

# 3DOP Technical Demonstration and Service Offerings: Call for Free Trials

## *About 3DOP Technical Demonstration and Service Offerings*

3DOP project, through its consortium partners, offers a full range of cutting-edge 3D printing solutions and support services to the manufacturing industries of the EU.

Companies selected through the Demonstration Call process will play a key role in the commercialization of innovative solutions stemming from the 3DoP project. By being directly involved from an early stage, these companies can significantly contribute to the success of **new value chains in the 3D printing market**.

By leveraging the expertise and resources of Demonstration Call participants, the 3DoP project aims to accelerate the transition of 3DOP solutions to the market, creating new economic opportunities, unlocking investments and driving sustainable growth.

## *Call for Participation*

The 3DOP Project offers a comprehensive suite of innovative solutions and services designed to empower the manufacturing industries of the EU. From **advanced technologies to expert support**, it provides a one-stop shop for the additive manufacturing innovation needs.

The 3DOP Demonstration Call is an opportunity for companies outside the consortium to collaborate with industry leaders and **access our world-class services at no cost**.

## *Benefits for participating companies:*

- **Validate and test:** test technical solutions in real-world scenarios to identify potential markets.
- **Collaborate:** partner with other organizations to develop complementary solutions and start projects.
- **Identify funding opportunities:** find private and public financial resources to support their innovative endeavors.
- **Receive guidance:** benefit from personalized coaching, technical guidance, and training to make informed investment decisions and challenge business plan and funding strategies.

The 3DOP Demonstration and Services Call is the opportunity for applicants with new ideas and projects to access the facilities, capabilities, services, and solutions developed by the consortium partners. New clients can validate and test their innovative ideas by selecting services from a wide portfolio of technical and non-technical services. An overview of the services can be seen below, and more information on the specific service portfolio is accessible at [www.3dop.eu/](http://www.3dop.eu/)

Accessing the ecosystem during the Demonstration Call will be **free of charge for the selected applicants**, as the project partners have allocated budget to support the test cases development.

Once the application is submitted, accepted and selected, the selected applicants will receive, in addition to the technical services complementary support, mentoring and experts' advice on several aspects of their concept such as innovation and business support

### ***Capabilities in the Call: Technologies and Services***

The 3DOP technical services are based on 8 technical solutions, covering a range of manufacturing technologies in the areas of metal 3DP, automation, electronics:

- **Opiliones:** New cost-effective Production Unit for viable, sustainable metal 3DP appliances that are not covered by SLS.
- **Element 22:** Serial production of titanium components with metallurgical powder materials, experts in Titanium Injection Moulding and Additive Manufacturing.
- **Guaranteed:** Provision of XXL metal wire arch AM production and repair services to various industrial sectors
- **TracXon:** 3D printed tools and moulds with imprinted electronics
- **Tecos:** Demonstration & production facility
- **AM Flow:** Workflow automation of 3D Printed objects & parts, focussing on High mix, High volume production
- **AddCatt:** Combining additive manufacturing and catalytic oxidation, providing new reactor technologies tailored to air purification processes
- **Valcun:** Machines & services for 3D Printed Aluminum parts

Non-technical services include:

- **Partnering on New Project Creation:** advisory services that will connect applicants to funded project opportunities.
- **Public Funding:** advisory services to interested organizations on EU and national public funding opportunities.
- **Private Funding:** services aimed at connecting the SMEs selected in the call with relevant organizations able to leverage investments, such as venture capitalists.
- **Coaching and Training:** Support for defining vision, business-case planning, and roadmap creation.

### ***How to apply***

The 3DOP Collaboration Call is a **rolling call**. It will be launched on 15 October 2024 at 12am and applicants will be able to submit applications until 4 February 2025. Between these two dates 3DOP Evaluation team will periodically make the evaluation and selection of the applications (those that will score above a minimum threshold) according to a “first in – first selected” priority.

The negotiation phase will occur periodically, as far as the evaluation and selection phase proceed, ending with the final signature of the contracts between the beneficiaries of the 3DOP Demonstration Call and their counterparts in the 3DOP consortium.

1. The **selected applicants will receive 3DOP services free of charge**. This means that

they will have access to the facilities plants/SME Solution Owners' technologies/services and receive additional transversal non-technical services from our portfolio, without any obligation to pay the consortium partners.

- More specifically, choosing “strand 1”, technical services will be provided together with non-technical ones,
  - Alternatively, choosing “strand 2” exclusively non-technical services will be provided.
2. Please note that the clients will not receive any additional funding from 3DOP to cover any part of their expenses.
  3. The maximum duration of each new test case of the Demonstration Call shall not exceed 8 months.

