

EDITORIAL

Autumn meeting of SG Construction: 13-14 October 2022 - Porto, Portugal

The international meeting of the Europe Enterprise Network (EEN) construction sector group (SGC) took place in Porto during the Concreta Fair, including also a B2B@CONCRETA matchmaking event. The meeting was organized by AIDA/CCI as a member of the SGC and had the support and collaboration of AEP. The Portuguese Sustainable Habitat Cluster was invited by the organization to participate together with its members in this EEN SG Construction initiative, contributing during these two days, for the discussion and analysis of the construction sector through the sharing of experiences and knowledge on current challenges.

Representatives from European Commission presented “Scenarios for the transition pathway for a resilient, greener and more digital construction ecosystem”, and from the European Innovation Council presented “Sustainability, digitization of the AEC (Architecture, Engineering and Construction) value chain, digital fabrication, adoption of alternative (local) materials, re-use / refurbishment”. Also the President of the Sustainable Habitat Cluster presented the opportunity and challenges brought by the topic of “Decarbonization, sustainability and circular economy in the Habitat value chain”. The representative from the Technological Center for Ceramics and Glass (CTCV) addressed the theme of “Innovation in sustainable ceramic products and materials for construction” and from PRECERAM Group introduced from the point of view of the enterprises and markets the approach to the “Circular economy in construction - what changes?”. The first day of the meeting was very successful with regard to presenting the local ecosystem to the European Commission and the EIC representatives.

The second day of this meeting, all the members visited the CONCRETA fair and participated in a special session, the **Creative Talks on “Sustainability & Digitalization of the Architecture, Engineering and Construction”**. Both Franc Mouwen from European Innovation Council and Irektra Papadaki, the construction team coordinator at the DG GROW participated at the creative talks and exchanged ideas with Portuguese companies, clusters as well as the Sustainability Team from the EC Consumer Protection Office. During the creative talks and the visits at the B2B and the stands of the companies in the fair, the representatives of the Commission and the EIC had the chance to get feedback directly from the construction companies on EU initiatives.

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Ceramic products for a safer built environment

By Victor Francisco, Innovation Director at CTCV – Technological Centre for Ceramics and Glass,
www.ctcv.pt



Used in a wide range of applications for thousands of years, ceramics today offer high quality products that play a critical role in our homes and buildings, and are deeply rooted in our economy, society and culture. Travelling to different European cities, from Faenza to Delft, from Castelló de la Plana to Limoges, from Sassuolo to Stoke-on-Trent, we will encounter the heritage of the European ceramic industry and see the versatility of ceramic products in building materials, from bricks to tiles, from sanitary ware to floor and wall tiles. In tableware or decorative ware, kitchenware or cutlery. And we could mention the many applications in refractory and technical ceramics or simply when we use the (ceramic) brakes in our car.

These are products with unique characteristics of resistance to heat and fire and can resist very high temperatures. Ceramics have insulating and thermal properties because fired clays are naturally insulating. Its high inertia helps regulate the interior temperature of buildings and plays a decisive role in thermal comfort. They can last thousands of years and are easily recycled, reducing waste and contributing to a circular economy.

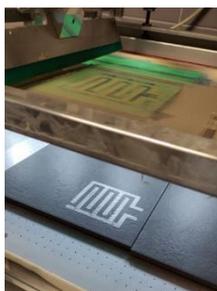
They are also safe products, they are inert and do not emit substances into the environment, preserving indoor air quality. Ceramic floors and tiles can have antibacterial properties and during the pandemic played a role in limiting the spread of viruses and bacteria by providing inert surfaces that are easy to disinfect.

Due to their high technical properties, innovation in these products involves the search for their multifunctionality, in order to associate new functions that promote their use in new spaces. One example of application stems from the current ageing of the population, which turns our homes into a support tool. The built environment, as a space where the fringe of the senior population tends to spend more time, plays a crucial role in fighting isolation and creating a greater and better life quality. The needs fall on the instrumentation of the spaces, allowing a more interactive, collaborative environment with non-intrusive functional assessment capacity.

