Vanguard Initiative 3DP Pilot

Webinar Funding Opportunities S1 2021

Jean-François Romainville, IDEA Consult, 3DP Pilot Network Manager
Introduction

- Welcome
- **Structure** of the presentation (and follow up actions):
  - 3DP Pilot activities and associated funding needs, in a nutshell
  - Infra(regional) level
  - EU level: I3 and selected HE RIAs and IAs
  - Cascade funding

  Sequence: **Presentation ➔ Needs/interests per Call (using online documents [here](https://example.com) (RIAs/IAs) and [here](https://example.com) (Cascade Funding) ➔ Flexible (bilateral/multilateral) ‘consortia’ generations/finalisations process (incl. using 19.03 (10-12) available slot for meetings)**

- The online environment’s **guidelines**
The 3DP Pilot’s main activities and associated funding needs
VI Pilot Projects and Democases

3D-printing
- Hybrid Components
- Repairing
- Collaborative Robots
- Integrated Electronics
- Healthcare
- Built
- Maintenance
- Large Parts
- Add-Subtr (awareness)

Dynamic Landscape
- Corrosion on Offshore and Subsea Infrastructure
- Monitoring Technology
- ADMA for Energy-related Applications in Harsh Environments
- Efficient and Sustainable Manufacturing
- Demand and Remanufacturing
- Lignocellulose biorefinery
- Bio-aromatics
- Liquified BioMethane
- EFREFO
- Nanowires for ICT and energy applications
- Nano enabled Micro System for Bio Analysis (NeMs4Bio)
- Nano Enabled Printed Electronics

In end-2020, 9 SMEs-led demonstration projects generated and funded...hopefully more in 2021

28 regions-cooperation
3DP Pilot rationale and objectives, in a nutshell

To address industry needs, in their ‘smart’, ‘green’ and ‘competitive’ paths...

...By enabling co-development, deployment and uptake of AM-related solutions...

...Through the timely development of cross-regional demonstration projects connecting capabilities and actors

Doing so, the 3DP Pilot will contribute to the emergence of new VCs and will reinforce existing ones
Implementation – The sequence, in a nutshell

Industry Needs
- Target group: (Downstream) SMEs, Tech-suppliers and start-ups
- Looking for expertise/equipment, new market/visibility
  - “Demonstration” and “cross-regional”

3DP Pilot ‘Treatment’
- Actors: Facility Centres, Tech-suppliers, etc.
- Benefiting from Co-development /deployment, visibility/market

Projects Implementation
- Funding support, Spill overs and feedback loops
- Towards Sustainable and Smart VCs
Implementation – The ‘back end’

1) ‘Demo Cases’ for emerging and complex solutions (‘anticipate and develop’) and 2) ‘Direct’ connections for others

- Industry Needs (suppliers, end-users, etc.)
- Supply of Demonstration Services (RTOs, companies, etc.)
- Co-development /deployment of solutions
- Network of expertise
- Critical Mass: funding, standards, awareness, etc.

9 Demo Cases

2 ‘Cross-Demo Cases’ (Transversal) Actions (‘Awareness’ and ‘Benchmark Properties’)

N Application-specific projects

Demonstration and industrial uptake AM-based solutions

Direct Matching Tools (3DP Pan EU, PiPP)

Connection - BVfM
## Overview of the Pilot’s main action lines in 2021 (1)

<table>
<thead>
<tr>
<th>Demo cases</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multi-materials components by hybrid 3D Printing manufacturing</strong> (Demo Case leader: Luca Tomesani, UNIBO, Emilia Romagna)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Innovative hybrid (subtractive/additive) manufacturing approach for repairing added value damaged objects</strong> (Demo Case leader: Paolo Gregori, Trentino Sviluppo, Trentino)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Multi-material 3D printing: Structural integrated electronics in 3D printed parts</strong> (Demo Case Leader: Hannes Fachberger, Profactor, Upper-Austria)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Devices and Healthcare demo case: 3D-Printed customized components for orthosis, exoskeleton and exoprosthesis…and beyond? (Demo Case leader: Alberto Leardini, IOR, Emilia Romagna)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AM in the Built Environment (Demo Case Leaders: Maaike Riemersma and Theo Salet, TUE, South-NL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3D-Printed large parts and complex shapes (mono-material) through emerging 3DP technologies (Demo Case leaders: José Antonio Dieste, Aitiip, Aragon and Giulia Marchisio, CIM40, Piemonte)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficient collaborative robot through 3D printing optimization (Demo Case Leader: Oscar Alonso, Leitat, Catalonia)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide a toolset for maintenance for 3DP and a training course for employees to do the maintenance (Demo case Leader: Coen de Graaf, Brainport, South NL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additive-subtractive high precision &amp; high finish production (high-end metals): a focus on elaborating cross-regional solutions for raising awareness (among SMEs) on AM-related opportunities (Demo case Leaders: Bianca Maria Colosimo, Polimi, Lombardy and Coen de Graaf, Brainport, South NL)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transversal Actions</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transversal Action 1 - Elaborating cross-regional solutions for raising awareness (among SMEs) on AM-related opportunities</strong> (Leaders: Bianca Maria Colosimo, Polimi, Lombardy and Coen de Graaf, Brainport, South NL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Transversal Action 2 - Building an international Benchmark for AM mechanical properties for various materials</strong>“ (Leader: Thomas Kairet, Sirris, Flanders/Wallonia)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Overview of the Pilot’s main action lines in 2021 (2)

End-2020 new ideas

• Scalability of serial-production: system approach of the AM-factory, automatization of post-production (South-NL, Brainport Development)

  Ruben Fokkema, R.Fokkema@brainportdevelopment.nl

• Automated removal of support structures and surface smoothing of 3D printed metal parts (Lower-Austria, FOTEC)

  Helmut Loibl, loibl@fotec.at

• 3D metal printing of catalytic reactor structures (South-NL, AddCat)

  Gerald van Santen, g.vansanten@addcat.eu

• “Hyberfacturing”, Auvergne-Rhône-Alpes (France), University of Grenoble in cooperation with Baden-Württemberg (Germany), University of Stuttgart

  Frédéric Vignat, frederic.vignat@grenoble-inp.fr

In 2021, still open to new ideas! Submit here
The 3DP Pilot ‘Portfolios’ of projects – Illustrative overview in early 2021

Demo Cases (incl. new ones, combinations, etc.):
- Selected Calls Horizon Europe (*Slides 18 onwards*)
- I3 (*slides 16-17*)

Application-Specific projects:
- Regional grants (*slides 12-13, forthcoming repository*)
- Grants/vouchers from Cascade Funding Opportunities (*slides 35+*)
- I3 (*slides 16-17*)
Opportunities at (Infra)-regional level