### ***Eligibility criteria***

To be eligible and admitted for the evaluation and selection process, applications shall comply with the following general requirements:

- The industrial application must involve 3DOP's innovative 3D printing technologies and services. The test case should demonstrate successful lab-scale experiments, starting at a TRL of 6-7 and reaching 9.
- Applicants shall be profit and non-profit legal entities classified as SME's.
- Entities shall be established in one of the eligible countries, i.e.:
  - EU Member States (including overseas countries and territories (OCTs))
  - Non-EU countries: listed EEA countries and countries associated to the I3 Instrument or countries which are in ongoing negotiations for an association agreement and where the agreement enters into force before grant signature (list of participating countries).

Expanded eligibility criteria for applications can be found on the 3DOP website and within the applicant portal.

[Apply in 3DOP's application portal here!](#)



**Addcat**

<https://www.addcat.eu/>

***Combining additive manufacturing with catalytic oxidation  
providing new reactor technologies tailored for air  
purification processes***

Founded in 2019, AddCat is a thriving, innovative start-up company in the high-tech sector of the Netherlands. AddCat combines additive manufacturing with catalytic oxidation and provides new reactor technologies tailored for air purification processes. With years of prior experience in the field, AddCat is a lead player in additive catalysis with a strong IP position.

AddCat strives for a cleaner and greener world, free from harmful industrial emissions and disturbing odors. We want to have a major positive impact on a sustainable and healthy living environment in which industry, agriculture and citizens can coexist in perfect harmony and in good health.

AddCat is a high-tech start-up specialised in smoke, odour & emission control for industrial customers. We combine ADDitive Manufacturing and CATalysis for the best oxidation process possible. The combination ensures maximum process improvement resulting in easy integration, higher emissions reduction and maximum cost-efficient catalyst. AddCat is the only global supplier of 3D metal printed catalysts. So be sure to contact us for your emissions challenges!

#### **Advantages and Benefits for SMEs:**

The unique combination of 3D metal printing and oxidation catalysis gives a highly efficient and cost-effective air purification process, enabled by the free-form reactor design, use of metals of high thermal conductivity and performant oxidation catalysts.

Our solution ensures easy integration in products, production processes or air purification equipment, low maintenance, and substantial reduction of Total Costs of Ownership.

#### **Interests for Tech Demonstration:**

- Looking for partners to test, demonstrate and develop new projects.
- Addcat would like to get in touch with interested companies, educational institutions, trade associations or other organizations from all sectors of the air purification industry.
- Mass product optimization for 3D metal printed filters

Redesign of 3D printed filtering modules for similar applications



**AM-Flow**

<https://am-flow.com>

***Workflow automation of 3D (Printed) objects & parts,  
focussing on High mix, High volume production***

As technology leader in adaptive automation and quality assurance, we enable the 3D print industry to scale with AI based software & robotics, developed to cope with infinite shape & material variation. Within 3DOP several modules are developed:

**AM-Quality:** World's first In-line Quality Control system for the high mix 3D market

- Takt time of 5 seconds per part enabling 100% quality inspection
- Dimensional inspection up to 100 µm for hole diameters, surface, breakage, warping
- Full spherical point cloud data generation to assess the quality of 3D-parts
- Fully traceable inspection results and metrology report

**AM-Vision:** 3D part identification with a process time for an average production batch (400 parts) under 30 minutes.

**AM-Sort:** directing parts to the correct next process-step, recombining the one-piece to a batch.

**AM-Bagging:** Bag and label unit that can efficiently print high resolution text, graphics and bar codes directly onto bags and present them for ready for shipping.

Customization of the above-mentioned modules tailored to production of medical parts

**Interests for Tech Demonstration:**

- Cross sectoral approach of dental applications (customized medical devices) into other markets, like automotive, remanufacturing, injection moulding
- Follow-up projects with potential customers based on their application
- Dental automation system integrator implementing our products
- Demonstration facilities; co-creative events with dental part manufacturers
- Testing/demonstrating at potential customers



**Element22**

<https://www.element22.de/>

***Serial production of titanium components with metallurgical powder materials, experts in Titanium Injection Molding and Additive Manufacturing***

A client can come with a titanium part idea, ideally a 3D file and a drawing and Element 22 will review it, analyze the drawing and put everything into place to bring it to serial production. This includes:

- Design review
- Molding and sintering simulations
- Feasibility studies
- Production of First Article Samples
- Serial Production with powder-based Methods like Cold Metal Fusion, Metal Injection Molding, Tape Casting, Extrusion, and more Industries

#### **Application fields:**

Element 22 caters to:

- Medical: equipment and implants, external fixators, active implant housings, bone plates etc.
- Aerospace: Parts for airplanes, e.g. fasteners
- Luxury consumer goods, e.g. watch cases, wearable devices, jewelry, high end electronics, AR/VR/MR glasses
- Mobility (high-end sporting): bicycles, motorized recreational vehicles

Hydrogen: components for electrolyzers and fuel cells

#### **Interests for Tech Demonstration:**

- Electrochemistry applications
- Anode components for hydrogen production
- Any application for chemically aggressive environments
- New aerospace applications
- Expand tapecasting capabilities

Acquire ASTM standards / certifications for new materials – E22 developed aluminium materials with high oxygen content



#### **Guaranteed**

<https://www.guaranteed.be/en>

***Provision of XXL metal wire arch AM production and repair services to various industrial sectors***

In an industrial environment, large production equipment is often tailor-made. When components break down this results in long lead times. Entire installations need to be completely replaced when components have become obsolete, moulds have been lost or suppliers have gone bankrupt.

Guaranteed offers a solution to these problems by **repairing and rebuilding large metal parts, using wire & arc additive manufacturing**. Born from Innovation, we use unique and state of the art simulation, monitoring and inspection tools to guarantee first time right production; while being raised in Industry we guarantee one-stop-shop industrial reliability.

#### **Interests for Tech Demonstration:**

- Collaboration on process monitoring capabilities
- LCA studies, CO2 calculations, fix partner needed
- Funded (follow up) projects



#### Opiliones

<https://www.opiliones.nl/>

***New cost-effective Production Unit for viable, sustainable metal 3DP appliances that are not covered by SLS. Metal 3DP for digital warehousing and rollout of machines.***

FDM 3D printing with standard granules from the Metal Injection Moulding industry, consisting of metal powder and binder PEG. This technology is four times cheaper than SLM metal printing and suitable for all FDM printable geometries.

Intended for:

- Digital warehousing for home appliances series size 10 – 100 pcs.
- Parts for standard equipment and machine construction for prototyping and start of production

without an investment threshold.

In the context of 3DOP Opiliones wants to develop a **cost-effective Metal 3D printing production unit** consisting of: 3DPrinters, Debinding technology, Sintering furnace and postprocessing unit.

These production unit(s) will be used by 3DPrinting as a service company in Europe, where there is a demand for cost-effective 3DMetal printing.

#### **New MIM metal granulate printing method**

Development of:

- compact extruder capable of printing 100% of all FDM 3D Printable geometries,
- software converting standard filament FDM slicing software into specific granulate compact extruder,
- integration of productions steps in automated process and customer portal

#### **Interests for Tech Demonstration:**

- Optimise the sintering of fragile geometries: partners willing to experiment with these fragile geometries and test the sintering
- Roll out & knowledge of polymer properties
- Follow up project opportunities



#### **Tecos**

<https://tecoss.si/en/>

***Demonstration & production facility: 3D Printing pilot line for fast development and tailormade for SME's.  
Facilities for integrated electronics (including injection moulding)***

Tecos wants to develop use cases for integrated electronics printing and would like to have a space in the 3DP market for opportunities for Slovenian SME's. Tecos wants to support SME's with their pilot plant through product development for companies. Companies can have access to mentors and training from TECOS

#### **Interests for Tech Demonstration:**

- Applications involving combining materials (plastics & oil - printed electronics)
- Applications of printing parts with resin by AM



TracXon

<https://www.tracxon.tech/>

***3D printed tools and moulds with imprinted electronics***

TracXon B.V., founded in 2021, produces hybrid flexible electronic products through roll-to-roll printing and component assembly. The company is a spin-out of TNO Holst Center and has unique knowledge in the field of electronics printing, lamination, curing and component soldering. This knowledge is necessary to deliver hybrid printed electronics on a large scale with the right quality. TracXon has set itself the goal of translating “printed electronics” prototypes into makeable/scalable processes that they carry out themselves and deliver to the health care, automotive and domestic market. TracXon transforms Hybrid Printed Electronics from a niche technology to a mainstream cradle-to-cradle sustainable manufacturing technology through continuous process and product innovation. The design rules used by TracXon are based on the latest “beyond-state-of-the-art” processes for printed electronics. There to TracXon has acquired and installed a R2R screen printing line and assembly line both operating in a cleanroom class 8 environment following ISO9001 and ISO13485 (medical standard).

In the 3DOP project TracXon has developed **circuitry printing systems on high resolution**, including component placing (assembly) **on foil in large area (R2R) format**. These foils are easily integrated into 3D objects for sensing, data-acquisition and signage.