The ACTIVAS project is an example of which will result in a set of innovative solutions for an Active, Safe and Healthy Life that will contribute to the definition of a new concept of habitat, providing this growing fringe of the population with the necessary security to have a better quality of life. These solutions are aimed at various market segments, such as the residential market, but also at hospitals, elderly centres, nursing homes and hotels.

One of the solutions under development involves the sensitisation of ceramic materials, endowing them with new functions for detecting floods and toxic gases, inferring situations of flood or fire danger. These systems make use of electronics printed directly on the ceramic (screen-printing) and, in comparison with conventional electronic sensors, make clear the possibility of a more invisible integration and adaptable to different environments, leading to non-intrusive solutions that are easy to install and remove.

New challenges with an identical purpose – to create a safer built environment for all.



Source: Projeto ACTIVAS



Source: Aleluia Cerâmicas

GISize: The future of the industrial sector in 3D format, by *Fundación para el conocimiento Madrid*

Aveva (Wonderware) was founded in 1987 on the premise that operators could monitor factory operations more effectively if their tools were as fun and easy to use as a video game interface. A few years later, it became one of the fastest-growing software companies in the USA and with more than 800,000 licenses in industrial facilities worldwide.

Aveva offered its customers an interface to view relevant information from their infrastructures in a visual form in 2D format. However, the evolution of the industrial sector is directed to 3D and so demanded by its customers, so the change was imminent.

Therefore, they needed a component that would be integrated into their system. That would allow them to add 3D controls as a much more attractive and accurate viewfinder to **show models of buildings, their maintenance, the operation of factories, tunnels...**



Aveva needed to explore the use of 3D components for its tools, so they trusted the Spanish company Plain Concepts to create a **graphical viewer to deploy infrastructure and building projects by integrating 3D tools** into their platform. From here, GISize was born, an app designed to create simulated environments to navigate through spatial or geographical data that represents the future of the industrial sector.

The control integrates perfectly into the platform and allows viewing information in 3D format, changing the camera angle, focusing the lens, magnifying it, applying effects, multiple selections, access the metadata of the different elements or parts of the 3D object specified in the IFC file... This allows the user to enter and consume the information that interests him/her, according to the desired moment.

In just a few years, 2D graphics will become obsolete, so betting on 3D represent the future of the industrial sector, but it will be extrapolated to all areas. **GISize is the future of Digital Twin and the digital transformation** that most industrial companies are demanding. From now on, all public works constructions must have a 3D representation and present the result in the BIM (Building Information Modelling) model, the standard at the level of architecture, so the applications of this viewfinder will be demanded worldwide. More information and source [here](#). Demo video available [here](#).

PREV.IA Project: Prevention of Occupational Risks through Artificial Intelligence, by *Fundación para el conocimiento Madrid*

The **introduction of Artificial Intelligence in the workplace** is a decision that opens up a world of possibilities within a company. This type of technology allows the “humanization” of the capabilities of machines, which have the capacity to understand, analyse and learn autonomously, which translates into automation and process improvement.

The PREV.IA project aimed to **analyse and detect patterns in the prevention of occupational risks** and issue notifications whenever the system perceives a risk behaviour. All this, applying a layer of artificial intelligence to the transmission of video in real time.



The Spanish company Plain Concepts proposed, as the main objective of the project, to test whether the use of technologies such as **Artificial Intelligence (AI) and Machine Learning (ML) could constitute an improvement in agility,**

implementation costs, accuracy and results in the prevention of occupational risks, compared to the use of other technologies already proven for the same objective such as Internet of Things (IoT).

The proposed solution allows the management of an automatic alert system that notifies in real time situations of danger. In a second phase of the project, risk behaviour is predicted before it takes place. The movement of workers was put to the test in areas where it is not possible to set beacons, for example, where there is a movement of land or in the laying of lines. In this case, the use of the helmet and the transit of safe paths in the environment of works and/or dangerous and restricted areas within the scope of construction and industry can be detected.

Thanks to the **application of solutions based on Artificial Intelligence** in less explored environments, such as industry or construction, accidents at work can be prevented, in addition to accessing them for a cheaper price. Using a video camera to control the number of people and locate them in dangerous areas, as well as detecting the mandatory use of protective measures, is a giant leap towards employee safety. More information and source [here](#).