State of play and next steps
State of Play

- First 3DP Pilot ‘**regional funding workshop**’ on 18.11.2020
  - Funding experts from 6 regions discussing a selection of 14 calculated cases
    - Regional instruments available?
    - Conditions?
  - Takeaways:
    - Identification of relevant regional opportunities:
      - Saxony: "**Innovationsprämie**“ voucher, ZIM international
      - Lombardy: FRIM FESR 2020, Call HUB Ricerca e Innovazione
      - Lower Austria: Additive Manufacturing Voucher” (“3D Druck Bonus”)
      - East NL: Tailor made solution + subcontracting
      - Aragon: Open Call and CDTI loans
      - Trentino: ‘Law 6 Open Call’
    BUT
      - ...Operational Programmes as main sources of (limited) opportunities
  - Report being **validated**, then circulated
  - Towards a ‘regional funding instruments’ repository
1. Populate the Regional Funding Instrument repository with existing opportunities
   • Please submit instruments [here](#) (information about Characteristics of cases and associated Funding needs are available on the online form)
   • Based on this, elaboration of a ‘matrix’ of regional funding opportunities
2. Promote the following combination ‘3D Printing – Demonstration activities – Cross regional collaboration’ in own S3 / Operational Programmes
3. EDIHs – 3D printing part of the targeted scope? Interactions among 3DP Pilot members for establishing EDIHs networks
<table>
<thead>
<tr>
<th>Costs and associated funding needs</th>
<th>Application-specific projects</th>
<th>Coordination of ‘Platforms’ (one demo case and/or broader overarching platform)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Consortium and activities</strong></td>
<td>Industry-led (one or more companies) cross-regional partnership (SMEs – FCs/tech Providers). Type of companies: from start-up to medium-sized company.</td>
<td>Multi-sided platform enabling generation and implementation of demonstration projects in key emerging areas</td>
</tr>
<tr>
<td><strong>Role of regions</strong></td>
<td>SMEs from the region in the lead and/or Facility Centres providing demonstration services.</td>
<td>Facility Centres and technology providers part of the network.</td>
</tr>
</tbody>
</table>
| **Phase 1 (demonstration activities) costs and funding needs** | - From **80k to 400k/project**  
- 40-50% Private co-funding/contribution (funding mainly SMEs own costs) and public **grants 50-60%** (from 40k to 200k) | - Selection, Coordination and Management (252k€/year) (exl. Investment in new equipment).  
- **Grant (800k-1M€)** needed to support is activities during the first four years of existence. |
| **Phase 2 (industrial uptake) costs and funding needs** | - Costs of industrial uptake estimated from **250k to 4M** (depending on the project)  
- Private contribution (equity or debt) from 40% to 60% (depending on the project) to be complemented by government supported **equity/loan** (or private grant) | |
| **Results**                       | IRR higher than 56% and EBITDA above 4M€ at year N+3 **(one exemplary case)** | |
Opportunities at EU level
I3, selected HE IAs and RIAs
Interregional Innovation Investments (I3)
– A focus on “Strand 1 (Innovation Actions) for mature partnerships” (1/2)

- **ERDF**, 3 strands of actions (EUR 570M), Strand 1: 279,3M
- **3DP Pilot** active contributions to generation and characterizations
- **Projects**: “Value chain investment” projects facilitated by interregional ecosystems; “Combination of activities, actors and strategic networking, interlinking firms, sectors and borders”
- **Type of Investment**: Interregional Investments in companies (TRL 6 -8) to accelerate the market uptake/commercialisation. Uptake of innovative technologies /solutions/services scaling up of regional and local innovation in S3 strategic priority areas
- **Eligible costs**: expenditure linked to productive investments /demonstration/piloting in companies with possibility to cover part of the coordination costs up to 7%
- **Applicant**: Public authority on behalf an S3 quadruple helix partnership, signing the grant agreement and redistribute the grant to final beneficiaries (SMEs) composing the portfolio
- **Final beneficiaries**: mainly SMEs
- **Total Budget**: EUR 279,3 M; Budget per call is around EUR 40 M to finance around 4/5 grants (2-10 Investment projects per grant/portfolio) Average size of the grant EUR 8/10 M (value of the project portfolio in a specific value chain).
I3 – A focus on “Strand 1 (Innovation Actions) for mature partnerships” (2/2)

- Still **lacking** definite crucial information BUT...
- ...Coming months are obviously relevant moment for **identifying/developing further our projects’ portfolios**
- **Next Steps:**
  - Communicate on key definite characteristics when ready;
  - Elaboration of a 3DP Pilot Strategy and Action Plan (in coop with Vanguard);
  - Implementation.
HE Selected RIAs and IAs– Action Plan

1. Presentation (today)
2. Interest in a listed Call ? Looking for complementing a consortium?
   ➔ Please fill in / consult (1 sheet per Call) the following document (members only): 
   [here](#)
3. Interested in another Call ?
   ➔ Please put the reference of the Call in the Chat or contact jean-francois.Romainville@ideaconsult (Call to be then included in online document)
4. Possible short-term outcomes towards proposals submissions: flexibility!
   a) Call-focused meetings with interested partners (initiated by one partner or the board if critical mass);
   b) Bilateral / multilateral direct interactions.
5. In the meantime, ‘3DP Pilot Brochure’ made available, especially for SMEs in the regions
**Topic designation:**
- RIA/IA/CSA

**Topic title**

- Open dd/mm – dd/mm

- X mio. – X Projects

- START:...

- FINISH:...

**Slides structure**

**RIA/IA/CSA**

- RIA Research & Innovation Actions
  - 100% funding

- IA Innovation Actions
  - Enterprises: 70%; Partnership: 60%; NPO: 100%

- CSA Coordination & Support Actions
  - 100%

- Open and close of calls

- Indicative budget per project and number of projects funded

- TRL: Projects expected to start at TRL X and achieve TRL Y by the end of the project
Timing for Horizon Europe calls – Suggestion

**2021 Calls:**
- Deadline 15 July 2021

  - **Topic**
    - Topics choice and partner contact before end of March

  - **Consortium**
    - Consolidation of consortia, value chains, project ideas before end of May

  - **Submission**
    - Writing and submission of proposals between June and July

**2022 Calls:**
- Deadline 12 January 2022

  - **Topic**
    - Topics choice and partner contact before end of August

  - **Consortium**
    - Consolidation of consortia, value chains, project ideas before end of October

  - **Submission**
    - Writing and submission of proposals between November and January

▰ 2021 Calls: Deadline 15 July 2021
▰ 2022 Calls: Deadline 12 January 2022
A selection of Additive Manufacturing related or focused Horizon Europe calls
Expected outcome: Make European industry leader in agile and green manufacturing through laser technology, make processes more versatile and efficient through data exchange and improve environmental sustainability towards ‘first-time right’ processes with 30% lower consumption of resources compared to the state of the art.

Scope: transmission of very high average and peak power laser radiation without loss or distortion including in the ultraviolet, mid and far infrared spectral range, powerful optical fibres, programmable beam guidance, maximum positional flexibility, free choice of energy distribution, rapid quantitative feedback and beam distribution systems with sub-micrometre resolution and high performance. A further research challenge is the integration of quality sensors in laser-based manufacturing. Edge devices with self-learning algorithms should be developed that can handle the computing requirements in the time required by the system to react with a feedback control action.

Consortium and targeted actors: research institutes, technology suppliers and users.
**3DP expected contributions:** “Machine tools include various laser-based technologies such as milling, turning, grinding, laser processing, surface treatment, sintering, forming and additive manufacturing. Projects funded under this topic should integrate state-of-the-art high-power lasers and tailored beams together with quality sensors and real time monitoring systems into advanced manufacturing and re-manufacturing tools.” 3DP experts would help integrate state-of-the-art high-power lasers and tailored beams together with quality sensors and real time monitoring systems into advanced manufacturing and re-manufacturing tools.

**Practical contribution:** contribute to at least three use cases, build on existing research, provide a business case and strategies for transferring developed technologies to other industrial applications.

**Further research aims:** build on existing standards or contribute to standardisation. Additionally, a strategy for skills development associating also relevant social partners must be presented.
Expected outcome: Demonstrate relevant scale production of innovative bio-based products to substitute traditional materials with high environmental footprint, develop products with similar or better mechanical, physical and chemical properties, demonstrate disruptive innovation of bio-based materials production in at least three different manufacturing value chains and develop sustainable business models for materials sourcing and recycling.

