



GALACTICA PROJECT Second Newsletter

Learn all about the activities
accomplished in the last 6 months



We are delighted to share with you the **second and latest GALACTICA newsletter**.

In the six months since our last newsletter, we built a strong relationship with most of you, receiving your deep interest in GALACTICA and its activities.

GALACTICA project is a cross-regional partnership across eight EU countries that involves eight innovation clusters from **advanced manufacturing, aerospace, and textile industries**, one investor network and one business incubator and accelerator.

The project **fosters the creation of unidentified or unexplored market opportunities for existent and new companies** in the development of latent and emergent value chains. It will overcome information and market failures by gathering together companies from diverse industrial sectors, R&D organizations, clusters and by bringing to life a set of tools, instruments, and triggering initiatives that will create a basis for the establishment of new value chains

The scope of the newsletter is to provide updates on project progress and inform you about highlights as well as GALACTICA and other relevant events.

Concluding, all **GALACTICA partners would like to thank you** for your interest in our project, your support on each activity, and your active involvement.

The GALACTICA Consortium

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CALL FOR PROPOSALS

REGISTRATION CLOSING

GALACTICA's first call for proposals with 1.2M€ to support new value chains by European innovative SMEs **closed last 19th May 2021.**

83 eligible proposals have been received with the participation of 138 SMEs requesting over 5M€ in funding.

Those selected were informed in July, to start the projects in September 2021.

Spain, with 34 participants, is the first in the ranking of the 21 eligible participating countries, preceded by Germany (25) and followed by Italy (17), Portugal (12) and France (11).

The Galactica consortium, led by AEI TÈXTILS, has evaluated the 83 proposals and selected **the best projects to be funded with grants of €20,000 for 18 pioneers and €100,000 for 8 orbitals.** The evaluation has been carried out between May and June and in July 2nd the final ranking list was confirmed.

FINAL RANKING LIST



Every funded proposal has gone through an in-depth evaluation process which included an assessment of the eligibility criteria and an external evaluation by a panel of 28 experts in each of the three fields of GALACTICA.

Each proposal was reviewed by independent experts (three for orbital and two for pioneer) that have applied the evaluation criteria, with a special focus on innovation, cross-sectorial and cross-border aspects.















GALACTICA's 1st Call for proposals had two different types of funding instruments, in the form of lump-sum vouchers, that are addressed to SMEs and start-ups with innovative solutions that could be part of cross-sectoral and cross border value chains in the relevant sectors.

Pioneer Acceleration voucher supports the exploration of new cross-sectoral value chains with focus on developing a Minimum Viable Product (MVP).

Orbital Projects voucher aims to support the demonstration of new cross-sectoral value chains connecting the different sectors of GALACTICA with initial market tests of the products and services developed.

The **GALACTICA** consortium received 83 applications (43 in Orbital Projects and 40 in Pioneer Acceleration) and has **selected 25 for funding**. In total, those 25 projects comprise 40 SMEs from the textile, aerospace, and advanced manufacturing sectors coming from across 14 European Countries.

In terms of distribution by country, Spain is first in funded SMEs with 10 companies, followed by France (5), Portugal (4), and Germany (4).

PIONEER ACCELERATION						
Country		Total		Country		Total
	Austria	2			Ireland	1
	Belgium	1			Italy	1
	Bulgaria	3			Latvia	1
	Czech Republic	1			Netherlands	1
	Estonia	1			Portugal	2
	France	1			Spain	4
	Germany	2			Sweden	1
TOTAL				24 beneficiaries and 14 countries		
ORBITAL PROJECTS						
Country		Total		Country		Total
	Austria	1			Ireland	1
	France	4			Portugal	2
	Germany	2			Spain	6
TOTAL				16 beneficiaries and 6 countries		

Those proposals that have not succeeded in the 1st call, have another opportunity to improve and apply to **GALACTICA's second call for proposals. It will open in January of 2022 with 1.84 M€.**

In the meantime, learn all about the winning proposals on the following pages!



LIST OF WINNING PROJECTS - ORBITAL -



ADDTITUDE. The project scope is the implementation of a functional prototype of a Horizon sensor for attitude determination of satellites, connecting the space sector, and advanced manufacturing by means of the use of additive manufacturing in the mechanical parts of the unit.



AMPERE. Ienai SPACE has been developing ATHENA, a modular and versatile electric propulsion system for nanosatellites. The solution proposed combines advanced additive manufacturing techniques, the use of technical textiles, and microfabrication processes.



ECO-FRIENDLY. The Eco-friendly tiles for the aerospace industry project aims to create a new lightweight textile material for interior design produced using recycled raw materials and sustainable processes. The main benefits will come from the recyclability of discarded materials, the new designs (look and feel) of the product, and the fact that it contributes to the circular economy.



FIBREMIX. It is an R&D project designed to create a cutting-edge machine producing bicomponent fibers combining polymers from both melt-spinning and wet-spinning processes. Induo's researchers developed a novel coating method, allowing them to coat viscose on a polyester filament with a strong adhesion between both materials.



