

VOJEXT



NEWSLETTER

Next-generation cognitive cobots for smarter industries!

July 2022 | Issue 4



IN THIS ISSUE:

About VOJEXT - p. 1

Latest news and developments - p. 2

Calendar of upcoming events - p. 4

VOJEXT partners - p. 4

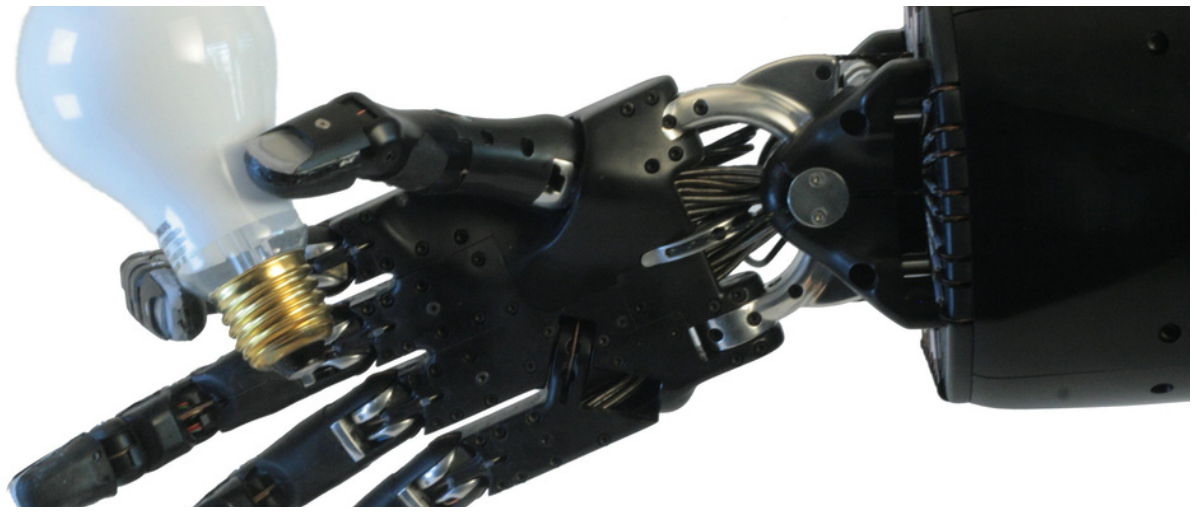
ABOUT VOJEXT

VOJEXT (Value Of Joint EXperimentation in digital Technologies for manufacturing and construction) is a 42-months long Horizon 2020 project, started in July 2020, which aims to provide a favourable business and technological framework for cognitive autonomous systems supporting human-robot interaction.

Under the vision Value Of Joint EXperimentation (VOJEXT) in digital technologies, the project dynamizes science-driven industry approaches engaging human and Cyber Physical Systems (CPS) in the same loop; thus amplifying the cognitive capabilities needed to achieve more effective sociotechnical and business ecosystems. For this purpose, VOJEXT will design, develop, and demonstrate affordable, market-oriented, multipurpose and easy-to-repurpose robotic systems; to be developed as one of the main components of a smart and scalable CPS ecosystem for the manufacturing and construction industry.

You can read more about the project, its main aims and specific objectives [here](#). For all the latest updates, please follow us on social media:





LATEST NEWS AND DEVELOPMENTS

First plenary meeting of project consortium

The first plenary meeting of VOJEXT's partners took place on 7-8 July at the headquarters of Robotnik Automation at the Paterna Technology Park near Valencia, Spain. Among the main topics discussed during the meeting were the technical progress achieved in the development of the cobot, the application of the developed technology in the 5 use case demonstrators, the forthcoming launch of the 2nd Open Call for SMEs and the S+T+ARTS Call for artistic residencies, development of the DIH network, etc. The meeting also featured a live demonstration of the mobile robot, performing one of the use case scenarios. Details about the main project developments covered during the meeting can be found in the respective sections below.

Development of use case demonstrators

Use case #1 - Viscoelastic Polyurethane Pillow Handling

Partners from TREE Technology visited colleagues from PEMU Plastic Processing Co. Ltd, with the aim of recording the scenario of the 1st use case, which involves a cobot cooperating with workers in the placement of viscoelastic pillows, that may have different sizes and materials. With the recorded videos, TREE's engineers tested the latest improvements in the stabilization image algorithms. This stabilization process is needed given that the robotic platform moves around its environment producing a certain number of vibrations and camera movement. When this happens, an unstable video sequence may be fed to the system and, depending on the severity of this vibration, the performance of the system may be more or less compromised. To reduce this effect, VOJEXT introduces an image stabilization module that can reduce small amounts of shakiness in the images.