Scope: The 2020 Circular Economy Action Plan aims at making sustainable products the norm in the EU. Rapid progress in manufacturing technologies using new and alternative materials, such as biomaterials, is one of the drivers of this trend. The use of reusable and recyclable products based on bio-based materials should increase substantially in order to build a truly sustainable manufacturing industry. Technologies should provide a valid alternative to conventional materials with a range of applications for example in construction, food, medical, packaging and textile industries.
3DP expected contributions: “Optimisation and improvement of smart manufacturing processes, e.g. additive manufacturing, injection moulding, extrusion etc., to unlock the full potential of biobased materials, such as carbon-positive bioplastics, biopolymers and other fibre-based materials (e.g. cellulose-based components and marine-based components).” AM stakeholders can contribute use cases on bio-based materials, material circularity, novel carbon-based materials and composite solutions and challenges for industry, also relating to standardisation.

Practical contribution:
- provide a business case and strategies for transferring the developed technologies to other industrial applications and areas.
- build on existing standards or contribute to standardisation. Additionally, a strategy for skills development associating also relevant social partners must be presented.
- build on or seek collaboration with existing projects and develop synergies with other relevant European, national or regional initiatives, funding programmes and platforms.

Further research aims:
- unlock the full potential of biobased materials in AM, such as carbon-positive bioplastics, biopolymers and other fibre-based materials (e.g. cellulose-based components and marine-based components);
- achieve high technical properties while lowering environmental footprint;
- combine the use of different bio-based materials to facilitate refurbishing and remanufacturing of products to achieve circularity by design;
- adapt existing or new characterisation methods and quality controls for the bio-based materials in different formats and for new and regenerated products;
- support the creation of a skilled workforce, through training/qualification of personnel related to AM
Expected outcomes:

- Integrate new breakthrough technologies in additive manufacturing, robots/robotic, etc. into construction activities, including maintenance, diagnostics and monitoring;
- Demonstrate the impact of the use of these new breakthrough technologies on the efficiency of resources (raw materials, water, etc.) and the reduction of waste and embodied CO2 emissions;
- Demonstrate the safety of these breakthrough technologies on a construction environment in cooperation with workers;
- Improve the wellbeing of the construction sector workforce.

Scope: Digitalisation and automation of construction sector, in view of improving safety on construction sites and attracting a younger workforce.

Consortium and targeted actors: Start-ups, SMEs, large construction firms.
3DP expected contributions: “Integrate new breakthrough technologies such as additive manufacturing, robots/robotic, etc. arms into construction activities, including maintenance, diagnostics and monitoring.” AM stakeholders can contribute their knowledge and use cases on the integration of AM practices into construction standards, practices and technologies.

Practical contributions:
- demonstrate developed solutions in at least four diverse construction sites (such as roadwork, bridges, tunnels, different types of buildings, etc.) across different countries in Europe;
- develop solutions for monitoring the wellbeing of the workforce and prevention of accidents taking into account gender and intersectional perspective;
- include a business case and a dissemination and exploitation strategy;
- contribute to the development of new relevant standards or update of existing ones.
Expected outcomes:

- for demo cases, achieve a metal recovery efficiency up to 90% and a mineral recovery efficiency of up to 80%;
- minimise CO2 emissions in the iron recovery and productions process;
- new technologies for onsite characterisation of ferrous materials to help standardisation of charge managing practice;
- Deploy smart sensor and big data analytics in steel plants.

Scope: currently steel and iron making is not efficient, has a high environmental footprint and is not integrated into higher value technologies. Therefore it should be the aim to increase the use of scrap metal and increase the quality finished products in EAF and BF/BOF route

Related efforts: European Partnership on Clean Steel
3DP expected contributions: “Enabling the use of obtained by-products in higher value applications (i.e. filtering, coating, additive manufacturing, material for CO2 sequestration, heat accumulator).” Material suppliers of metal powders to contribute input to enable the use of obtained by-products in AM.

Further research aims:
- Selection and integration of best available and applicable technologies to reduce impurities in post-consumer scrap before melting together, supported by digital smart tools for scrap classification and charge optimization;
- Development, deployment, and use of smart sensor and dedicated Big Data analytics to develop and further optimize decision-supported systems for helping steel plant operators to increase the process yield and to improve the final steel product quality;
- Development and implementation of highly efficient technologies for recovering metals and mineral fraction from steelmaking residues, including those coming from H2-based metallurgy ones, with high metallic or oxidic fractions.
Expected outcomes:
- develop more efficient manufacturing processes for products with functional surfaces that contribute to competitiveness and a transition to green and sustainable production flows;
- significant reduction of the environmental footprint for surface treatments;
- uptake of treatment technologies in applications for a sustainable society, targeting reductions in energy use and environmental footprint.

Scope: surface treatments gain importance in manufacturing. Complexity and customisation requirements for shape, material and functionality are increasing posing considerable challenges for making new products environmentally friendly.

Related efforts: European Partnership Made in Europe
3DP expected contributions: “Surface treatments are an integral part of any manufacturing process. Surface treatments include many disciplines, such as painting/coating/printing (spray, powder, dip coating, inkjet etc.), plating/implantation (electroplating, vacuum plating/coating, etc.), thermal treatments (annealing, thermo-chemical processes, etc.), laser-based treatments (annealing, texturing, etc.), additive manufacturing, micro manufacturing (micro electrical discharge machining, micro milling, etc.) chemical and electrochemical treatments (anodizing, electropolishing, chemical deposition, etc.), biochemical treatments, etching (wet etching, plasma/dry etching, also for texturing).” Use cases of manufacturing processes for additive manufacturing and micro manufacturing (micro electrical discharge machining, micro milling, etc.)

Practical contribution:
- creation of a business case and strategies for transferring the developed technologies to other industrial applications and areas. Interoperability for data sharing should be addressed.
- build on existing standards or contribute to standardisation. Additionally, a strategy for skills development to which social partners should be associated must be present.
- All projects should build on or seek collaboration with existing projects and develop synergies with other relevant European, national or regional initiatives, funding programmes and platforms.
Expected outcomes: demonstrate the combination of precision engineering design with additive manufacturing methods to provide tailor-made joining solutions for dissimilar materials, with the ability to be reused/dismantled;

Scope: the role of new development in additive manufacturing processes with dissimilar materials.
3DP expected contributions: “Evaluation of matching materials properties to the production process to enable the joining of dissimilar materials for AM tools”. Other aspects in advanced manufacturing are also relevant such as quantification of functionalities, properties, quality and lifespan, recycling aspects of composite materials, modelling and simulation.
Expected outcomes: overarching objective of launch cost/price reduction by 50% by 2030, for the benefit of EU Space programmes implementation and going towards reinforcing EU's independent capacity to access to space.

Innovation acceleration of enabling technologies (maturing, prototyping, on ground tests)

Scope: the propulsion systems represent a significant part of launch system costs. It is necessary to mature new or optimised low cost effective (lower number of parts, better operability), high performance (high thrust to weight ratio, high specific impulse) and green propulsion concepts, technologies and propellants for high thrust engines.
HORIZON-CL4-2021-SPACE-01: RIA

22: Low cost high thrust propulsion for EU strategic space launchers - technologies maturation including ground tests (2/2) [DRAFT]

**3DP expected contributions:** “The activities will address one or several of the following areas:

- low cost propulsion,
- throttability,
- *reduced number of parts with extensive application of Additive manufacturing, or new composite technologies,*
- maintenance/overhaul,
- associated fluidics.”

