VOJEXT

Value Of Joint EXperimentation in digital Technologies for manufacturing and construction

Open Call 2 Pilot Text

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The VOJEXT project, co-funded from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952197, foresees as an eligible activity the provision of financial support to third parties, as a mean to achieve its own objectives.

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1. INTRODUCTION

This document provides information regarding the VOJEXT framework and associated Open Call 2 Pilot. All associated documents and annexes must be additionally considered for the submission of a Proposal.

Through Open Call 2 Pilot, the VOJEXT consortium aims to engage European SMEs and Mid-Caps to present solutions addressing specific technical challenges and experiments which will address the following areas and respective budgets:

Challenge	Grant
Challenge 1 - Warehouse management	80,000 Eur
Challenge 2 - Robots for logistics supporting and demonstrating capabilities in real operational environments	80,000 Eur
Challenge 3 - Graphical overlay design for core UI	60,000 Eur
Challenge 4 - Clean rooms and clean environments	80,000 Eur
Challenge 5 - Metrology and Reconstruction	80,000 Eur
Challenge 6 - Machine Learning-based Material Characterization	80,000 Eur

Table 1: Challenges Briefing and Budget

1.1 VOJEXT in a brief

The increased consumers' demand for customised, new and innovative or continuously improved products is paving the way for collaborative robotics. This kind of production requires flexibility in order to cope with rapidly changing consumer preferences. Advanced digital technologies can help improve manufacturing processes, especially when referring to small-scale production.
However, not all manufacturing companies, and in particular SMEs or crafting companies (usually small organisations with less than 10 employees), have access to smarter means of production, due to costs and efforts in the integration and implementation, possible aversion or readiness to ICT technologies, lack of knowledge, investment, time or close providers [DIH_WG1, 2018]. Consequently, advances technologies such as AI, robotics and CPS are usually underexploited.

In this context, the VOJEXT project aims at providing a favourable business and technological framework to enable matchmaking and encourage producers and adopters (mainly SMEs including small crafters and Mid-Caps) of Cognitive autonomous systems for human- robot interaction, specially "cobots", dynamizing science-driven industry approaches for the European industry. For this purpose, VOJEXT will design, develop, validate and demonstrate affordable, market-oriented, agile, multipurpose and easy- to-repurpose, autonomous, mobile and dexterous robotic systems as the main

component of a smart, agile and scalable cognitive CPS for industry; under the vision of providing Value of Joint Experimentation (VOJEXT) in digital technologies to manufacturing and construction industry; while having DIHs as drivers of innovation based economic development in Europe.

VOJEXT will demonstrate its value by deploying the solution through a 42-months work plan scaling the project to at least 5 additional different markets; starting with 5 experimental pilots (and 9 SMEs) in the plastic textile, electronics, automotive, construction and creative architecture for urban regeneration, VOJEXT cover traditional and non-traditional areas for AI- robotics and cognitive ICT developments; aiming to extend to 15 experimental pilots, integrating 20 more SMEs or Mid-Caps through open calls.

The open calls will foster scientific, and business driven innovation together Digital Innovation Hubs led by UPM- AIR4S (Spain) and other 3 DIHs – Fortiss (Germany), PIAP (Poland) and EMC2 (France). Open Call 2 Pilot will gather the most innovative SMEs and Mid-Caps to bring new challenges into project's pilots and propose alternative scenarios. Moreover, the project will carry out with 2 S+T+ARTS residencies, that will allow artists stimulate the creation of new product in different contexts and support creative craft experimental pilots in Italy. DIHs will create a new niched oriented offering based on VOJEXT technical areas and for crafting sector.

The project started in 2020 and will end in 2023.

