DeremCo 2^ Open Call:

Incontro tecnico e opportunità di finanziamento

10 febbraio 2025

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the European Union

AGENDA

14.00 - APERTURA E INTRODUZIONE

***Mattia Dosso**, Innovation Manager, AFIL*

***Marcello Colledani**, Docente al Politecnico di Milano e Coordinatore di DeremCo*

14.10 - LO STRUMENTO I3 E LE OPPORTUNITÀ DI FINANZIAMENTO

***Valentina Pinna**, Project Officer di EISMEA e Project Officer di DeremCo*

14.20 - IL PROGETTO DEREMCO

***Marcello Colledani**, Docente al Politecnico di Milano e Coordinatore di DeremCo*

14.30 - ROUND TABLE: PANORAMICA DEI DEMO CASE

Modera: *Marcello Colledani,* *Docente al Politecnico di Milano e Coordinatore di DeremCo*

Panel: *Giulia Filippone, R&D Project Manager, Caracol*

***Omar Maschi**, Responsabile Tecnico–Scientifico Multilab, Centrocot*

***Fabio Cortinovis**, R&D Manager, NTS*

***Matteo Origoni**, Architetto, Origoni Steiner Architetti Associati*

***Giacomo Bonaiti**, R&I Manager, Fibereuse Tech*

14.50 - MODALITÀ DI PARTECIPAZIONE ALLA OPEN CALL

***Adelaide Moscatelli**, Project Manager, META Group*

***Mattia Dosso**, Innovation Manager, AFIL*

15.00 - Q&A E CHIUSURA LAVORI

***Marcello Colledani**, Docente al Politecnico di Milano e Coordinatore di DeremCo*

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Lo strumento I3 e le opportunità di finanziamento

Valentina Pinna

Project Officer DeremCo
EISMEA

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Il progetto DeremCo

Marcello Colledani

Coordinatore DeremCo

Politecnico di Milano

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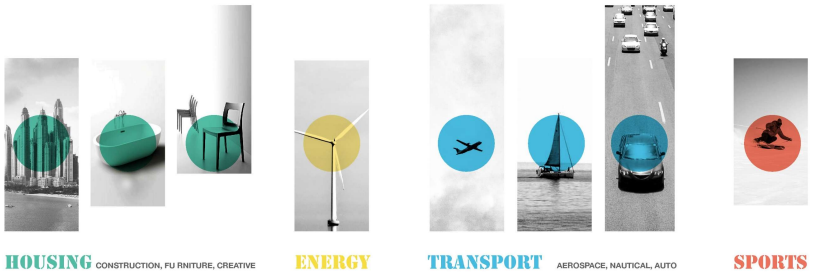
European Commission

I3 Interregional Innovation Investment Instrument

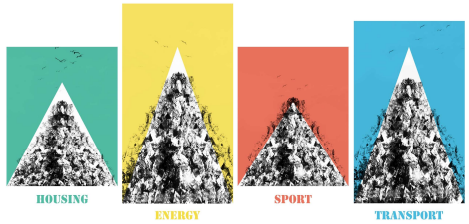
I3 Instrument DeremCo - De- and Remanufacturing for Circular Economy Investments in the Composite Industry

Project summary

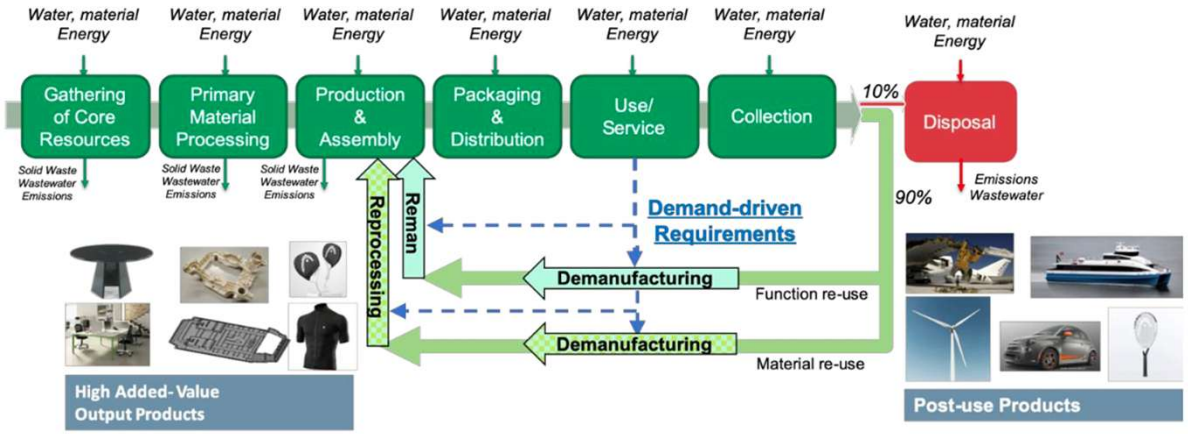


1- Fiber-Reinforced Plastics (FRPs) are widely adopted in several massively used products in the electronics, sport equipment, medical equipment, automotive, construction, wind energy, aeronautics and marine industries, due to their better lightweight and corrosion resistance compared to metals.

2- The recovery of plastics and fibers after the use phase of such products is a challenge. For example, 60,000 tons of GFRP from post-use wind blades will be produced by 2023.



The objective of DeremCo is the development and large-scale demonstration of a cross-sectorial circular value-chain for the recovery and re-use of composites into high added value products.