**Deadline**
07/11/21

**15-19 mio.**
– 1 Project

**START:**
3-4 to 5-6

**FINISH:**
Horizon Europe calls related to advanced manufacturing, but non-AM specific
Expected outcome:
- provide safe, highly flexible, reconfigurable and modular solutions, allowing fast response to repurposing changes in production requirements;
- demonstrate significant improvements towards collaboration by exploiting the latest advancements in AI, robotics and Social Sciences and Humanities (SSH);
- Create a network of open-access pilots to allow new users, especially students, start-ups, representatives from the makers’ community and SMEs, to experiment new technologies and to enable data and knowledge sharing through the European industrial ecosystems.

Scope: Projects should seize the opportunities arising from the latest state-of-the-art-developments in AI and robotics to deploy intelligent and autonomous systems for flexible production.

Consortium and targeted actors: no information

Related efforts: European Partnership Made in Europe
**3DP expected contributions:** use cases of smart manufacturing.

**Practical contribution:** provide a business case and strategies for transferring the developed technologies to other industrial applications and areas. Interoperability for data sharing should be addressed. Research must build on existing standards or contribute to standardisation. Additionally, a strategy for skills development associating also relevant social partners must be presented.

**Further research aims:**
- development of robust, easy to use, explainable and compliant AI tools for manufacturing environments that require minimal learning and can be configured without highly skilled personnel;
- implement and integrate the latest research findings on technologies such as sensors, actuators, control, edge computing, haptic technologies, mechatronics, robotics and autonomous systems;
- demonstrate complex, safe and efficient collaboration between multiple agents simultaneously;
- demonstrate results in at least three large-scale industrial use-cases, targeting sectors and tasks typically difficult to automate.
Expected outcome:
- Increase of sustainable production through improved control systems and non-destructive inspection methods;
- Develop methodologies and tools to prevent the generation of defects at component level and its propagation to the system level;
- Create new diagnostic methods for in-situ monitoring;
- Ensure reduced production cost and time (through efficient use of materials and repair strategies).

Scope: The projects must address the full production line or system, with an holistic approach, with the aim of reducing defects = enable a “first-time-right” production process. Projects should target types of waste or discarded material from identified defective products that cannot be easily reworked or recycled without significant effort through 2 main elements:
- The integration of control systems and/or in-line non-destructive inspection methods;
- The use of large data sets and analysis for the creation of machine learning algorithms.

Related efforts: European Partnership Made in Europe
3DP expected contributions: use cases in manufacturing proving material savings and efficiency gains.

Practical contribution: provide a business case and strategies for transferring the developed technologies to other industrial applications and areas. Interoperability for data sharing should be addressed. Research must build on existing standards or contribute to standardisation. Additionally, a strategy for skills development associating also relevant social partners must be presented.
Expected outcome:
- improving the environmental sustainability of industrial production
- improving the agility of European industry and its resiliency to external and internal influences;
- integrating state-of-the-art AI technologies with advanced circular manufacturing exploiting their potential across the entire product lifecycle;

Scope: Focus on manufacturing and process industries, addressing the entire lifecycle of products and services from design to remanufacturing and including all the aspects primarily relevant for industrial production. The objective is to exploit the potential of AI as a transformation tool to support circular production in the entire manufacturing and process industry

Related efforts: European Partnership Made in Europe and AI, Data and Robotics.
**3DP expected contributions:** use cases in AM where AI promotes circular manufacturing.

**Practical contribution:** provide a business case and strategies for transferring the developed technologies to other industrial applications and areas. Interoperability for data sharing should be addressed. Research must build on existing standards or contribute to standardisation. Additionally, a strategy for skills development associating also relevant social partners must be presented.
Expected outcome:
- develop sustainable data-driven manufacturing and process industries through efficient data processing and notably at the edge of the network;
- demonstrate the use of open systems available and qualified open source software tools for data monitoring & collection as well as data analytics;
- improving the agility of European manufacturing industry, including with agile, secure and easy-to-implement non-public 5G systems, leading to more resilient production processes
- foster industrial data and distributed computing standardisation.

Scope: To reach the opportunities of sharing and exploiting industrial data, including deep industrial data. Computing, storage and networking technologies will have to show also flexibility along the industrial value chains and promote the introduction of new business models. Projects are encouraged to develop toolkits of open hardware, software and toolware, and qualify the use of these to provide opportunities to SMEs to further automate and digitalise their manufacturing, through, for example, OPC-UA and Administrative Shell (AAS)

Related efforts: European Partnership Made in Europe.
3DP expected contributions: use cases in AM of data sharing between industry stakeholders.

Practical contribution: provide a business case and strategies for transferring the developed technologies to other industrial applications and areas. Interoperability for data sharing should be addressed. Research must build on existing standards or contribute to standardisation. Additionally, a strategy for skills development associating also relevant social partners must be presented.
Expected outcomes:
- develop tools to support industry in sustainable production and consumption of goods, by embedding circular economy strategies;
- develop ontology based data documentation for the application domain to facilitate interconnection by data exchange between designers, manufacturers, users and collectors of used/waste products;
- reinforce European industry capacities and adapt to the new trends in the areas of sustainability and digitalization, and contribute to the development and/or creation of standards;
- increase competences for data handling among the potential data users (e.g. by providing trainings).
- ensure high visibility of project results and user-friendly, open access to data and ontologies

Scope: to develop tools for industry to enhance efficiency and contributing to less waste and emissions while improving material/product/process quality all along the lifecycle of a product/service system. The proposals should have a holistic approach, with a minimum of three demonstrators/use-cases, covering the entire material/product/process life cycle and proving the interoperability of data across the life cycle stages across industry domains.
3DP expected contributions: use cases in LCA and improvement of durability, reusability, recyclability, recycled content, product reparability of components.
Opportunities at EU level

Current Cascade Funding Opportunities
1. Presentation (today)

2. Interest (incl. connections with SMEs interested) in a cascade funding opportunity? Looking for complementary expertise?
   ➔ Please fill in / Consult (1 sheet per Call) the following document (members only):
   here

3. Bilateral / multilateral direct interactions towards proposals submissions

4. In the meantime, 3DP Pilot Brochure made available, to be circulated among SMEs in the region
The 3DP Pilot ‘Portfolios’ of projects – Illustrative overview in early 2021

- Hybrid
  - Blowers
  - Spoiler
  - Surfboard
  - Suspension part

- Repairs added value
  - Moulds 1
  - Moulds 2

- Healthcare
  - CAFO

- Robots
  - Auto
  - Machine

- Maintenance
  - Steady rest

- Struct. Electronics
  - Gripp3D (Grippers)

- Large Parts
  - AGRIAM (Agric)
  - INSECTAM (Food)