Use case #2 - Electronics and fragile components

Partners from OSAI are working on the 2nd use case, which is aimed at improving the manipulation and assembly of fragile and transparent objects from semiconductors and medical field of application. The use case is based on a system composed by a cobot, a conveyor belt for feeding and sorting boxes for the collection of different type of objects. The different components are prepared and partially assembled into the trays for loading and the trays will then follow the line for the automatic assembly of the finite product.



Use case #3 - Automotive Smart Manufacturing

Partners from German Aerospace Center (DLR) and Mercedes-Benz Türk will perform dynamic and static tests with promising thermoplastic materials to enhance the manufacturing of automotive components. The test results will then be used to generate the material cards needed to analyze such components in numerical simulation.

Use case # 4 - Building Construction – Wall Finishes

Partners from Acciona, Robotnik Automation and other members of the project consortium, continue preparing the construction use case, which will be implemented in the coming months at ACCIONA's Demo Park. Currently, the definition of requirements is focused on the proper development of the finishing of drywalls workflow, which will be carried out by the robot in cooperation with the human operator.

Use case # 5 - Crafts, culture and creativity

Partners from Officina Keller Napoli (OKN) offer a creative space for the experimentation of arts and crafts, aimed at supporting small crafts businesses, local artists and artisans, architectural ventures and urban regeneration processes. Their role in the project is to make possible the cooperation between artisans, artists and robots and to allow artists to express themselves in new and multiple ways. In this way, artisans can create more, supported by technology, and traditional arts can be revitalised.

More information about the use cases can be found [here](#).

Completion of 1st Open Call and launch of 2nd Open Call and S+T+ARTS Call

The mentoring programme for the 5 SMEs selected from the 1st Open Call "Challenges" has just finished. The outcomes succeeded and VOJEXT is organising a final event to demonstrate the solutions. The event will take place online on 26th July at 10 h CET. Please follow this [link](#) to join the event which will be held via Zoom.

The 2nd Open Call "Pilots" with a total budget of € 620 000 is scheduled to be launched on 15th September. It will fund SMEs and mid-caps to deploy VOJEXT technology through small-scale pilots across Europe to cover different sectors. A total of 5-8 grants of up to € 80 000 each will be awarded and the winning companies will be provided with mentorship during the realisation of the pilots. Further details about the 2nd Open Call and the two information session webinars, which VOJEXT plans to organise, will be announced soon.

The S+T+ARTS Call for two artistic residencies with a total budget of € 60 000 is also expected to be launched later in 2022. All the information about the forthcoming calls will be announced [here](#).



CALENDAR OF UPCOMING EVENTS

- 26 July 2022 - Final event for demonstration of solutions and outcomes of 1st Open Call "Challenges";
- 15 September 2022 - Launching of 2nd Open Call "Pilots" to SMEs and mid-caps;
- 5 October 2022 (tentative date) - 1st information session webinar for Open Call #2;
- 3 November 2022 (tentative date) - 2nd information session webinar for Open Call #2

VOJEXT PARTNERS

Led by the Universidad Politécnica de Madrid (UPM), VOJEXT brings together a multidisciplinary and complementary consortium team consisting of twenty partners from 14 EU and associated countries. VOJEXT partners comprise 8 SMEs (Shadow, Robotnik, Tree Technology, Technovative Solutions, Kontor 46, F6S Network Limited, Officina Keller Napoli, OSAI Automation Systems), a mid-cap (PEMU), two large companies (Acciona, Mercedes Benz), two universities (UPM, NEBRIJA), four research centres (Fortiss GmbH, Przemysłowy Instytut Automatyki i Pomiarów -PIAP-, Istituto Italiano di Tecnologia, Deutsches Zentrum fuer Luft- und Raumfahrt-DLR-) and three non-profit organisations (Pôle EMC2, Bulgarian Chamber of Commerce and Industry, Stichting Waag Society).

Check out a map of all participating countries and short profiles of the partners [here](#).

GET IN TOUCH WITH US

For all the latest news, please visit VOJEXT's [website](#). If you would like to contact us or subscribe for our newsletter, please drop us an email at contact@vojext.eu

Thank you for reading. Expect our 5th issue of VOJEXT's newsletter in January 2023.



This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 952197