Interregional dimension

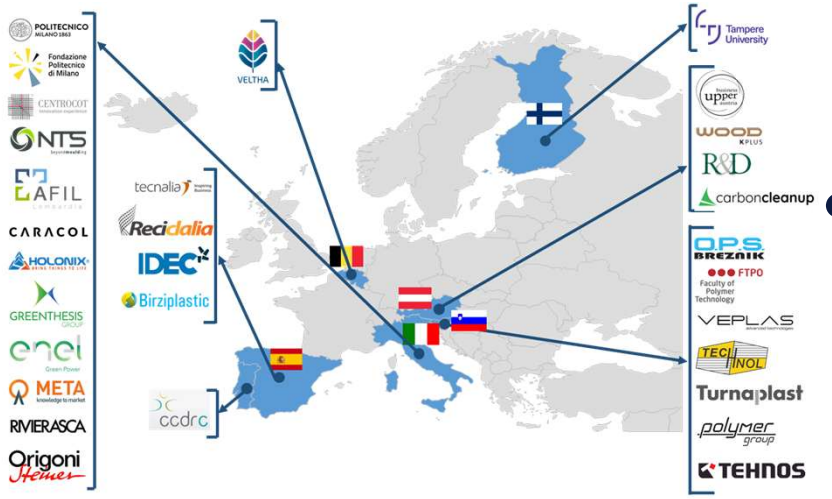
The DeremCo project aims at the development of innovative systemic solutions for unlocking the great potential of EoL composite materials as new manufacturing sources, with a set of actions inspired by two major general guidelines: Sustainable Manufacturing and Digitalization.

Duration: 36 months, starting December 2022.

Consortium: 30 partners, from 7 EU countries and Regions.

Coordinator: Politecnico di Milano

EC Funding: ca. 9 mln €.



(i) Geographical areas with the highest utilization of composites;

(ii) Complementarity in smart specialization on technical enablers;

(iii) Part of the Vanguard De-and Remanufacturing network;

(iv) Wind and automotive are distributed value-chains with relevant footprint in these Regions.

	Applied Research - Techn. Validation - Demonstration - Ready to market								
TRL	1 Basic Principles Observed	2 Technology Concept Formulated	3 Experimental Proof of Concept	4 Technology Validation in Lab	5 Technology Validation in relevant environment	6 Demonstration in relevant environment	7 Demonstration in operational environment	8 System complete and qualified	9 Successful mission operations
Traditional CE concept				REFORM					
Demand-driven CE concept. Development & Replication							DeremCo Pipeline of demonstration and investment projects		
									(Systematic replication and upscale)

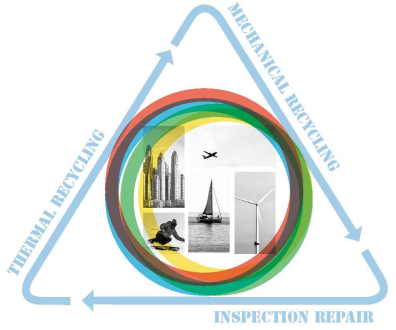
Innovation dimension

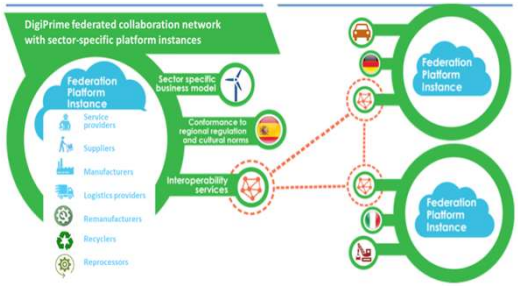
Technical enablers including:

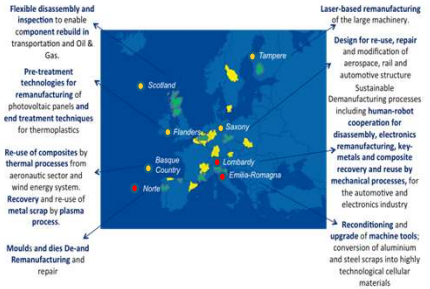
- Innovative highly controlled demanufacturing (thermo-chemical, mechanical) processes;
- Demand-driven reprocessing and certification solutions for unlocking industrial re-use business cases;
- Product co-design solutions for enhancing user and citizens involvement;
- A digital platform incorporating tools for material traceability and information exchange among stakeholders.

Non-Technical enablers for:

- Achieve large scale replication and multiplication by exploiting the capabilities of the Vanguard Initiative “De-and Remanufacturing for Circular Economy” pilot network.
- Boosting the industrial uptake within the local eco-system, implementing actions designed by public administrations and institutions, clusters and sector associations, financial intermediaries, citizens representatives.
- Increasing awareness for a more conscious consumer behavior.







Investments dimension

Strategy S1: Composite granule demanufacturing, hybrid reprocessing and re-use.							
Involved sectors: energy, automotive, home design, sport equipment, creative products.							
Components: turbines, furniture, lighting frames, decorative elements, benches, packaging, pump bracket							
Key recycling technology: mechanical recycling							
ID	**Type**	**Input (EoL materials)**	**Output sector / Product**	**End user**	**Reprocessing technology**	**Reprocessing materials**	**Preliminary target (KPI)**
1.1	B2B	Wind turbines	Automotive, Lighting frames	NTS	BMC, Injection molding	Thermoset and rGF	20% recyclate
1.2	B2C	Wind turbines	Creative products	OS/RIV	Various	Thermoset and rGF	>30% recyclate
1.3	B2B	Car body components	Packaging	WOOD/RD	Pulp molding	Recycled paper + recycled natural fibers	>10% composite recyclate
1.4	B2B	Wind turbines	Wind turbines	CARACOL	3D printing	Thermoset and rGF	Waste reduction >70%, weight reduction >80%
1.5	B2B	Wind Turbines	Fences	TECHNOL	Hot pressing	Thermoset and rGF	>60% composite recyclate
1.6	B2C	Wind turbines	Shelf for motorhomes	VEPLAS	Vacuum Infusion	Thermoset and GF	>30% recyclate
1.7	B2B	Wind turbines	Mounting Keys	OPS	Injection Molding	Thermoplastic and GF	>50% recyclate
1.8	B2B	Wind turbines	Structure parts	CAP	VARTM	Thermoset and GF	>40% recyclate
1.9	B2C	Wind turbines	Rails for Ski bindings	TURNAPLAST	Injection Molding	Thermoplastic and GF	>50% recyclate

The technical and business feasibility of 14 investment cases will be validated and demonstrated for future innovation diffusion among European regions.