#### **Interests for Tech Demonstration:**

- Demonstration opportunities for the printing process
- Applications targeting Circularity in manufacturing
- Follow up projects/demonstrators



**Valcun**

<https://www.valcun.be/>

***Novel Aluminum 3D Printing process (Molten Metal Deposition) unlocking new Aluminum alloys for AM. 3D Printers and services for AM Aluminum parts***

ValCUN is a Belgian tech SME focusing on unlocking new applications and industrial parts by making metal additive manufacturing within reach of the industry. Because we believe that finding new ways of manufacturing will lead to disruptive innovations that were not possible today.

We are doing this by focusing on the deployability of metal additive manufacturing. The deployability of a technology covers a wide range of factors, ranging from feedstock, integration in the work environment, sustainability, throughput, yield, user experience, product value, postprocessing, reliability. In the end it all boils down to 'is the cost in balance with the value that can be provided'.

With that in mind ValCUN has developed a patented technology with initial focus on aluminium alloys. The deployability focus allows ValCUN to target more mainstream applications for providing economic benefits.

ValCUN offers both the metal printer (Minerva) with ValCUN's technology, printhead as well as feasibility studies, design guidelines, prototype printing and even realizing the first serial parts.

The type of applications is very versatile ranging from near net shaping of enclosures and structural components, low weight parts, design ornaments, heat exchangers and catalytic convertors, manifolds, etc.

#### **Guidelines for the current applications/designs are:**

- Diameter 120mm x height 200mm / Diameter 200mm x height 300mm
- Wall thicknesses for different nozzles: 0.8mm-1.2mm, 1.5-2.5mm, 4-5mm
- Alloys: Aluminum 4043 and 6061
- Supportless overhangs: up to 75° (with 0° being a vertical wall)

Important to note is that the technology is not limited to the range of an enclosed machine but installing the printhead on a robotic arm will allow parts with higher complexity and dimensions.

For more information, please visit our website [www.valcun.be](http://www.valcun.be) and view [this](#) video to get a glimpse of the whole process.

#### **Interests for Tech Demonstration:**

- Companies, Research Institutes & Universities interested in collaboration projects on ALU 3DPrinting
- Funding opportunities for above mentioned projects
- Partners in software and in-line monitoring
- Part printing demonstrations

## Partnering on New Project Creation



### Brainport Development

<https://brainporteindhoven.com/en/discover/brainport-development>

Brainport Development develops the regional economic strategy, builds and realizes projects, offers business advice and promotes Brainport Eindhoven at home and abroad. Partnering with local and international companies to execute funded projects is a core activity of our organization. In this service offering of 3DOP, Brainport and other partners will connect applicants to funded project opportunities.

We support your company through:

- **Connection to Project Opportunities:** Through our international networks, we will connect applicants to strong project calls and coach them through the application process.
- **Building Consortia:** We will help you form core groups or consortia composed who share a common vision, ambition, and a clear roadmap. Leveraging our various networks and technical ecosystems, we will advocate for you organization's strengths and value-add as a partner in new project calls.
- **Project Creation and Application:** We will help you collaboratively develop the plan, strengthen the consortium, and build future value chains around a specific topic, application, or use case. Ultimately, we will ensure you have the highest quality pitch for these funded project opportunities, and the greatest chance of success.

Examples of how we will do this are:

- Matchmaking via the Vanguard Initiative (VI) Gateway online platform and via co-creative events with regional ecosystems of the Innovation Hub partners
- Workshops or consultancy for new project creation (define vision, ambition, roadmap, value chain, business case, workplan, ...)
- Advocacy and connection at international conferences to market project ideas, find strong partnerships, and eventually to facilitate dissemination of the success of your project.

## Private Funding



**Tech Tour**

<http://www.techtour.com/>

**Tech Tour** is Europe's **largest tech investment community**. It supports tech entrepreneurs to raise investments and to grow, progressing their innovative solutions addressing global challenges and making our world more equitable and sustainable. All of Europe and all tech sectors are covered including digital, health, and sustainability with a focus on scale-ups with a potential to grow and impact. Every year, over 1,000 of the most promising tech companies are selected by some 1,000 investment, corporate and agency Members actively engaged in 25 specialized Investment Programmes culminating in annual Events.

With 25 years of experience, our entrepreneur alumni selected in the Tech Tours reported over € 26.5 billion of investments raised (see [data](#)) in the past 8 years alone. On average, 81% of the company alumni raised funding at an average of €9.7million per company of which 77% after they presented at a Tech Tour.