- Built
  - WeldGala xy
  - Metabuilding

- Add/Subtract

List of 20 previously identified cases

Others!!!
<table>
<thead>
<tr>
<th><strong>3DP Pilot Members FAQs</strong></th>
<th><strong>Trinity</strong></th>
<th><strong>Pulsate</strong></th>
<th><strong>WeldGalaxy</strong></th>
<th><strong>SmartEEs</strong></th>
<th><strong>Metabuilding</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope of the Call and linkages with 3D Printing</strong></td>
<td>The goal of TRINITY is to increase the agility of manufacturing SMEs in Europe by robotics, ICT and cyber-security. So AM activities fitting under this umbrella are fine. Focus should be in robotics.</td>
<td>LBAAM technology</td>
<td>for ex. WAAM technology</td>
<td>End-user cases targeted, not technologies. If end-user cases requesting 3D printing as an innovative solution: ok.</td>
<td></td>
</tr>
<tr>
<td><strong>Budget</strong></td>
<td>2nd Open-call, max. 200k€ per project. 300k€ total limit if earlier TRINITY of DIH^2 funding received.</td>
<td>up to 150k EUR per experiment</td>
<td>100k EUR per pilot</td>
<td>100 k€ max (+ in-kind to reach funding rate ≤70% for private organisations)</td>
<td></td>
</tr>
<tr>
<td><strong>Funded Activities</strong></td>
<td>Activities on TRL 5-7. Technical development and dissemination, mostly personnel costs. Equipment depreciation costs only.</td>
<td>TRL 5 to 7</td>
<td>TRL 5 to 7</td>
<td>Technology solutions must be &gt; TRL4. Eligible costs are the same as H2020 costs for IA actions</td>
<td></td>
</tr>
<tr>
<td><strong>Cross-border: compulsory/favored?</strong></td>
<td>Cross border compulsory. Additional points from EU-13 partners.</td>
<td>No</td>
<td>No</td>
<td>Compulsory: end-user and technology provider must be from different countries</td>
<td></td>
</tr>
<tr>
<td><strong>Consortia</strong></td>
<td>Consortia of 2-3 partners. SME must lead but other type of partners accepted too.</td>
<td>Consortia including minimum 2 SMEs and/or slightly bigger companies.</td>
<td>Proposals can be submitted by a single applicant (SME or MidCap) or consortium. Consortia applying to the call must include at least one SME or MidCap.</td>
<td>Eligible are SMEs or MidCaps only. If identified, technology supplier can be integrated in the proposal. See Slides 108 onwards</td>
<td></td>
</tr>
<tr>
<td><strong>Facility Centres: partners and/or subcontractors?</strong></td>
<td>Facility centres can be partners. Critical research tasks should not be subcontracted, services only.</td>
<td>Only as subcontractors (maximum 15% of total grant)</td>
<td>Only as subcontractors (maximum 15% of total grant)</td>
<td>Testing is usually made by the end-user. Who can subcontract though. So, yes, the testing can be integrated inside the application. But must be functional testing and be a minor part of the action.</td>
<td></td>
</tr>
<tr>
<td><strong>Role of FCs</strong></td>
<td>Partners only supporting the work of SMEs. Main focus on the project should be the needs of the SMEs.</td>
<td>(maximum 15% of total grant)</td>
<td>(maximum 15% of total grant)</td>
<td>Invite the end-user to mention the service inside its application</td>
<td></td>
</tr>
<tr>
<td><strong>Distribution of budget among FC partners / subcontractors</strong></td>
<td>Lead SME must receive min. 40% of the total funding amount. Funding amount for all partners is 70% of the project costs.</td>
<td>(maximum 15% of total grant)</td>
<td>(maximum 15% of total grant)</td>
<td>FSTP Financial Support to Third Parties is defined by DG CONNECT as a support to SMEs and Midcap only. Other organisations can participate but at their own costs.</td>
<td></td>
</tr>
</tbody>
</table>
Looking for innovations in:

Laser-based advanced and additive manufacturing technology

Izabela Zrazinska
Senior Project Manager @Fundingbox
26.02.2021
About US

48 Projects, 9 as coordinator

- Manufacturing
- Robotics
- Next Generation of Internet
- Digital Innovation Hubs
- Artificial Intelligence
Pulsate

Fostering the PAN-European infrastructure for empowering SMEs digital competences in laser-based advanced and additive manufacturing

https://www.pulsate.eu/
Revolutionising Markets

LBAAM provide maximal benefits towards flexible manufacturing and highly digitalized production environments

LBAAM technology is particularly beneficial for sectors like aerospace, automotive, medical devices, industrial machinery, customised electronics, and textiles & clothing.
About us

We are a strong consortium to support you with any need for implementing LBAAM technologies.

This project has received funding from the European Union’s Horizon 2020 research and innovation program under grant agreement No 951998.
Open Calls in a nutshell

- 4 Open Calls
- 62 projects
- LBAAM technology
- 4.07 million EUR

https://pulsate-opencalls.fundingbox.com/
What are the benefits?

- Technical support from industry experts
- Business Mentoring led by FBA
- Up to €150k funding per experiment
- Media exposure
- Access to private & public investment

<table>
<thead>
<tr>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>M5</th>
<th>M6</th>
<th>M7</th>
<th>M8</th>
<th>M9</th>
<th>M10</th>
<th>M11</th>
<th>M12</th>
<th>M13</th>
</tr>
</thead>
</table>

- Stage 1: Tech Development
- Stage 2: Proof of Concept
- Stage 3: Scalability

**PULSATE Technology Domains**

<table>
<thead>
<tr>
<th>PULSATE Technology Domains</th>
<th>High Power Laser based Applications</th>
<th>Micro/nano fabrication</th>
<th>Additive Manufacturing</th>
<th>LBAAM Digitisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCs</td>
<td>Fraunhofer, MTC, AIMEN</td>
<td>FTMC, MTC, AIMEN</td>
<td>CEA, MTC, AIMEN</td>
<td>SINTEF, CEA, AIMEN</td>
</tr>
</tbody>
</table>
Who are we looking for?

- Minimum one Manufacturing SME
- At least one Experimentation area
- TRL From 5 up to 7
- Legal Status

ONLY SMEs or Slightly Bigger from EU + associated + UK

YOUR PROPOSAL
Technology Transfer Experiments Consortia

The TTEs have to be proposed by a Consortium including minimum 2 SMEs and/or Slightly bigger companies acting as:

- Technology Provider
  - System Integrators, Technology Providers

- Manufacturing company
  - End-User, Manufacturer, Technology Adopter

Minimum 1 compulsory
Do not have a partner to apply with?

- Submit Expression of Interest: [https://pulsate-matchmaking.fundingbox.com/](https://pulsate-matchmaking.fundingbox.com/)

- Write a post in Matchmaking Community: [https://spaces.fundingbox.com/spaces/i4ms-pulsate-networking-matchmaking-1](https://spaces.fundingbox.com/spaces/i4ms-pulsate-networking-matchmaking-1)
How to apply?

https://pulsate-tte.fundingbox.com/
Selection Process

WHEN?
- 22nd April
- 14th May
- 3rd week of June
- End of July

HOW?
- Proposals Submission
  - Eligibility Check
- Experts Evaluation
- Consensus Meeting
- Mini-Grant Agreement Signature
- Finalists Pitch on Jury Day
- FSTP Agreement Signature
- Beneficiaries submit a Full Proposal
  - Based on eligibility criteria (FBA)
  - Experts Panel (2 independent experts per proposal)
  - Selection Committee (Project Steering Committee + 2 Experts)
- Finalists submit information for Legal Validation
  - Selection Committee (PSC + invited members of the BoS)
- Selected beneficiaries submit information for Financial Validation and Ethical review
### Application Form

#### Guide for Applicants Section 5

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Contact information*</td>
</tr>
<tr>
<td>2</td>
<td>Consortium composition and legal info*</td>
</tr>
<tr>
<td>3</td>
<td>EXCELLENCE: Technology Innovation*</td>
</tr>
<tr>
<td>4</td>
<td>Market and Social IMPACT*</td>
</tr>
<tr>
<td>5</td>
<td>IMPLEMENTATION*</td>
</tr>
<tr>
<td>6</td>
<td>STATISTICAL SECTION</td>
</tr>
<tr>
<td>7</td>
<td>Declaration of honour on exclusion criteria and absence of conflict of interest*</td>
</tr>
<tr>
<td>8</td>
<td>Personal data processing*</td>
</tr>
</tbody>
</table>
Follow our series of webinars