Strategy S2: **Long fiber and matrix demanufacturing, textile reprocessing and re-use**							
Involved sectors: aeronautic, automotive, sport & leisure							
Components: pump bracket, shipbuilding boat battery cover, technical yarns, home appliances							
Key recycling technology: pyrolysis, production with rBMC/rSMC, injection molding							
ID	**Type**	**Input (EoL materials)**	**Output sector / Product**	**End user**	**Reprocessing technology**	**Reprocessing materials**	**Preliminary target (KPI)**
2.1	B2B	Bathtubs	Automotive (pump bracket)	OPS	Injection molding	Thermoplastic and rGF	30% recyclate
2.2	B2B	Wind turbines	Shipbuilding boat battery cover	IDEC	Injection molding	Thermoplastic and rGF	>40% recyclate
2.3	B2C / B2B	Wind turbines	Textile, technical yarns and fabrics	COT	Hybrid yarn spinning and weaving	rGF and rCF fibers, textile recycled polymers	3 products by mixed rCF/rGFd yarns
2.4	B2B	Aeronautic/wind turbines	Automotive components	BIRZIPLASTIC	Injection molding	Thermoplastic and GF/CF	Fiber content 20%
2.5	B2C	Wind Turbine	Construction	RIVIERASCA	Rolling	rGF MAT	Fiber Content 40%

Innovation examples

Objective:

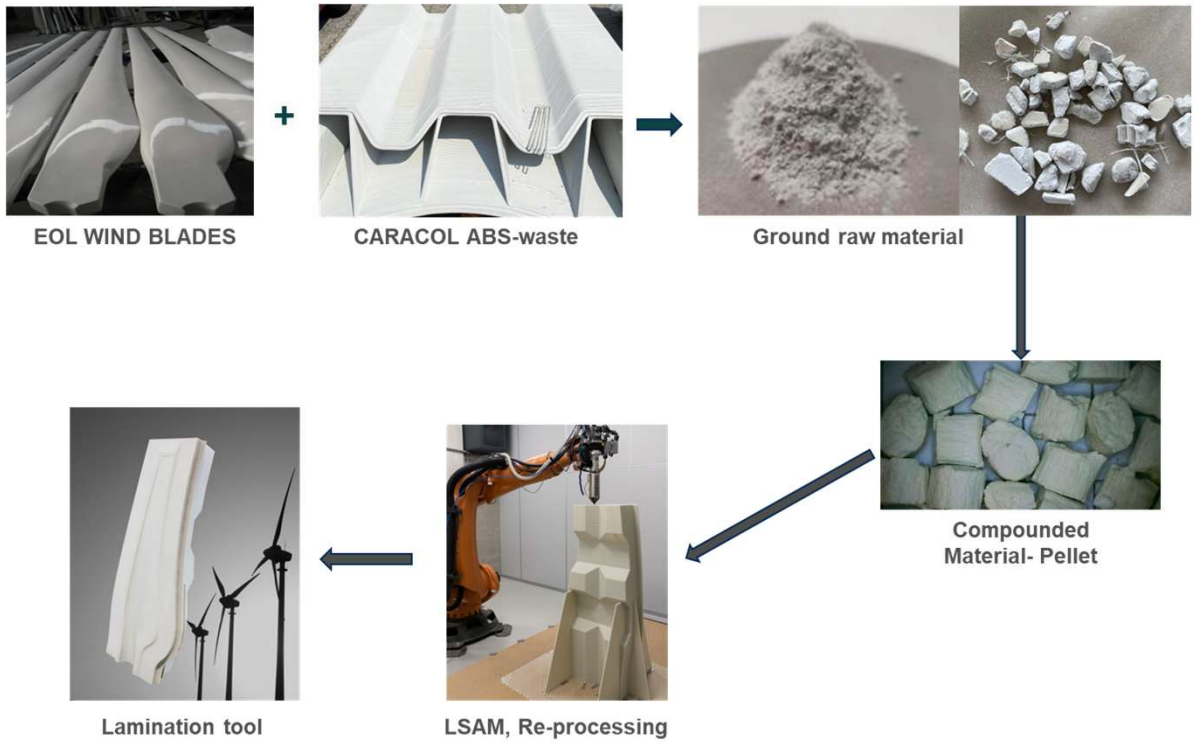
- Development of machine for 3D printing of large moulds for construction sector, incorporating recycled composite fractions.

Technological innovation:

- Mechanical recycling process of wind blades and ABS, compounding for pellet manufacturing, innovative 3D printing process.

Interest value chain players, Venture Capitalists or investors:

- new strategic additive manufacturing solution to process recycled granules from many sectors and for many applications.



Innovation examples

Objective:

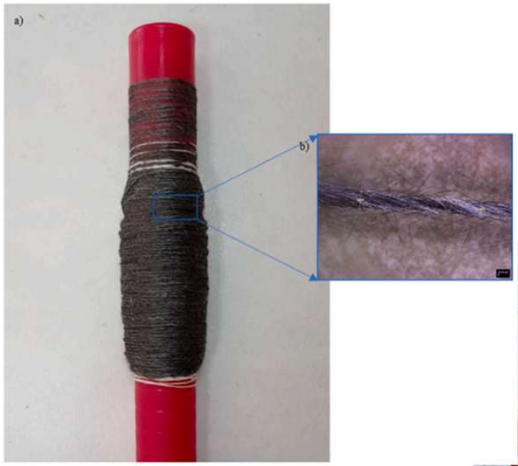
- To create a hybrid yarn starting from recycled carbon (CF) and glass fibers (GF) (from post-use wind blades) and thermoplastic fibers (from textile waste). The hybrid yarn will combine the high mechanical and physical performances of CF and GF with the “textile” properties of thermoplastic fibers, thus providing a high-value sustainable material for technical textile production.