In 3DoP, Tech Tour provides Services to facilitate your company's access to "Private funding". The services include:

- **Funding needs analysis** devoted to identifying your needs in terms of funding and to provide you with support for identification of relevant funds that suit your project growth path.
- **Collaborative eXperts Insights** devoted to guidance by business planning experts to challenge your business plan and funding strategy to increase the attractiveness towards investors.
- **Investors connections Roadshow** focused on activities aiming at connecting you with relevant organizations able to leverage investments such as venture capitalists.

## Public Funding



### IDEA Consult

<https://ideaconsult.be/>

IDEA Consult: Cross-sectoral innovation for societal challenges

The unique strength of IDEA is that we combine expertise in five domains to design innovative and cross-sectoral solutions for societal challenges:

- Culture, Creative sectors, Heritage & Tourism
- Labour market & Lifelong learning
- Innovation, Competitiveness, Green economy & AI
- Sustainable real estate & Territorial development
- Local governance & Sustainable development

As part of the services on Innovation, Competitiveness, Green economy & AI, we foster technology deployment by offering support to organisations and ecosystems (at EU and regional level) to facilitate the deployment of significant innovations.

More specifically, we can help you to:

- **Establish and deploy interconnected ecosystems and partnerships**, through the identification of promising areas for cooperation, giving hands-on advice about governance, helping with setting up appropriate structures, and through the active coordination of ecosystems and partnerships;
- **Generating and implementing landmark innovation projects** and programmes, including the activation of relevant (public) funding sources;
- **Designing an improved public support and funding landscape**, to better expedite the deployment of (cross regional) solutions.

For 3DoP, IDEA provides the Service “Public Funding”

This task will provide advisory services to interested organisations on EU and national public funding opportunities. It will screen the available programmes and present the SMEs with calls matching with their requirements/needs. This sub-service is integrated in the overall Funding Service, and will be activated when relevant (i.e. following an actual analysis of needs of beneficiaries

Focus:

- Regional funds (FESR)
- Regional opportunities

- National opportunities
- EU funds
  - Call mapping
  - Cascade funds mapping

Support in Consortium building

## Funding Opportunities Consulting for Businesses



HIT

<https://www.trentinoinnovation.eu/en/>

HIT specializes in helping SMEs identify and secure the most suitable funding sources to support their research and innovation projects. Our expert team provides tailored guidance through the complex funding landscape, ensuring you maximize your chances of success.

### We support your company through:

- **Funding Needs Assessment:** We evaluate your project's specific funding requirements and develop a customized strategy.
- **Funding Opportunity Identification:** Our extensive network allows us to pinpoint the most relevant funding programs, grants, and incentives at the European, national, and regional levels.
- **Proposal Development:** We assist you in crafting compelling funding proposals that effectively communicate your project's value and align with funding criteria.

**Application Support:** Our experts provide comprehensive guidance throughout the application process, ensuring your submission meets all requirements

## Coaching and Training



**Mikrocentrum**

<https://mikrocentrum.nl/nl/>

Mikrocentrum: Empowering Companies in Vision Development, Business-Case Planning, and Roadmap Creation

Mikrocentrum is a renowned and neutral authority dedicated to technical education and knowledge sharing. With over 50 years of experience, Mikrocentrum is committed to empowering businesses in the manufacturing industry through specialized training programs, expert guidance, and fostering collaborations. Known for its expertise in innovation and strategic development, Mikrocentrum equips companies with the tools needed to navigate complex technological and business challenges.

As part of this initiative, two specialized training programs are being developed in 3DoP to support organizations in their growth and adoption of additive manufacturing:

- **Value Proposition Development:** This program helps companies identify and articulate their unique offerings in the additive manufacturing market. By aligning their capabilities with market demands, businesses can create compelling value propositions that drive market differentiation and competitiveness.
- **Quality Management in Additive Manufacturing:** Designed to enhance understanding of quality assurance processes, this program ensures that companies deliver consistent, high-quality products. It addresses key aspects such as process control, certification requirements, and product validation in AM.

Through these tailored programs, Mikrocentrum supports informed investment decisions by enabling companies to define their vision, plan business cases, and create actionable roadmaps. The Value Proposition Development training, in particular, serves as a foundation for evaluating market potential and aligning innovation goals with strategic priorities and also as input and preparation for the other services.

Additionally, the training sessions utilize these developed programs to provide a broader perspective on manufacturing trends, explore relevant use cases, and build internal consensus. These sessions aim to foster organizational maturity, strengthen collaboration within small consortiums, and ensure the alignment of project activities with defined roadmaps.

By leveraging these initiatives, Mikrocentrum empowers companies to seed new value chains, adopt 3DoP solutions, and drive sustainable growth within the additive manufacturing ecosystem.