<table>
<thead>
<tr>
<th>Partner/Title</th>
<th>Country</th>
<th>Date and Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRA</td>
<td>Germany</td>
<td>23rd Feb at 9am</td>
</tr>
<tr>
<td>AIMEN</td>
<td>Spain</td>
<td>25th Feb at 12</td>
</tr>
<tr>
<td>CEA</td>
<td>France</td>
<td>2nd March at 3pm</td>
</tr>
<tr>
<td>SINTEF</td>
<td>Norway</td>
<td>9th March at</td>
</tr>
<tr>
<td>MTC + FBA: Innovations in LBAAM &amp; Technical Support</td>
<td>ALL</td>
<td>10th March at 3pm</td>
</tr>
<tr>
<td>FTMC: Industry Week</td>
<td>Lithuania</td>
<td>23rd March</td>
</tr>
<tr>
<td>FBA: Final Countdown Q&amp;A and Tips</td>
<td>ALL</td>
<td>12th April</td>
</tr>
</tbody>
</table>
APPLY BEFORE 22\textsuperscript{nd} APRIL!

https://pulsate-tte.fundingbox.com/

Mail: pulsate.help@fundingbox.com
Thank you for your attention

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 951998.
This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 825196.

Vanguard Initiative 3DP Pilot Webinar Funding Opportunities March 8th, 2021

Jyrki Latokartano, TRINITY Project Manager
Tampere University, Finland
What we can do to ensure successful business in Europe?

Increase the product quality and production capacity by robotics
- Mundane tasks for robots (e.g. dirty, dull and dangerous tasks)
- Transform (human) operator to knowledge worker and problem solver (e.g. system supervisor)
- Ensure that the factories can operate with less engineers (since we will lack those)

Shorten the overall production time with ICT and AI
- Digitalisation to increase supply network transparency and reliable real-time data visibility
- AI solutions to predict and prepare for continuous changes

Benefit from industrial ecosystems (e.g. DIHs)
- Life-long learning support
- To share resources (machines) and expertise
- Answer together to the changing customer needs
- Shorten the supply chains
The main objective of TRINITY is to create a network of digital innovation hubs (DIHs) composed of Research Centres and University Groups specialized in Advanced Robotics and Internet of Things (IoT), supported by a DIH with experts in Robotics Cyber security to contribute to novel robotics solutions that will increase agility in production.

The second objective is to continue this network after the ramp-up phase, by building a sustainable business model throughout the project lifetime.

The third objective is to deliver a critical mass of use case demonstrations in collaboration with industry to support the industrial modernization leading to more agile production and increase the competitiveness of European companies.
Modular approach

• The main target is to prepare modular and re-configurable use-case demonstrations on the fields of robotics, ICT and IoT, and Cyber-Security.

• External Use-case demonstrators
  • 18 Internal Use-case demonstrators: Each of the internal use case demonstrations include well defined specifications, ’how to set up’ tutorials and ’how to use’ education packages.
  • 19 External SME-lead use-case demonstrators aiming for the technology and business renewal

• The technologies we use are multi-purpose, and can be combined to fit the purpose.
With the TRINITY use case demonstrations

• The overall theme is “Robotics for Agile Production”
• We look forward
  • Novel (for applicant) utilisation of robotics, ICT and cyber-security applications and solutions developed and implemented by or into SMEs
  • Roadmap to success by the applicant
  • Measurable KPIs for outcomes – you decide what these are:
    • Non-value added time is reduced once the development is taken into use
      • Scrap is reduced
      • Quality is increased
      • Productivity is improved
    • New development can be commercialised
    • The company/partners gain new knowledge, competences and sellable items
TRINITY - Open Calls – What we actually fund

1. Vision
2. Roadmap
3. Proof of Concept

Step 1.
Step 2.
Step 3.
Step n.

The Growth Strategy
Open calls

**First open call**
- Open Call 1
- Call opened 14.2.2021 and closes 1.6.2021
- 1.7 - 31.8. evaluation period
- September contracting
- 1.10.2021 Demo Program 1 starts
- Up to EUR 200,000 funding per demonstrator
- Consortium lead by SME (or slightly bigger)
- 10 months run-time
- Must be a consortium of 2-3
- Must be two countries
- TRL 5-7
- Total call budget 3,5 m€

**Second open call**
- Open Call 2
- Call opened 14.2.2021 and closes 1.6.2021
- 1.7-31.8. evaluation period
- September contracting
- 1.10.2021 Demo Program 2 starts
- Up to EUR 200,000 funding per demonstrator
- Consortium lead by SME (or slightly bigger)
- 10 months run-time
- Must be a consortium of 2-3
- Must be two countries
- TRL 5-7
- Total call budget 3,5 m€
2nd Open Call, 2 possible tracks

€ 3,5m€ $\rightarrow$ from €50.000 to €200.000

Open Call #2 February 2021 GET READY!

Demo TRINITY
Existing technical modules and their concepts for enhancing, testing & extending
Support available from TRINITY consortium

Novel solutions
Propose your own solution!

2-3 partners
SME Partner 1 Partner2

2-3 partners
SME Partner 1 Partner 2
Who can apply?

TRINITY ecosystem invites small consortia (max 3) to plan, implement, and disseminate ICT technologies incl. robotics, IoT and cybersecurity to facilitate agile production in European companies.

Lead applicant is SME or slightly bigger (less than 500 person, 100m€ turnover)

Consortium members:
- **Technology adopters/end-users**: SMEs and slightly bigger
- **Technology providers**: Technology SMEs, Competence Centres, Large companies, Research Centres and academia
- EU member states, H2020 associated countries
- 2 countries

Budget and timing
- max 200 000€
- 10 months
- 3 gateways (M1, mid-term, final)
- Min 40% of the budget must go to the Lead SME
## Special targets

- **Cross-country collaboration** (e.g. partners from 2 different countries is mandatory)
- Budget: at least 40% has to go to the Lead SME
- **Extra Points:**
  - 5 extra points if female(s) in lead roles (in of the consortium members)
  - 5 extra points if using/applying/testing/developing/ extending TRINITY modules
    - Combination of TRINITY+own development is allowed
  - 5 extra points if EU-13 collaboration (e.g. 1 partner is from EU-13)
- **Total extra points are 15 in addition to the scores**
- **The threshold still needs to be reached in all categories**

<table>
<thead>
<tr>
<th>Resource</th>
<th>Score/Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact in terms of Industrial relevance and exploitation plans</td>
<td>0-10 /6 (double points)</td>
</tr>
<tr>
<td>• industrial impact (for partners)</td>
<td></td>
</tr>
<tr>
<td>• Manufacturing SME → factory floor</td>
<td></td>
</tr>
<tr>
<td>• System Integrator → markets</td>
<td></td>
</tr>
<tr>
<td>• potential impact to general advancement of technology (minor role)</td>
<td></td>
</tr>
<tr>
<td>Soundness of Concept e.g technical soundness</td>
<td>0-10 /6</td>
</tr>
<tr>
<td>Implementation feasibility of the work</td>
<td>0-10 /6</td>
</tr>
<tr>
<td>Resources &amp; Consortium: Partners of the consortium (capabilities), Deployment of resources for tasks and goals</td>
<td>0-10 /6</td>
</tr>
<tr>
<td></td>
<td>max 50</td>
</tr>
<tr>
<td></td>
<td>max 65 (if all bonus)</td>
</tr>
</tbody>
</table>
Open calls for Demonstration Program 1&2

- 2019: Open Call 1
- 2020: Demon Program 1
- 2021: Open Call 2, Demo Program 2
- 2022: Dissemination

Key Dates:
- M1: 30%
- M2: 40%
- M3: 30%
- Payment Day “Grant”: 6/2023

Key Components:
- Modularization of Internal Demonstration
- TRINITY Digital Access Point
- TRINITY Education and Training material
- Community Building
Expected impact

• Consortia should define on how the impact should be measured e.g. within timeline we as company expect following increases in ... and it is measured by following KPIs

1. **Industrial impact (for the company/consortium)**
   • Manufacturing SME → factory floor
   • System Integrator → revenue, markets

2. **Potential impact** in general for the industry (secondary role)

• **Increased**
  • agility of production
  • deployment of robotics
  • use of standards for modules and systems
  • use of ICT and cybersecurity in Factory floor

• **Improvement in**
  • Turnover & Profits
  • Markets share
  • Collaboration with partners
  • Technology maturity
  • Gender balance and attractiveness (new employees)
How to apply?