Technological Innovation:

- Mix of CF, GF and thermoplastic fiber processed by mechanical recycling and innovative spinning process to create the hybrid yarn.

Interest for value chain players, Venture Capitalists or investors:

- merging point between sustainability (recycling of materials to a new product) and the request for high performance products coming from technical textile sector.



Example of Hybrid yarn (rCF + rPA)

Innovation examples

Objective:

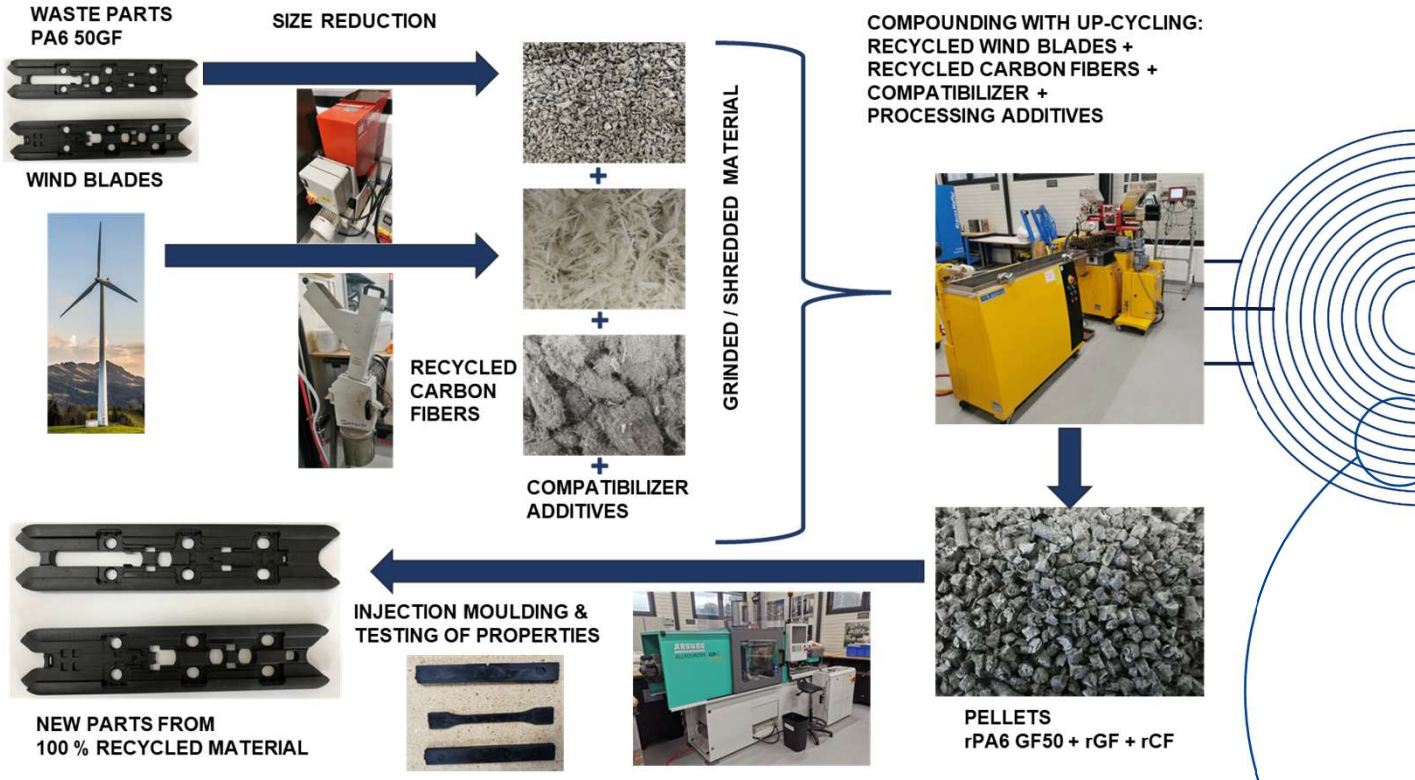
- sustainable **Rails for Ski bindings** using recycled glass fibers coming from industrial composite waste and from post-use wind blades as reinforcement for thermoplastic composites (> 55 wt. % recycled glass fibers).

Technological innovation:

- The product will be produced by injection moulding embedding recycled material fractions with a **cross-sectorial approach**.

Potential interest for value chain players, Venture Capitalists or investors:

- Invest in the developement of new product lines for sport equipment companies, also in view of the upcoming 2026 Olympic games in Italy, where a similar innovation can be showcased to gain momentum towards sustainable winter sports.