Ferrovial: Reality through virtual reality, by *Fundación para el conocimiento Madrid*

Taking advantage of the latest BIM (Building Information Modelling) work methodologies, a set of applications based on the use of open standards, such as IFC, have been designed to make collaborative work easier, more enjoyable and more efficient. The set of tools developed covers the world of the desktop and virtual reality, where the structures are shown with the concept of ``objects`` with their properties and characteristic information.

The main challenge of this project is to **plan and visualize a construction and its different sections before starting the construction or manufacture of the piece**, during the process to control the status of each section and at the end of the process to compare results.

The **Evergine graphics** engine has been used to create a set of tools in desktop systems and in Virtual Reality environments that faithfully, proportionally, and functionally represent the content offered by the openBIM standard. It increases the user's immersion allowing navigation and manipulation in Virtual Reality environments as if they were really working with elements already built in reality.

This set of tools makes possible to support the openBIM standard for the transfer of information, represent in 3D and 360° models both on the computer screen and in the virtual reality glasses, and navigate in real-time through the different sections of the building, pieces, rooms, spaces, factories. The hierarchical structure of the components allows greater focus on the sections that are most important for the current context, and the layered architecture allows the building of new behaviours on the entities while maintaining compatibility.

More information and source [here](#).

[News from the Sustainable Habitat Cluster in Portugal](#)

By Victor Ferreira, President of the Sustainable Habitat Cluster

The Sustainable Habitat Cluster is composed by a network of more than 150 members that brings together in Portugal mainly companies, but also R&D centers, universities, municipalities, business associations and other public and private entities, that are committed to sustainability as a motto for Innovation and Competitiveness in the Habitat value chain. The members of the Cluster aim to promote a more Sustainable Habitat (cities, buildings and infrastructures) for a better quality of life of people and safeguard of the planet.

Get to know more about the Sustainable Habitat Cluster here: <http://www.centrohabitat.net>

In this next section we'll present some of the latest initiatives and solutions by the Cluster and its members, under the topics of Sustainability, Innovation and Circular Economy.

EXCELIVING, the habitat value chain towards healthy, age-friendly and sustainable living environments

The EXCELIVING project, financed under the call "Cluster Excellence" of the COSME-HORIZON 2020 program, is led by the CENFIM Cluster (Spain) and has the participation of the SMARTTECH Cluster (Spain), Transylvanian Furniture Cluster (Romania), Cluster Habitat Sustainable (Portugal) and Danish Life Science Cluster (Denmark).

This project is focused on the habitat value chain with a cross-sectorial approach to its different sectors and dimensions: construction building materials, furniture and lighting, home automation, welfare technology, etc. During the expected two years of the project, the clusters involved and the companies they represent will work on ideas and formulas to promote healthy and sustainable spaces and buildings throughout Habitat's value chain. Inter-regional cooperation, transfer of innovation and a multisectorial approach will be the work axes of the organizations involved.

More information at: <http://exceliving.eu/>



Development of an Eco-Design Tool for a Circular Approach to Building Renovation Projects

The UAveiroGreenBuilding Project, supported by the EEA Grants under the Environmental Fund, whose objective is to provide the University of Aveiro with a methodology that allows the application of the principles of Circular Economy, is developing an ecodesign tool based on data on two pillars of sustainability, the environmental pillar and the economic pillar, introducing considerations of circularity, which makes it possible to compare constructive solutions at the time of decision in a preliminary design phase.

Preliminary tests with this tool are available in the technical article developed by the project team and published in the scientific journal "Sustainability".

You can access the article here: <https://doi.org/10.3390/su14148969>



DAPHabitat: Portuguese system for the registration of Environmental Product Declarations (EPD)

Environmental Product Declarations (EPD) are a tool for communicating the environmental information of products and services. In order to promote the preparation and publication of this type of document in Portugal, the DAPHabitat System was created, a national registration programme for Environmental Declarations and an eco-innovation tool for products and solutions in the Habitat value chain (Materials, Construction and Real Estate).