IROONY. The goal is to set up a new, advanced, and cleaner manufacturing process using one ionic liquid as a safer solvent for the extraction of cellulose from sustainable biomass to standard industrial methods.



ITRAINUP. Enables aeromedical training not only in an operational environment but also outside of costly hypobaric chamber training under safe & controlled conditions. iTrainUP is a wearable-based companion helping new pilots to train their respiratory system to reduce the risk of inflight hypoxia, hyperventilation, and anxiety.



TEXCOOL. Extreme heat can lead to heat-stress-related complications and death, namely in outdoor workers such as construction workers, farmers, and those working in the mail and package delivery. To optimize the body temperature, a cooling system would be helpful to be integrated into clothes worn by people at risk.



TXTHAB-3D. The project will develop novel technology and concept for innovative habitation systems for Moon and terrestrial applications. Future missions on the Moon will require developing novel methods to set up habitats, shelters, and infrastructure by using in-situ resources. TXTHAB - 3D will develop a robust solution to future lunar settlements and very concrete terrestrial challenges.



LIST OF WINNING PROJECTS - PIONEER ACCELERATION -



ATLASAERO. Is a startup working on a hybrid-electric vertical take-off and landing airplane with ideal efficiency in forwarding flight



BATWATEX. Is a sustainable vegan leather alternative material made of potato leaves fiber, technical hemp, and recycled plastic.



BIOMX. Is an antimicrobial finishing agent that can be employed with different fibers and fabrics. The technology proposed showcases that antimicrobial treatments can manage the microbiome so that clothing can be longer worn in space and hence reduce the payload for the missions and aid in prolonging the wearability of the spacesuit due to less degradation at the inner layer.



CINPASA. Aims to develop a data transmitter tape for aeronautic applications with decreased weight and simplified designs to transmit information between the different sensors and the control units.



CIRPLATEX. Its vision is to replace conventional textile materials and significantly reduce the environmental impacts of the textile industry. It introduces the world's first circular PLA textile achieving the lowest ecological impact from all the currently available textile materials.



DRONE-3D. Proposes developing advanced manufacturing technologies using recycled carbon Fibre reinforced thermoplastic composite material to produce key drone components.



EASYNANO. The objective of the project is the optimization and validation of pre-processed carbon-based nanomaterials in the form of dough ("Ready to use", RtU, materials, MVP), avoiding nanoparticles handling and able to be dispersed into polymeric matrices by conventional mixing techniques.



ETISILK. Aims to develop and validate a minimum viable product of a new low-weight fabric for aerospace applications based on flame retardant polypropylene fabrics.



GRAFREN AB

G-COMP. In this project, they will prepare a unique graphene nanomaterial, coat it onto the glass fiber textile and integrate the GF into a heterocomposite with carbon fibers core



LIST OF WINNING PROJECTS - PIONEER ACCELERATION -

FRET

FRET. Combines two well-known and well-established technologies in the aerospace industry, namely rigid-flex PCB and flight-grade Nomex Textile material. This enables the integration of electronics into dynamic structures thanks to the unique mechanical properties offered by textile materials.



IDD. Its objective is to build a scale prototype of an inflatable passive de-orbiting device for satellites based on advanced technical textiles.

Microgravity Technologies



MICROGRAVITY-KNIT. Is a cross-sector partnership to fully develop and test a pipeline that enables to knit complex 3D surface geometries and control its functional and mechanical properties in ways currently not possible with the existing software.



NOOBIS. In this project, Fureho AB aims to develop and validate an MVP of a Noobed 3D fabric reinforced composite material solution for an identified problem in the space industry.



PHAST-DEPOSIT. Aims at demonstrating the feasibility of plasma torch heating for textile wipes placement performed in additive manufacturing machines for advanced thermoplastic composite aerospace structures.



SG2 SMART GARMENTS FOR SPACE. Is a 3D knitted garment layer that provides active seamless support for astronaut's hands.



SIFA. Silk Insect for Food in the Aerospace. The primary input raw material for silk production is silk cocoons. After the production of silk, the waste remains - this is the silk pupae. The SIFA project was launched to establish the possibility of this waste raw material being used for space food during space missions.

ParaStruct

TEXTIL-REINFORCED PARAMETRIC FREE-FORM FACADE. To realize the complex geometry of the facades, they have developed a recyclable 3D-printed mold that can be used to produce parameterized free-form components made of concrete.

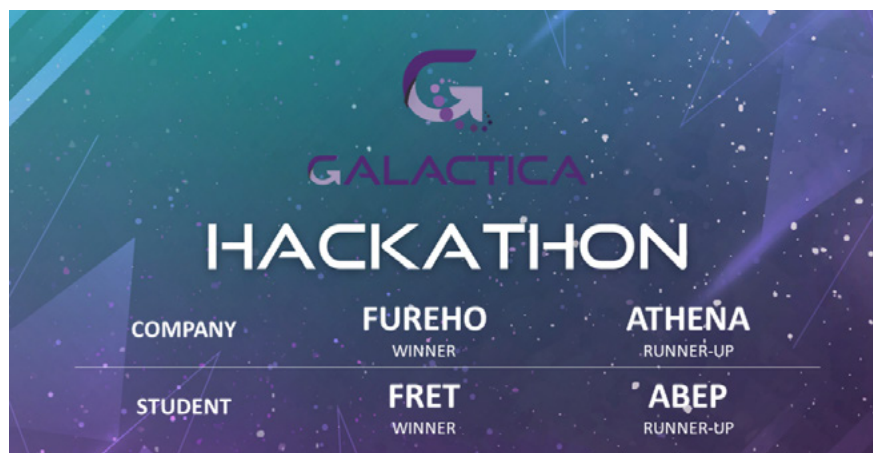


TRIBO BLEND. Developed a method for increasing the toughness of epoxy resins and improving the dispersion, delamination, and filler size performance of a vast amount of industrial blends.