• Build a consortium
• Register at TRINITY webpage  
  • [https://trinityrobotics.eu/register/](https://trinityrobotics.eu/register/)
• Find more info and download guideline  
  • [https://trinityrobotics.eu/open-calls/](https://trinityrobotics.eu/open-calls/)
• Register for PIC number  
• Submit your application  
  • [https://www.f6s.com/trinitydihopencall2/apply](https://www.f6s.com/trinitydihopencall2/apply)
AM related demonstrations from TRINITY 1st demonstration program

- SALSA2d, Separation of Additive-Layer Supports by Automation via 2-way Digital Twin

- WAAM CLAMP: Wire Arc Application of Metal Component Linked to Additive Manufacturing for Pipeline Repair


3DP Pilot Webinar Funding Opportunities

8th of March 2021
SmartEES2 - at a glance

Innovation Action: DT-ICT-01-19 (*Smart Anything Everywhere*)

Number of partners: 14 partners from 9 EU countries
Grant: 8M€
Duration: 36 months

Expected results: 47 Application Experiments (AEs)
FSTP 2.9 M€ (37% of the grant)

Open call / 5 cut-off dates

<table>
<thead>
<tr>
<th>CUT-OFF</th>
<th>DATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Cut-off</td>
<td>05/06/2020</td>
</tr>
<tr>
<td>2nd Cut-off</td>
<td>23/09/2020</td>
</tr>
<tr>
<td>3rd Cut-off</td>
<td>15/01/2021</td>
</tr>
<tr>
<td>4th Cut-off</td>
<td>07/05/2021</td>
</tr>
<tr>
<td>5th Cut-off</td>
<td>31/08/2021</td>
</tr>
</tbody>
</table>

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 872076.

[https://smartees.eu/](https://smartees.eu/)
Support the European Industry & reinforce its competitive advantage by providing acceleration support for the integration of Flexible Electronics into novel products, processes and business models.

Technologies uptake & new businesses

Experimentation (test before invest)

Technologies adoption

OE-A Business Climate Survey on General Trends in Organic and Printed Electronics, October 2018

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 761496.
This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 872076.
Open Call / Latest results

Product’s functionalities vs. Sectors

- Beneficiaries are SMEs and MidCaps
- 67 projects to be supported
- 4.1 M€ total support (cascade funding)

- High demand on Health, Textile & Sports (Others) and Packaging & Logistics
- 4 projects addressing COVID

Data=
SmartEEs data (20 projects) +SmartEEs2 data (20/47 projects started)

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 761496.
This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 761496.
Customer journey

Preparation & Submission
Companies can discuss their ideas with SmartEEs2 consortium

Evaluation & Selection
Selected experts

Joint Service Planning
Service Delivery Manager Assigned to IC

Service Delivery
Start Assist within 2 weeks of SDA signing

- 13 to 16 (+5) Months in Duration
- 2 Months
- 2 (+2) Months
- 9 - 12 (+3) Months

Download Application Information Pack
helpdesk
Address company enquiries
Innovation Idea Submitted by IC
IC Successfully Passed Evaluation
Co-development of Joint Implementation Plan
Monthly Status Reporting

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 761496.
Get started

Open Call page

https://smartees.eu/open-call-smartees2/
<table>
<thead>
<tr>
<th>Questions</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope:</strong> what is the possible role of 3D Printing-related activities in the Open Call? I.e. to what extent 3D printing activities are targeted?</td>
<td>We target end-user cases. Not technologies. However, if end-user cases requesting 3D printing as an innovative solution, fine.</td>
</tr>
<tr>
<td><strong>Total amount of Voucher/Grant per project?</strong></td>
<td>100 k€ max (+ in-kind to reach funding rate ≤70% for private organisations)</td>
</tr>
<tr>
<td><strong>Which activities (TRLs?) funded and which associated costs?</strong></td>
<td>Again, we don’t support technologies but user cases. Technology solutions must be &gt; TRL4 Eligible costs are the same as H2020 costs for IA actions</td>
</tr>
<tr>
<td><strong>Is cross border cooperation requested and/or promoted (e.g. higher scoring)?</strong></td>
<td>Compulsory: end-user and technology provider must be from different countries</td>
</tr>
<tr>
<td><strong>Only one organisation (SME?) submitting an application or can ‘consortia’ composed of several identified organisations submit an application (i.e. the SME in the lead and beneficiary but ‘service’ providers already identified)?</strong></td>
<td>Eligible are SMEs or MidCaps only. End-user is the applicant in SmartEES. If identified, technology supplier can be integrated in the proposal.</td>
</tr>
<tr>
<td><strong>Can ‘Facility Centres’ (providing e.g. demonstration services like e.g. testing, etc.) not part of the overarching project consortium (e.g. Pulstate) be part of a ‘project’ consortium submitting an application? Or can they act as subcontractors?</strong></td>
<td>They cannot apply. Testing is usually made by the end-user. Who can subcontract though. So, yes, the testing can be integrated inside the application. But must be functional testing and be a minor part of the action.</td>
</tr>
<tr>
<td><strong>If the answer to the previous question is positive, what are the requirements to be part of the consortium and/or act as subcontractor?</strong></td>
<td>Invite the end-user to mention the service inside its application</td>
</tr>
<tr>
<td><strong>Any limitations on the budget (from the voucher/grant) used for funding services from Facility Centres / Technology providers?</strong></td>
<td>FSTP Financial Support to Third Parties is defined by DG CONNECT as a support to SMEs and Midcap only. Other organisations can participate but at their own costs.</td>
</tr>
</tbody>
</table>
THANK YOU!
WeldGalaxy 2\textsuperscript{nd} Open Call: Looking for Arc Welding Innovators

3\textsuperscript{rd} March
12 CET

Izabela Zrazinska, Senior Project Manager @Fundingbox
About US

48 Projects, 9 as coordinator
What is WeldGalaxy?

B2B online platform that brings together global buyers (end-users/OEM) and EU sellers. The project has as a goal to enhance the visibility of EU’s welding products/services to global users.
What is WeldGalaxy platform?

Our responsive Web-based Platform that integrates:

• Chatbot
• KBE
• DLT base tendering
• AI Analytics
• Ontology
• Simulation

Selected Pilots will become a beta testers of the ‘online welding equipment and consumables platform’.

https://www.weldgalaxy.com/
€2.5 MILLION
Equity free funding

2 Open Calls
25 Pilots selected

11 partners
From 8 European Countries

6-MONTH Support PROGRAMME
• Technical support from industry experts from TWI
• Business Mentoring from FBA
• €100k funding per pilot
• WeldGalaxy platform account
• Media exposure
Are you eligible?