Visit: <https://daphabitat.pt>

Some solutions and products from the members of the Sustainable Habitat Cluster:

CircularBuild Project- Development and Validation of the Concept of Circularity Applied to Modular Prefabricated Construction

The CircularBuild project, funded by EEA Grants under the Environment Fund, has the partnership of the Sustainable Habitat Cluster and aims to investigate solutions with alternative materials for the panels of the prefabricated modular system of CONCEXEC - Arquitetura, Lda. in a circularity perspective, allowing a total reuse of the waste generated, without compromising the performance of the building in terms of energy efficiency and also contributing to the new paradigm of "Zero Carbon Buildings".



+info: <https://www.circularbuild.com.pt>

Cork Components of Amorim Cork Composites reduce the Carbon Footprint of Flooring

Developed by Amorim Cork Composites, the cork components of Amorim NRT@62, with and without a vapor barrier, specially developed for the flooring industry, make a positive contribution to reducing the carbon footprint of the flooring manufacturers' production process. This is because Amorim NRT@62 components, produced from the raw material cork, have a negative carbon balance. At the same time, they prevent the transmission of vibrations to the structure of the building, consequently reducing impact noise.



+info: <https://amorimcorkcomposites.com/en/about-us/news/sustainability/>

Meet the ECOBOARD brand

Through the ECOBOARD brand, Sonae Arauco offers a complete range of solutions with resins with no formaldehyde added during the manufacturing process. Whether PB (particleboard), MDF (medium density fibreboard) or OSB (oriented strand board), these products seek to meet the most demanding ecological requirements, contributing to improve indoor air quality. This is another important step towards a more sustainable world and is a strong commitment from Sonae Arauco to the well-being of the next generations.



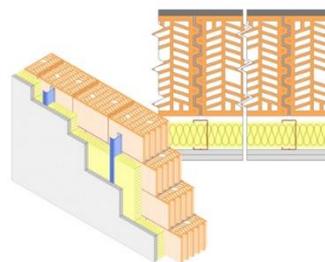
+info: www.sonaearauco.com/en/products/core-and-technical_2592.html#bl_2

Preceram Group nZEB Walls Library

The thermal performance of the walls is fundamental and, in partnership with Itecons, a set of constructive solutions was characterized, which combine materials from the various companies of the Preceram Group (Gyptec plasterboard, Volcalis mineral wool, Preceram thermal brick), to help designers to improve the energy performance of their buildings.

All the solutions presented are suitable for buildings with almost zero energy needs, the so-called nZEB.

+info: <https://solucoesparaconstrucao.com/en/>



Chatron's Solar Light Tubes at the forefront of sustainability

Manufactured in Portugal, in Europe, Chatron's Solar Light Tubes have a design based on energy efficiency and have great integration with global lighting of buildings (versions Solar Tube - Light Tunnel - Sun Pipe). The Solar Light Tube was designed to optimize efficiency and service life, offering a high guarantee to its customers.

+info: <https://www.chatron.pt/en/produtos/tubo-solar>



Weber flooring solutions enhanced with innovative and more sustainable solutions

Weber, a brand of Saint-Gobain Portugal S.A., increases the solutions in the weberfloor range. The new products reinforce the brand's commitment to developing solutions and systems for flooring with a high profile of innovation, sustainability and safety, in order to optimize processes and decision-making for construction professionals.

+info: <https://go.saint-gobain.pt/gama-pavimentos-weber-sustentavel>



Verdi Zero Concrete: The path to sustainability

SECIL launched the Verdi Zero Concrete, the first Carbon Neutral Concrete in Portugal. This is another important step in the decarbonization of the SECIL Group, with the objective of achieving carbon neutrality by 2050, in line with the commitments assumed to reduce CO2 emissions from its activity.

+info: <https://www.secil.pt/pt/caminho-da-sustentabilidade>



BIM library of Leca® products

Building Information Modeling (BIM) allows the creation and management of data during the digital process of design, construction and operation of buildings, enabling more informed and conscious decision-making, leading to more sustainable and cost-saving choices. As a manufacturer of construction products, Leca provides a BIM library of its products for REVIT and AutoDesk design software.