FIRST HACKATHON

WINNERS INTERVIEW



GALACTICA, held the final of the 1st Galactica Hackathon on March 19th 2021 and awarded the 50k€ pool of prizes to the different winners of each category.

The development of new industrial value chains towards higher added value products is crucial to increase the competitiveness of textile and aerospace industries. The 1st Hackathon has contributed to find new early-stage ideas that combine advanced manufacturing with aerospace and/or textile.

[Take a look at the interviews done to the four winners regarding their project and inspirations to apply to the first GALACTICA Hackathon](#)

Interview 1

Interview 2

Interview 3



LEARNING EXPEDITIONS

LEARNING EXPEDITIONS LAUNCH

GALACTICA opened on July 14th the registration for the first four Learning expeditions involving the **textile, aerospace, and advanced manufacturing** sectors. Inter-cluster learning expeditions experiences will consist of **cross-sectoral visits** to industry-leading companies followed by **innovation management coaching and workshops** to facilitate cross-sectoral idea generation.

GALACTICA has prepared **8 Learning expeditions** for cross-sectoral innovation in Aerospace, Textiles and Advanced Manufacturing Sectors to be held in Fall 2021.

Inter-cluster mutual learning visits and innovation workshops will bring together the different sectors involved with the aim to reduce the silo-like sectoral boundaries fostering, the get-to-know on the operations in other sectors, the innovation mechanisms other used and seeding of cross-sectoral collaboration for innovation. This can lead to untapped opportunities that arise from crossings of the sectors, both in terms of technological cooperation and innovation such as development of new materials, processes and products, but also in terms of non-technological innovation such as the development of new business models, new marketing tools, management systems, processes, creativity tools and industrial design.

This is an opportunity to visit, learn and listen to success stories from leading companies from different industrial sectors.

[Click on the image below to download the agenda for the next Learning Expeditions!](#)



TRAVEL VOUCHERS



GALACTICA project has launched the **Travel Vouchers general framework** with the goal to attract and support innovative SMEs and startups in the fields of textile, aerospace and advancing manufacturing to participate in GALACTICA events.

SMEs and Startups can apply for Travel vouchers under eligible events with a maximum voucher of **up to €1.000 for a single voucher or up to €2.000 in accumulated travel vouchers**.

Do not miss this opportunity to learn the latest trends in the sectors of aerospace, textile and advanced manufacturing, **participate in cross-sectoral fertilization workshops and networking opportunities** that Galactica offers you.

- Call for Eols – Nantes Learning expedition -> Deadline: 7/10/21 at 17h CEST
- Call for Eols – Hamburg Learning expedition -> Deadline: 14/10/21 at 17h CEST
- Call for Eols – Barcelona/Terrassa Learning expedition -> Deadline: 21/10/21 at 17h CEST
- Call for Eols – Porto Learning expedition -> Deadline: 21/10/21 at 17h CEST

To apply, please fill in your application before each individual deadline through [GALACTICA's Calls platform](#).



Travel voucher framework and guidelines



SECOND HACKATHON

LAUNCH



The **Second GALACTICA Hackathon** is **open to start-ups and SMEs** as well as to **university students** based in the European Union (EU27) or the United Kingdom. GALACTICA **seeks innovative solutions to combine the aerospace and textile sectors with advanced manufacturing** is expected, in order to re-shape value chains and business models, fomenting cross-sectoral and cross-border partnerships.

The registration for the Second GALACTICA Hackathon was open through the GALACTICA call platform until September 24th at 17h CEST, 2021.

The Second GALACTICA Hackathon **will take place in two rounds**:

- firstly an **online virtual challenge** on open innovation during October 2021
- the **2nd round will be in-person** for selected finalists on **November 30th and December 1st, in the Barcelona region** (as long as sanitary conditions allow so).

All participants from the first round will be invited to three free-to-access workshops from experts on technological and business topics. The ten finalist teams will also be invited to an additional workshop and mentoring before the two-day Hackathon final in the Barcelona area.

The GALACTICA hackathon **will award 50.000€ in prizes**, distributed in 25k€ for the winning SME/Start-up team and 10k€ for the runner-up. On the other side, the winning team of students receives 10k€ and the runner-up 5k€.

Stay tuned for the latest news regarding this event at our social media platforms and website!

<https://galacticaproject.eu/news/>



MEET THE PARTNERS



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