1.2   The VOJEXT Action

Within VOJEXT project, the funding to third parties aims to upgrade and extend VOJEXT technology offer beyond consortium partners and enlarge the outreach of the project demonstrators. For this purpose, the consortium has planned to devote a budget of €850k for cascade funding across a total of up to: (i) 5-8 projects upgrading VOJEXT demonstrators (Call 1 Challenge); and (ii) 5-8 new pilot demonstrators (Call 2 Pilot). This allocation of cascaded funding represents approximately 11% of the requested overall budget and corresponds to the following funding table:

Call	Total Fund	Duration	Max. fund per grant	Nr. grants
Call #1 Challenge	€230.000	6-12 months	€100.000	5-8
Call #2 Pilot	€460.000	6-7 months	€80.000	5-8

Table 2: Vojext Open Calls Briefing

Open Call 1 Challenge has been issued in 2021. This document is specifically dedicated to the **Open Call 2 Pilot** and outlines the application modalities for this call.

2. VOJEXT Open Call 2 Pilot

- Main Objective:

- Extend the capacity and technology outreach of VOJEXT infrastructure by attracting tech/robot SME suppliers to integrate their units with VOJEXT APIs.

- Deploy geographic and sector distributed small-scale pilots - expanding the scope of the existing use cases or deploying new ones –at DIH living labs and/or SMEs/mid-caps facilities to demonstrate the impact/potential of VOJEXT technologies and approach towards digitising and boosting European industry

- Funding: Max. fund per grant: 80 000 EUR
- Duration of the acceleration programme: 6-7 months
- Number of Grants: 5-8

Open Call 2 Pilot will be open from October 5th to December 7th, 2022. The experiments deployment will start in March 2023.

The consortium deems that at least technical challenges addressing the following areas (both hardware and software) should be explored (See Table 1).

The detailing of the open call rules and each challenge/experiment are detailed on the Guide for Applicants document (https://vojext.eu/open-calls).

3. Announcement at EC Portal

Announcement at EC Portal	
Call Title	Open Call 2 Pilot
Full name of the EU Funded Project	Value of Joint Experimentation in digital technologies for manufacturing and construction
Project acronym	VOJEXT
Grant agreement number	952197
Call publication date	5/10/2022 at 12:00 PM CET
Call deadline	7/12/2021 at 5:00 PM CET
Expected duration of participation	6-7months

Total EU funding Available	€460.000
Task description	VOJEXT is launching a set of challenges and experiments for which European Robotic driven SMEs and Mid-Caps are defied to propose solutions. Once selected and engaged, SMEs and Mid-Caps will get access to the VOJEXT platform and technological support (through mentors), besides the funding that will enable to develop and demonstrate the proposed solution. An indicative budget is presented in the description of each challenge.
Submission & evaluation process:	The submission will be done through the F6S platform https://www.f6s.com/vojext-oc-2-pilot/apply which is directly linked with the VOJEXT Programme. The following activities will be performed as the following process and methodology: eligibility filter, remote evaluation, interview, Consensus meeting, final selection according to the rules described on the guide for applicants' document.
Further information:	Details available at: https://vojext.eu/open-calls).

Table 3: Announcement at EC Portal

4. Support to Applicants & Kit for Application

4.1 Support to applicant

The VOJEXT consortium will provide information to the applicants only via OpenCall@vojext.eu. No binding information will be provided via any other means (e.g. telephone or other email).

- **More info at**: https://vojext.eu
- **Apply via:** https://www.f6s.com/vojext-oc-2-pilot/apply
- **Support team**: OpenCall@vojext.eu

4.2 Kit for Application

The VOJEXT Open Call 2 supported material is the following:

- The VOJEXT Open Call 2 Text

The present document.

- The VOJEXT Guide for Applicant

This document provides in detail the information to help apply to the VOJEXT Open Call 2 Pilot such as an abstract of the VOJEXT action, a description of the open call, the modalities for application, the evaluation process, the scheme of the funding support, and how to prepare and submit a proposal.

It is available at: https://vojext.eu/open-calls

- The VOJEXT Application Material

The Administrative documents and proposal supplement template

It is available at: https://vojext.eu/open-calls/