Arc-welding

Technological challenges

At least one

TRL

From 5 up to 7

Legal Status

Minimum one SMEs or MidCap from EU + associated + UK

YOUR PROPOSAL
Open Call is open until 29th April

https://weldgalaxy-opencall.fundingbox.com/
Application Form: basic information

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Basic information*</td>
</tr>
<tr>
<td>2</td>
<td>Pilot composition and legal info*</td>
</tr>
<tr>
<td>3</td>
<td>EXCELLENCE: Technology Innovation*</td>
</tr>
<tr>
<td>4</td>
<td>Market and Social IMPACT*</td>
</tr>
<tr>
<td>5</td>
<td>IMPLEMENTATION*</td>
</tr>
<tr>
<td>6</td>
<td>STATISTICAL SECTION</td>
</tr>
<tr>
<td>7</td>
<td>Declaration of honour on exclusion criteria and absence of conflict of interest*</td>
</tr>
<tr>
<td>8</td>
<td>Processing of personal data*</td>
</tr>
</tbody>
</table>

Guide for Applicants Section 4.2
Selection Process:

**Eligibility Check**
- 30th April

**Expert Evaluation**
- 21st May

**Consensus Meeting**
- Last week of May

**SubGrant Agreement Signature**
- June - July

Criteria listed in section 3 of GfA

Scored criteria evaluated by 2 external experts

WG partners

WHO will evaluate?
<table>
<thead>
<tr>
<th>Number of Submitted Applications</th>
<th>34</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Countries</td>
<td>19</td>
</tr>
</tbody>
</table>
Join our webinars

26.03.2021 WeldGalaxy Innovation Day
Presentation of 1st OC companies + 2nd Open Call
Register

21.04.2021 Final Tips
How to improve your application?
Q&A
Apply before 29th April

https://weldgalaxy-opencall.fundingbox.com/

Mail: weldgalaxy.help@fundingbox.com
Innovation Funding and Support for SMEs of the Built Environment Sector

VI 3DP Pilot Webinar - Funding Opportunities
8th March 2021
Bring innovation to the “traditional” value chain of the Construction sector.
Expand to other industries to create an enlarged Built Environment industrial sector.
Enable SMEs to internationalise their activities and reach European markets.
Consolidate, expand and nurture a modern construction sector innovation ecosystem backboned by a common Digital Open Innovation Platform.
CONSORTIUM

15 European Partners

▪ 4 EU Level Industrial Platforms
▪ 3 National Technology Platforms
▪ 2 National Construction Industrial Associations
▪ 1 Large ICT Industrial
▪ 1 Business Network
The METABUILDING innovation ecosystem brings together stakeholders from construction and 4 emerging industrial sectors.

Outreach to over 6,000 SME by means of meta-clustering.

Support for cross-sectoral, cross-border collaboration.

6 target countries:

- Austria
- France
- Hungary
- Italy
- Portugal
- Spain
Open Innovation Digital Platform, helping all stakeholders of the enlarged Built Environment sector, to:

- Find partners for collaborative projects.
- Discover innovative technologies.
- Find available funding for SME innovation.
- Discover new innovative tools.
- Provide information on innovation support.
- Help SMEs to reach new markets.
- Virtually showcase SME’s products/services.
- Digitally connect, manage and nurture the ecosystem including sectoral sub-systems or “clusters”.

Direct link to the European Construction Technology Platform activity and needs.
The **METABUILDING** project will finance **Innovation Vouchers of 5 000 €** dedicated at verifying technical, legal and business aspects of innovation projects and support **Collaborative Projects with grants of up to 55 000 €** per project.

*Cascade Funding is a mechanism of the European Commission to distribute funding to third parties (final receivers like for example SMEs)*
In a Nutshell

- **Provide** direct financial and non-financial innovation support for SMEs.
- **Increase** competitiveness of SMEs through international business collaboration.
- **Support** SMEs to get out of the COVID-19 crisis through innovation.
- **Stimulate** the innovation potential of the Construction sector through cross-sectoral and cross-border collaboration.
- **Create** and expand a Digital Platform facilitating collaboration and innovation in an enlarged Built Environment Sector.
WHY YOU ARE CONCERNED
WHAT IS IN IT FOR YOU

As SME, Cluster, RTO, University, etc.

▪ Receive financial and non-financial innovation support for your SME:
  ➢ 75% of the Maximum Grant Amount = 3,75 M €.
  ➢ Possibility to develop your potential ideas to get out of the COVID-19 crisis.

▪ Identify innovative technology from actors of other sectors and countries or promote your own technology.

▪ Access to new markets with existing products and solutions.

▪ Access to other funding and support for innovation.

▪ Position your regional cluster in a European network and gain visibility to attract new members.

▪ Give the needs of your cluster’s SME members a voice on European level.

▪ Support SMEs in innovation projects & feasibility studies as RTO/university member of the Innovation Stakeholders Pool.
CALLS FOR PROPOSALS

Deadline in February 2021!

Funding Schemes

Single SME

SEED

- Assess feasibility of project ideas / innovation opportunities
- Up to 5,000 € / SME
- Short interventions

Collaborative Projects (at least 2 SMEs)

GROW

- Development of new technologies (co-creation projects)
- Up to 55,000 € / project

HARVEST

- Technology transfer from other sectors / countries (in-sourcing projects)
- 6 months

METABUILDING · H2020 G.A. 873964
Create collaboration across industrial sectors and country borders to develop new technologies in response to specific cross-sectoral challenges (GROW).

Encourage the use of existing technologies from an industrial sector in another METABUILDING industrial sector in order to respond to specific cross-sectoral challenges (HARVEST).
CALLS FOR PROPOSALS

Funding Schemes

DRAFT SCOPE: Cross-sectorial topics

- Use of 3D printing for green infrastructures/building
- Integration of 3D printed components into building greening systems
- Integration of waste/residues in large scale 3D printing
- Development of systems allowing for the integration of reinforcement elements in 3D printed structures in line with structural regulations
- Establish and define 3D printing processes that allow working with mixed materials integrating or not mortar/concrete
- Development of union systems for the 3D printed big elements
- Integration of accessory components in 3D printing like windows, glass, wooden elements or new functionalities
- ....

DRAFT REQUIREMENTS

- Consortia of a minimum of 2 SMEs from 2 different sectors,
- From the 6 targeted countries or member of ECTP, AM platform, EFB (or one of its members) and active in one of the 5 sectors.
- Higher TRLs (6-8, to be determined), essentially development and testing costs
- Cross sector collaboration will be mandatory /cross border cooperation will only be promoted and awarded with a higher score
- Subcontracting costs will be eligible, but we most probably will limit them to between 30% and 50% of the overall project budget
COMING UP
Joint roadmap concerning Construction / ICT / Additive Manufacturing / Nature Based Solutions / Recycling

Announcement of call for collaborative projects (GROW/HARVEST calls)

Starting of H2020 OITBs Project METABUILING LABS
MANY THANKS!!

Innovation Funding and Support for SMEs of the Built Environment Sector

Project website: www.metabuilding-project.eu

Platform and calls: www.metabuilding.com

paula.queipo@idonial.com
Next Steps

1. Indicate interest in online documents
   1. HE RIAs and IAs: here
   2. Cascade Funding: here

2. Flexible ways to interact and generate actions
   1. Bilateral contacts;
   2. Initiate meetings with group of partners (please put jean-francois.Romainville@ideaconsult.be in cc., if possible);

   Please note that all partners blocked the 19.03 (10-12) time slot! Exploit that opportunity for scheduling meetings!

3. Follow up on other upcoming 3DP Pilot activities

Thank you!