocidade con carga electrostática interna montado sobre robot e un "Wave-scan dual" para a medición de pel de laranxa e DOI (Distinctness-Of-Image – Gloss, reflection of image, Haze) en superficies de alto brillo e semibrilantes, como ferramenta de diagnóstico para a solución de problemas, reaxuste e optimizar a aparencia.
- Logros: Mediante estas simulacións, a empresa mellorou os produtos xa existentes e desenvolve novas referencias que lle fan ser máis competitivo no mercado. Ademais, permítelle ofrecer un mellor servizo, optimizar a calidade das pinturas e aforrar custos, xa que as tecnoloxías instaladas fan posible adiantarse a posibles incidencias que poidan ocorrer, evitando gastos e tempo relacionados.
- Investimento mobilizado: 222.409,52 €





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Also, Igape has convened an award to the best joint SME projects submitted by clusters or other associations. A public award ceremony was held on June 6, 2016, with the presence of the Head of the Regional Department of Economy, Employment and Industry, which helped to spread word of the European co-financing of this aid:



2. The intervention brings in innovative features

The company **Aníbal Metalmecánica** has introduced very innovative components in its manufacturing process during the development of this project.

A series of digital components have been implemented, providing real time knowledge of the situation of the different machines in the different parts of the factory, and gathering all this information in a single centralized point. This way, it is much easier to make sound decisions to maximize the production of the factory.

The have also put in place a machine with a measurement precision of one millionth of a metre, so this innovation will allow them to be very competitive in the market.

The firm **Industrias Proa** has set up a completely new laboratory in its facilities. This laboratory is capable of simulating the various types of actions carried out by its clients, which is a very significant advance in the competitiveness and efficiency of the company. In addition, it will make possible much shorter simulation runtimes than those necessary up until now.

Specifically, a series of robots, measuring equipment, the possibility of communicating different machines located at different points of the installation, applications to process large amounts of data, etc., have been implemented.

It should be noted that in all of Spain there are only two facilities similar to those co-financed in this project.

3. Compliance of the results with the set objectives

Aníbal Metalmecánica belongs to a very competitive sector: the automotive industry. For this reason, this project has made a very important improvement in its productivity thanks to digitization and the implementation of robots in the factory. The quality of manufactured products has been improved, manufacturing efficiency has been increased, and profitability of the company has been increased.

In short, it has led to a qualitative leap that allows it to compete with Asian and European companies in this global market.

For the company **Industrias Proa**, the installation of the laboratory in its facilities has allowed them to continuously carry out product testing during the manufacturing process, resulting in time savings and a more efficient certification process of these products. In addition, it will allow the development of new products with much lower costs.

Thanks to this, the company will be more competitive and will be able to offer a better service to its customers and place higher quality paints on the market.

4. Contribution to the resolution of a problem or weakness detected within the territorial scope of intervention

The company **Aníbal Metalmecánica** is dedicated to the manufacture of metal parts at its headquarters located in San Cibrao das Viñas. It was founded in 2010 and has a team of experts in different disciplines: there are engineers, technicians, managers, etc.

Even so, the development of this project was very necessary for the company because they were falling behind in the market competition with their Asian rival companies.

For this reason, the development of the project has allowed this company to remain in the market and to be able to produce metal components with adequate costs and quality.

Industrias Proa is dedicated to the manufacture of paints for use in various sectors. Currently, paints to be placed on the market are required to be of very high quality. Achieving the demanded quality was a task impossible to perform with the manufacturing processes they had been using to date.

Hence, with the automation of the company's facilities, many more trials and tests can be carried out than was possible before, and all this at a reasonable cost.

With the laboratory installed, waiting times to test or make the desired product available to customers have been eliminated or reduced, resulting in greater efficiency and customer satisfaction.

5. High degree of coverage of target population

It should be noted that the improvement in performance features of the metal parts made by **Aníbal Metalmecánica** will affect a very high portion of the population. Practically all of us own or use a vehicle in which we travel every day to carry out our day-to-day activities.

For this reason, this project will allow us to have vehicles of a higher quality and less prone to failure over time.

Likewise, the project developed by the company **Industrias Proa** benefits the entire population. It is easy for any of us to think (or take a look around) of everyday objects that have a coat of paint, which is the activity in which the company has made a leap in quality.

Think of soda cans, cars, the walls of our home, etc. We are completely surrounded by things that have a layer of exterior paint that makes them more pleasant to our eyes.

Therefore, the laboratory installed by this company will make it possible to produce paints of a much higher quality than that existing up to now and that we could all enjoy sharper colours and a longer paint duration.

6. Observance of horizontal criteria of equality of opportunities and non-discrimination, as well as social responsibility and environmental sustainability

The firm **Aníbal Metalmecánica** uses metal or its derivatives as raw materials to produce the final parts that it places on the market.

As we know, metal is a product that can cause damage to the environment without a proper separation and recycling of the leftover products created in the production process. For this reason, the company has a design of the manufacturing process that pays special attention to the protection the environment and the prevention of damage by hazardous waste.

The company **Industrias Proa** uses a series of chemical compounds in the production of its paints. During the development of the project, special attention has been paid to prevention and to the improvement of its relationship with the environment.

Specifically, they have reduced their waste generation, added value to some of these residues that are inevitably generated, replaced some polluting and dangerous materials with innocuous or less hazardous ones, reduced the emission of harmful compounds into the air and decreased resource and energy consumption.

7. Synergies with other policies or instruments of public intervention

These actions have a clear synergy with the rest of the actions that are included in the Europe 2020 growth strategy, the Spanish Industrialization Agenda and the Strategic Plan for Galicia.

Likewise, the action is part of a package of 27 actions of the "Galicia Industry 4.0 Competitiveness Agenda" carried out by different public officials and aimed at creating an environment favorable to the development of industrial activities of a high technological level.

For example, it is worth noting the existing relationship with the Conecta Pyme aid scheme, aimed at promoting public-private collaboration in the field of industry.

It is also worth highlighting the harmony of this support scheme with another existing one consisting of favoring the creation or promotion of Joint Research Units, which aim to boost cooperation between research organizations and companies.

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BUENAS PRÁCTICAS
Actuaciones Cofinanciadas

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