Round Table: panoramica dei demo case

Giulia Filippone

R&D Project Manager di CARACOL

Omar Maschi

Responsabile Tecnico Scientifico Multilab CENTROCOT

Fabio Cortinovis

R&D Manager NTS

Matteo Origoni

Architetto ORIGONI STEINER ARCHITETTI ASSOCIATI

Giacomo Bonaiti

R&I Manager FIBEREUSE TECH

Modera: Marcello Colledani, Coordinatore DeremCo

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Modalità di partecipazione alla Open Call

Adelaide Moscatelli

Project Manager META GROUP

Mattia Dosso

Innovation Manager AFIL

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De & Remanufacturing for Circular Economy Investments in the Composite Industry

DeremCo: Seconda Open Call

- **Presenter**: Adelaide Moscatelli
- META Group

10-02-2025

Co-funded by the European Union

Project coordinator: Marcello Colledani
Contact: marcello.colledani@polimi.it

DeremCo Open Call: obiettivo

Investigare nuove soluzioni per i topic di DeremCo:

- **Input** – (materiali) da trattare con le tecnologie DeremCo per penetrare nuovi mercati
- **Process** – tecnologie complementari, incluse soluzioni IT, che migliorano o integrino quelle già in uso in DeremCo
- **Output** – soluzioni innovative che utilizzano i materiali DeremCo

Value chain regionale: facilitare la creazione di value chain regionali

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DeremCo Open Call: contributo

Dimensione della call: *€600.000* (2^ OC)

Contributo massimo: *€60.000* per entità legale

Copertura: *100%* del costo ammissibile

Regola: *Lump Sum* (forfettario)

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DeremCo Open Call: attività ammissibili

Attività finanziabili

- Prove/test
- Acquisizione e test di materie prime diverse da quelle trattate in DeremCo
- Ricerche di mercato
- Dimostrazione in ambiente reale/operativo, su piccola e/o grande scala
- Sfruttamento in nuovi settori di applicazione (cross-fertilisation)

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2nd DeremCo Open Call: tempistica

Lancio:	30 Dicembre 2024
Scadenza:	28 febbraio 2025
Durata dei progetti:	Max 6 mesi

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DeremCo Open Call

Chi può partecipare

- PMI (incluse start up)
- Singole o raggruppate (fino a 3 PMI)
- Provenienti dalle regioni partner e/o dalle regioni delle filiali dei partner DeremCo

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DeremCo Open Call: come e dove applicare

Processo semplice:

- Registrazione in piattaforma
- Compilazione del form di domanda
- Compilazione e caricamento del modello di proposta tecnica
- Caricamento della prova di entità legale

Dove:

https://deremco.afil.it/

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DeremCo Open Call: topic

Topic 1 (Output off-taking) - Prototypes of **innovative products realized by Large Format Additive Manufacturing** (LFAM),

Topic 2 (Output off-taking) – Prototypes of **new applications using the hybrid yarn produced within DeremCo.**

Topic 3 (Output off-taking) – Prototypes/small sample of **new products using the recycled Bulk Moulding Compounds** (r-BMC) produced within DeremCo.

Topic 4 (Output off-taking) – Prototypes/small sample of **new products manufactured using injection moulding with DeremCo materials.**

Topic 5 (Input) – New typologies of waste materials based on natural fibres to be recycled.

Topic 6 (Output) – New reprocessing support techniques and technologies such as those supporting quicker impregnation of recycled GFRP mat with unsaturated polyester resin and enabling of impregnation of recycled GFRP mat with light RTM process in combination with unsaturated polyester resin.

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DeremCo Open Call: criteri di selezione

Rilevanza:

- Coerenza della proposta con gli obiettivi di DeremCo e dei suoi partner, inclusi i progressi oltre lo stato dell'arte (max 10 punti)
- Coerenza con le catene del valore dei partner industriali (max 5 punti)
- Complementarità con altre azioni innovative e progetti I3 (max 2 punti)

Qualità:

- Fattibilità tecnico-finanziaria del piano d'azione (max 12 punti)
- Solidità e credibilità del piano di marketing (max 7 punti)
- Credibilità (capacità tecnica/operativa ed esperienza) del richiedente (max 7 punti)

Impatto Potenziale:

- Potenziale di mercato (max 10 punti)
- Impatto sociale, territoriale e ambientale (max 5 punti)
- Impatto sulle “Regioni Meno Sviluppate” (max 2 punti)

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DeremCo Open Call: contatti

Email dedicata: deremco@meta-group.com

Mentori tecnici risponderanno alle domande se necessario

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THANKS

DOES ANYONE HAVE ANY QUESTIONS?

deremco@meta-group.com

@DeremCo

@DeremCo_project

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De & Remanufacturing for Circular Economy Investments in the Composite Industry