+info: <https://www.leca.pt/apoio-tecnico/bim-building-information-modeling>



DECK flooring by Pavigrés

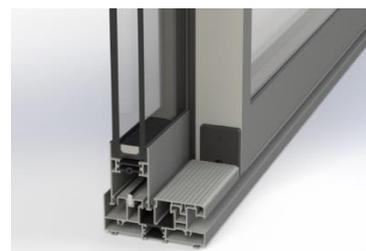
Pavigrés has a long history in sustainable products and the porcelain stoneware woods are just a small example of this. Pavigrés has developed a long-awaited product to add to its wood family, its new Deck. With a three-dimensional design, it was carefully thought out for water drainage, in addition to exceptional non-slip features suitable for outdoor use. From the essence of the Pavigrés, Coolwood and Deepwood collections, this deck was created in 4 natural colors. A product's sustainability and environmental impact is linked to its cost vs. life expectancy, Pavigrés believes that its environmental footprint changes the world and therefore makes sure that this is, and will be, its path.



+info: <https://pavigres.com/Colecao/DEKMAD/>

Extrusal reinforces the competitiveness of the B.095LV sliding system

Three months after launching the corner solution, Extrusal completes the offer of construction typologies for its B.095LV sliding system: fixed leaf option with capping profile. The guarantee of greater comfort and sustainability of housing by achieving better thermal and acoustic performance of the solution.



+info: <https://www.extrusal.pt/en/architect/b095-rpt-light-view/>

CIRCO HUB Portugal

Creating business through circular design

The CIRCO program (Creating Business through Circular Design) emerged in the Netherlands in 2015 and is based on the application of design and design thinking to the development of circular products, services and business models. From 2019 onwards, several other countries joined the CIRCO network, including Portugal.

The main objective of CIRCO Hub Portugal, which is being developed under a Technical and Financial Collaboration Protocol between the Environmental Fund, LNEG (coordinator), IAPMEI and APA, is to support the transition to the circular economy from the businesses side. In this project, companies and designers work together to develop products, services and circular business models, following the CIRCO well-tested training methodology. So far, 62 companies and 14 designers have been trained and by the end of March it is expected that these numbers will raise to 70 and 40, respectively.

+info: <https://circohubportugal.lneg.pt>



openDBL - A reference platform for transparent, green buildings, by CETMA

Designing modern sustainable architecture is a complex, time-consuming and expensive job. It also combines multiple technological fields and countless issues that need to be solved. The EU-funded openDBL project will bring these processes to a new level by integrating multidisciplinary know-how to solve problems in the architecture, engineering, construction and operations industry. To achieve this, the project will develop an openAPI, the disposal of openDBL, which would work in the frame of a standardised platform. Therefore, they will create a multifunctional, digital building logbook (DBL) to ensure the platform's speed, effectiveness and convenient pricing. This platform will support data matching with external databases and integrate with state-of-the-art technologies.

You can find more details on the project on the website <https://openDBL.eu>. The openDBL project is also present on LinkedIn (<https://www.linkedin.com/company/opendbl/>).

iCLIMABUILT iClimabuilt - An open innovation test bed for building envelope materials, by CETMA

iClimabuilt is led by the National Technical University of Athens and the 28 consortium partners cover 13 EU member countries. The project will run for 4 years, with the goal of creating an open access ecosystem for developing, upscaling and testing innovations in building envelope materials and technical systems via 9 Pilot Lines (PLs) to reach Nearly Zero Energy Buildings (nZEB) balance. At the same time, iClimabuilt will support and help small high-tech firms to scale up and cope with the continuous rising of technological complexity, assisting in the transformation of research results into innovations.

The 9 Pilot Lines within iClimabuilt will be combined and validated in 7 Test Cases to be demonstrated through 5 iClimabuilt demo-buildings. Additional test cases will be selected from an Open Call foreseen to run from September 2023 to February 2025, according to pre-defined criteria. At the same time, the iClimabuilt consortium will work towards establishing a coherent strategy for the characterization and optimization of the developed materials and building components, ensuring compliance with regulatory and environmental assessments as well as with the relevant standards under development.

You can find more details on the project website <https://iclimabuilt.eu/>.