Modalità di partecipazione alla open call

Presenters: Mattia Dosso
AFIL – Associazione Fabbrica Intelligente Lombardia

10-02-2025

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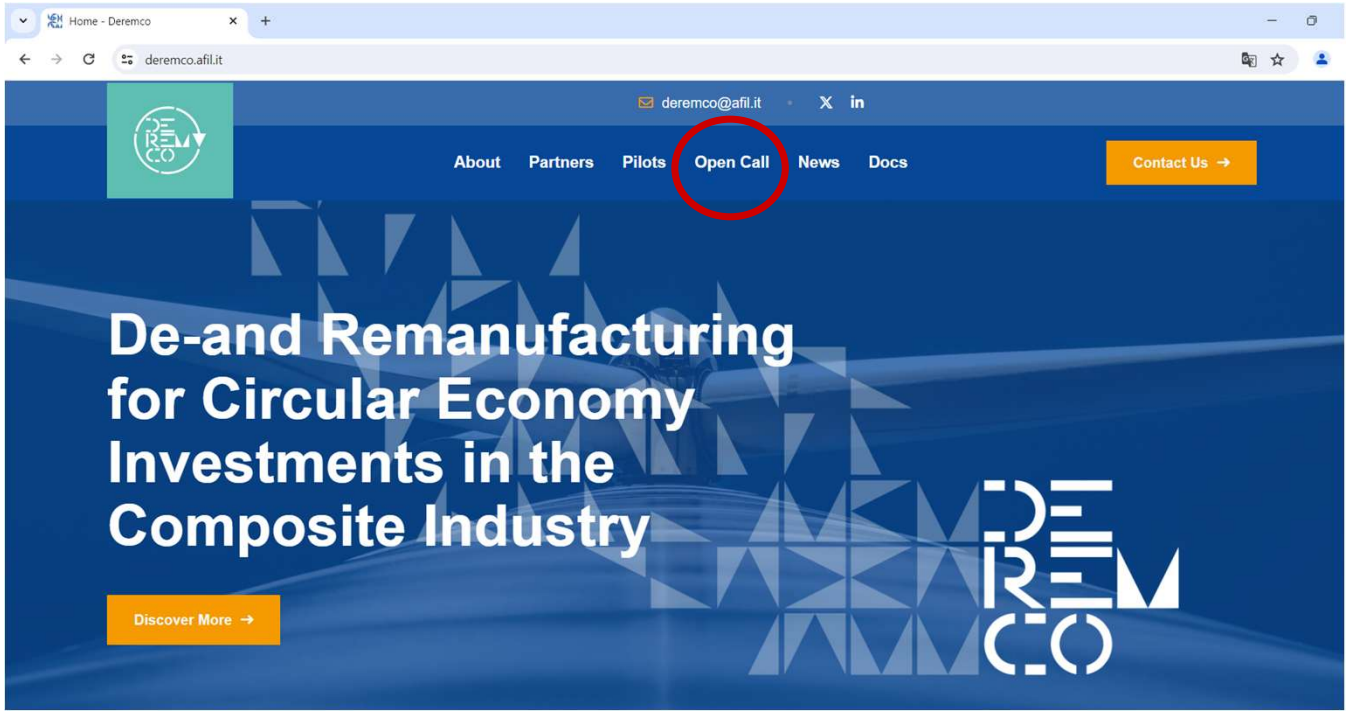
Project coordinator: Marcello Colledani
Contact: marcello.colledani@polimi.it

Linee Guida per la Seconda Open Call DeremCo: Processo di Applicazione



https://deremco.afil.it/

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Pagina dedicata sul sito web DeremCo

OPEN CALL DEADLINE: FEBRUARY 28, 2025

DEREMCO SECOND OPEN CALL

Details →

A new opportunity for your organization

Join us through the open calls!

Discover More →

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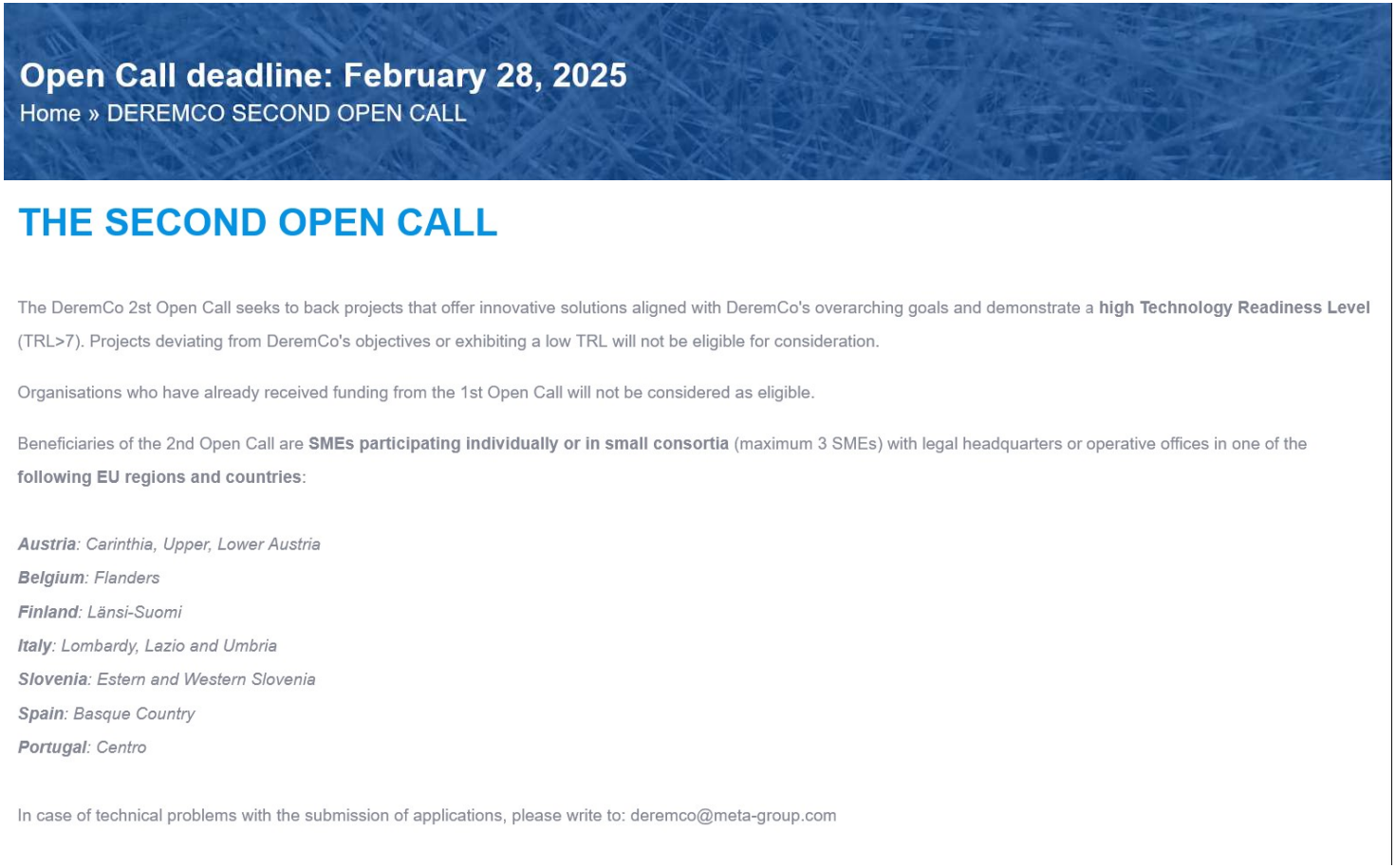

Open Call deadline: February 28, 2025

Home » DEREMCO SECOND OPEN CALL

THE SECOND OPEN CALL

The DeremCo 2st Open Call seeks to back projects that offer innovative solutions aligned with DeremCo's overarching goals and demonstrate a **high Technology Readiness Level** (TRL>7). Projects deviating from DeremCo's objectives or exhibiting a low TRL will not be eligible for consideration.

Organisations who have already received funding from the 1st Open Call will not be considered as eligible.

Beneficiaries of the 2nd Open Call are **SMEs participating individually or in small consortia** (maximum 3 SMEs) with legal headquarters or operative offices in one of the **following EU regions and countries**:

***Austria**: Carinthia, Upper, Lower Austria*
***Belgium**: Flanders*
***Finland**: Länsi-Suomi*
***Italy**: Lombardy, Lazio and Umbria*
***Slovenia**: Estern and Western Slovenia*
***Spain**: Basque Country*
***Portugal**: Centro*

In case of technical problems with the submission of applications, please write to: deremco@meta-group.com

https://deremco.afil.it/open-call/open-call-2//

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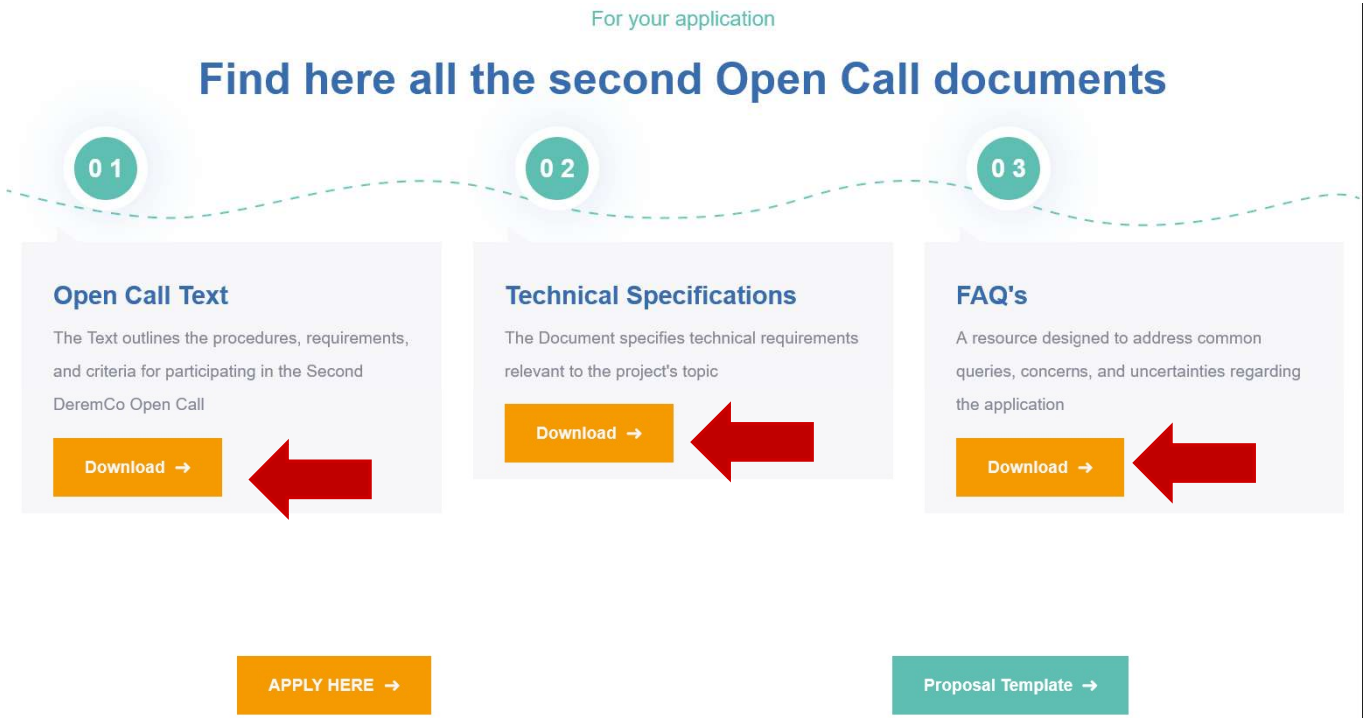
Pagina dedicata sul sito web DeremCo: DOCUMENTI SCARICABILI



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Testo dell’open call

- Descrizione di DeremCo
- Obiettivi generali della Call
- Chi può applicare e attività finanziabili
- Budget disponibile e criteri di finanzialmento
- Criteri valutativi
- Privacy e regolamento generale

DeremCo - De & Remanufacturing for Circular Economy Investments in the Composite Industry

2nd Open Call

Disclaimer: *This project has received funding from the European Union's ERDF under grant agreement No 101084037. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Innovation Council and SMEs Executive Agency (EISMEA). Neither the European Union nor the granting authority can be held responsible for them.*

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Annex 1 – Dettagli Tecnici

- Descrizione degli argomenti a cui verrà riservata maggiore attenzione in sede di valutazione della proposta

Annex 1 - Technical specifications

Topics of particular interest for the 2nd open call

When evaluating the received applications against the criterion "**Relevance**", particular attention will be given to the *Coherence of the proposed project with the DeremCo vision and DeremCo partners' business objectives*, for example considering the following topics:

Topic 1 (Output off-taking) - Prototypes of **innovative products realized by Large Format Additive Manufacturing** (LFAM), or other Additive Manufacturing techniques, using compounds produced by the DeremCo project. A limited amount of DeremCo material will be made available for tests. Advice and know how on 3d printing process and design for additive manufacturing will be made available by project partners. Knowledge of additive manufacturing and availability of 3D printing processes from applicants will be considered as an added value. The proposed **products should include at least 20% of recycled materials from Fiber Reinforced Polymers** (thermoplastic matrix).