The iclimabuilt project is also present on the following social media platforms:

- Twitter <https://twitter.com/iclimabuilt>
- LinkedIn <https://www.linkedin.com/in/iclimabuilt-project-4216a321b/>
- Facebook <https://www.facebook.com/search/top?q=iclimabuilt%20project>

Digitalisation of Construction SMEs

The European Innovation Council and SMEs Executive Agency (EISMEA) under the powers delegated by the European Commission, contracted a consortium to support the digitalisation of construction SMEs. The consortium is composed of Ecorys, TNO, IMP³ROVE, and Europa Media Group. Ecorys, a research and advisory consultancy, is as lead partner in charge of the overall project management and implementation. The services developed under this project aim at supporting the digitalisation of construction sector SMEs by improving the understanding of digitalisation covering technologies such as BIM, 3D printing and scanning, robotics, drones, sensors and IoT.

Visit: <https://digital-construction.ec.europa.eu/>

Matchmaking Platform of the Driving Urban Transitions Partnership for DUT Call 2022, by *Fundación para el conocimiento Madrid*

9 September 2022 – 3 May 2023, Online

Through the Madrid Knowledge Foundation we are co-organizing the Brokerage Event & Matchmaking Platform of the Driving Urban Transitions Partnership for DUT Call 2022 in which companies, technology centres, universities, public authorities/governmental organizations, NGOs, clusters, living labs, hubs and other actors in the urban transition sector, mobility and the development of sustainable, inclusive cities and will be able to hold bilateral online meetings with potential partners and/or clients around the launch of the first call for the European partnership Driving Urban Transitions (DUT). The main objective of this platform is to discuss and refine your project ideas with potential partners, as well as creating collaborations and joint consortia.

The platform will remain open until May 3, 2023, coinciding with the final date to submit full proposals to the 2022 call. However, it is important to note that the call will not allow new proposals between the pre-proposal phase (21 November 2022, 13:00 CET) and the full proposal phase (May 3, 2023, 13:00 CEST), so the search for partners will be especially important during the first phase. The purpose of the DUT 2022 Call is to support transnational research and/or innovation projects that address urban challenges in order to help cities in their transition towards a more sustainable economy and operation. These challenges are grouped into three themes called Transition Pathways:

- The Positive Energy Districts Transition Path (PED): aims to optimize the local energy system through energy efficiency, flexibility and local power generation from renewables in actions towards (urban) energy transition and neutrality climate and the integration of these actions in the urban planning processes.
- The 15-minute City Transition path (15mC): aims to redesign the existing mobility system and urban morphology to encourage sustainable mobility options, redistribute urban space and reorganize our daily activities to make our cities more neutral for climate, habitable and inclusive.
- The Circular Urban Economies Transition Pathway (CUE): aims to foster the design of urban places characterized by regenerative urbanism, that is, liveable, inclusive and green communities and neighbourhoods that are sustained by circular urban economies and resource flows.

More information and registration: <https://dut-calls.b2match.io/>

EUROSTRUCT2023, by *Fundación para el conocimiento Madrid*

27-29 September 2023, Vienna, Austria

EUROSTRUCT2023, the 2nd Conference of the European Association on Quality Control of Bridges and Structures will be held in Vienna, Austria from 27th to 29th September 2023 at the University of Natural Resources and Life-Sciences (BOKU). It aims to act as a forum for academics, practitioners, owners, and operators to discuss recent advances and identify future research directions.

The objectives of EUROSTRUCT2023 are to address all aspects of quality control plans in bridges and tunnels' safety and management, infrastructure systems, and protection structures and buildings, integrating the most recent knowledge on performance assessment procedures with the adoption of specific goals. Specifically: bridge repair and rehabilitation issues; bridge management systems; needs of bridge owners. Strategies as to how to incorporate sustainability & climate change issues into the design, construction, operation, and quality control plans in bridges safety and management, the implications and applications of Big Data and AI in the management – quality control.

More information and registration [here](#).



PARTNERING OPPORTUNITIES

[TOES20230201002](#) - A Spanish tech company offers advanced point cloud processing capabilities with applications on the industry, mining and construction sectors. The Spanish technology company offers advanced point cloud processing capabilities, enabling fast and effortless inventory in complex environments in the industry, mining and construction sectors. These capabilities also allow for the automatic generation of 3D models which serve as inputs for the development of Digital Twins. The main focus is on the development of research projects, including those launched for funding calls (Horizon Europe, ERA-NETs, partnerships...).

[TOES20230207036](#) - A Spanish company specialized in process engineering, plant design and system development for the efficient treatment of minerals and other raw materials for different industries offers its expertise to determine the most efficient industrial process. The Madrid-based company is specialised in process engineering and plants design and equipment for the efficient treatment of minerals, sand, gravel, clay, chemical and other raw materials processed by various industries. The company is offering its expertise in project development and a wide range of laboratory and pilot plant scale tests on ores, sands, and other materials for the processing industries to determine from the earliest stages the most suitable process applicable at industrial scale.

[Supplier request](#) - French trading company is looking for suppliers from Germany, Austria, Switzerland, Belgium and Luxembourg of innovative products for the construction and industry sector to offer sales representation in France.

Founded in 1978, the French trading company sells technical products and consumables for the building industry (structural works, shell and core) and civil engineering. The company is family-run and operates throughout France; the customers are all major construction companies, prefabrication plants, road builders, landscapers and industry.

20 employees (including 7 technical sales representatives) are fully committed every day and are working over the three branches in Cholet, Angers (West France) and Colmar (East France). Each branches has a warehouse, so we can react very quickly. In 2022 we achieved a turnover of €9 million. Our French customers are for example: Vinci, Bouygues, Eiffage, Razel Bec, and all major precast plants. We have been working transparently and trustingly with German partners for many years.

We are looking for new partners from Germany, Austria, Switzerland, Belgium and Luxembourg who want to sell innovative products for the construction or industry sectors in France.

Innovative products for the construction industry, for example: insulating or sealing products, all innovations for modular and prefabricated construction, shell work in new construction or renovation, new materials or technical textiles. Any building equipment, product or building material for the construction of a single-family home is excluded.

Innovative products for industry, for example: Products and solutions for integrated logistics and lifting systems.

[BOPT20220622007](#) - Metalworking Portuguese company is looking for partners to establish a subcontracting agreement. This Portuguese metalworking company sell general metalworking services and work for very diverse areas, such as naval, oil & gas, construction, mining, foundries, food, energy, water treatment, air treatment, among others. The company is looking for partners who are interested in having them as suppliers for their projects, by signing a subcontracting agreement.

[BOPT20220701007](#) - Portuguese company specialized in high precision tools and machined parts for several industries is interested in manufacturing or subcontracting agréments. This company is specialized in the development and producing of mechanical tools, molds and spare parts. The company is also active in machined parts for several industries. The manufacturer is open for manufacturing or subcontracting agreements.

[BOPT20220317054](#) - Portuguese company specialized in metal molds for injection of plastics is looking for partners interested in a commercial/distribution or subcontracting agreement. This company from the central region of Portugal, established in 1997, develops a set of services that encompass the design, production, after sales assistance and repair of molds. The company seeks for foreign partners to act as distributors or commercial agents or a subcontracting agreement.

 **Useful Links**

European Foundation for Cluster Excellence: www.clusterexcellence.org

Quality audit - [GOLD LABEL](#)

Platform for European Clusters: www.clustercollaboration.eu

LiderA - Sustainability assessment system: www.lidera.info

General Information about Sustainability: www.theenvironmentalhandbook.com

Futurebuild: www.futurebuild.co.uk/

ECTP - European Construction Technology Platform: www.ectp.org

Sustainable Build: www.sustainablebuild.co.uk

BuildingGreen: www2.buildinggreen.com

International Initiative for Sustainable Built Environment: www.iisbe.org

CIB World: www.cibworld.nl

BRE - Building Research Establishment: www.bre.co.uk

DUT Partnership: <https://dutpartnership.eu/>

iClimabuilt project: www.iclimabuilt.eu

openDBL: www.opendbl.eu

Cluster Habitat Sustentável - Centro Habitat: <http://www.centrohabitat.net/pt>

Centro Tecnológico da Cerâmica e do Vidro (CTCV): <https://www.ctcv.pt/>

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