Topic 2 (Output off-taking) – Prototypes of **new applications using the hybrid yarn produced within DeremCo**. Applications targeting the nautical, furniture and automotive sectors will be given priority. Knowledge about the hybrid yarn as well as a limited amount of sample hybrid yarn will be made available to applicants by the project partners.

Topic 3 (Output off-taking) – Prototypes/small sample of **new products using the recycled Bulk Moulding Compounds** (r-BMC) produced within DeremCo. The DeremCo consortium would make available to applicants:

- Short training on the r-BMC, its variations and properties achievable on moulded components;
- Moulded samples with different r-BMC formulations produced during DeremCo;
- Advice the design of the new products for a better use of the r-BMC;
- Advice on how to design and produce a mould for the transformation of thermosetting materials.

Topic 4 (Output off-taking) – Prototypes/small sample of **new products manufactured using injection moulding with DeremCo materials**. A limited amount of material will be made available to applicants for their projects. Applications including new **products in industries different from automotive will be prioritized**. Facilities for injection moulding will be made available to applicants by the DeremCo partners.

Topic 5 (Input) – **New typologies of waste materials based on natural fibres to be recycled**. Facilities of DeremCo partners will be made available to applicants for validation. Availability of the waste materials for testing is considered an asset.

Topic 6 (Process) – New reprocessing support techniques and technologies such as those supporting quicker impregnation of recycled GFRP mat with unsaturated polyester resin and enabling of impregnation of recycled GFRP mat with light RTM process in combination with unsaturated polyester resin.

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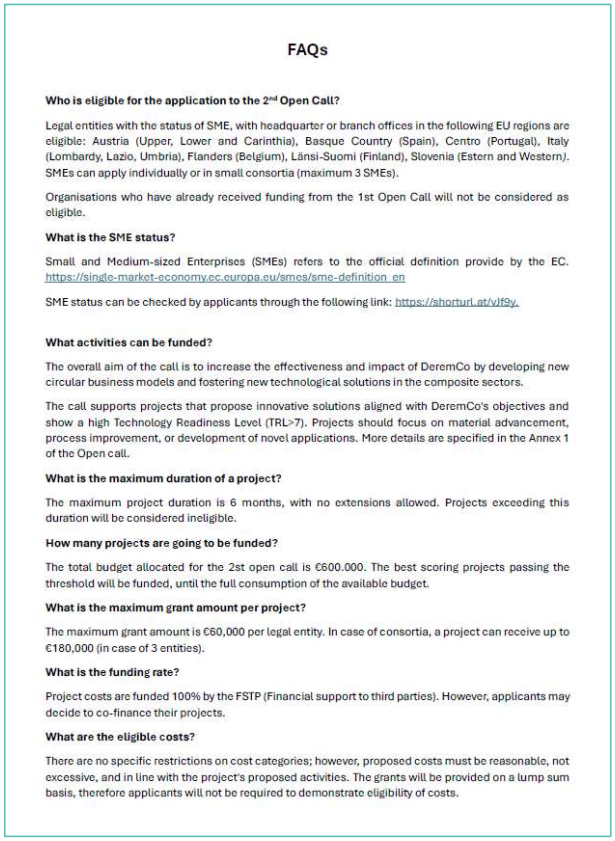
FAQs

- Documento che contiene le domande frequenti relative all'application.

- In caso sia necessaria una risposta più esaustiva o precisa è possible contattare, come indicato nei documenti, la seguente email dedicata:

  deremco@meta-group.com



FAQs

Who is eligible for the application to the 2nd Open Call?

Legal entities with the status of SME, with headquarter or branch offices in the following EU regions are eligible: Austria (Upper, Lower and Carinthia), Basque Country (Spain), Centro (Portugal), Italy (Lombardy, Lazio, Umbria), Flanders (Belgium), Länsi-Suomi (Finland), Slovenia (Estern and Western). SMEs can apply individually or in small consortia (maximum 3 SMEs).

Organisations who have already received funding from the 1st Open Call will not be considered as eligible.

What is the SME status?

Small and Medium-sized Enterprises (SMEs) refers to the official definition provide by the EC. https://single-market-economy.ec.europa.eu/smes/sme-definition_en

SME status can be checked by applicants through the following link: https://shorturl.at/vJf9y.

What activities can be funded?

The overall aim of the call is to increase the effectiveness and impact of DeremCo by developing new circular business models and fostering new technological solutions in the composite sectors.

The call supports projects that propose innovative solutions aligned with DeremCo's objectives and show a high Technology Readiness Level (TRL>7). Projects should focus on material advancement, process improvement, or development of novel applications. More details are specified in the Annex 1 of the Open call.

What is the maximum duration of a project?

The maximum project duration is 6 months, with no extensions allowed. Projects exceeding this duration will be considered ineligible.

How many projects are going to be funded?

The total budget allocated for the 2st open call is €600.000. The best scoring projects passing the threshold will be funded, until the full consumption of the available budget.

What is the maximum grant amount per project?

The maximum grant amount is €60,000 per legal entity. In case of consortia, a project can receive up to €180,000 (in case of 3 entities).

What is the funding rate?

Project costs are funded 100% by the FSTP (Financial support to third parties). However, applicants may decide to co-finance their projects.

What are the eligible costs?

There are no specific restrictions on cost categories; however, proposed costs must be reasonable, not excessive, and in line with the project's proposed activities. The grants will be provided on a lump sum basis, therefore applicants will not be required to demonstrate eligibility of costs.

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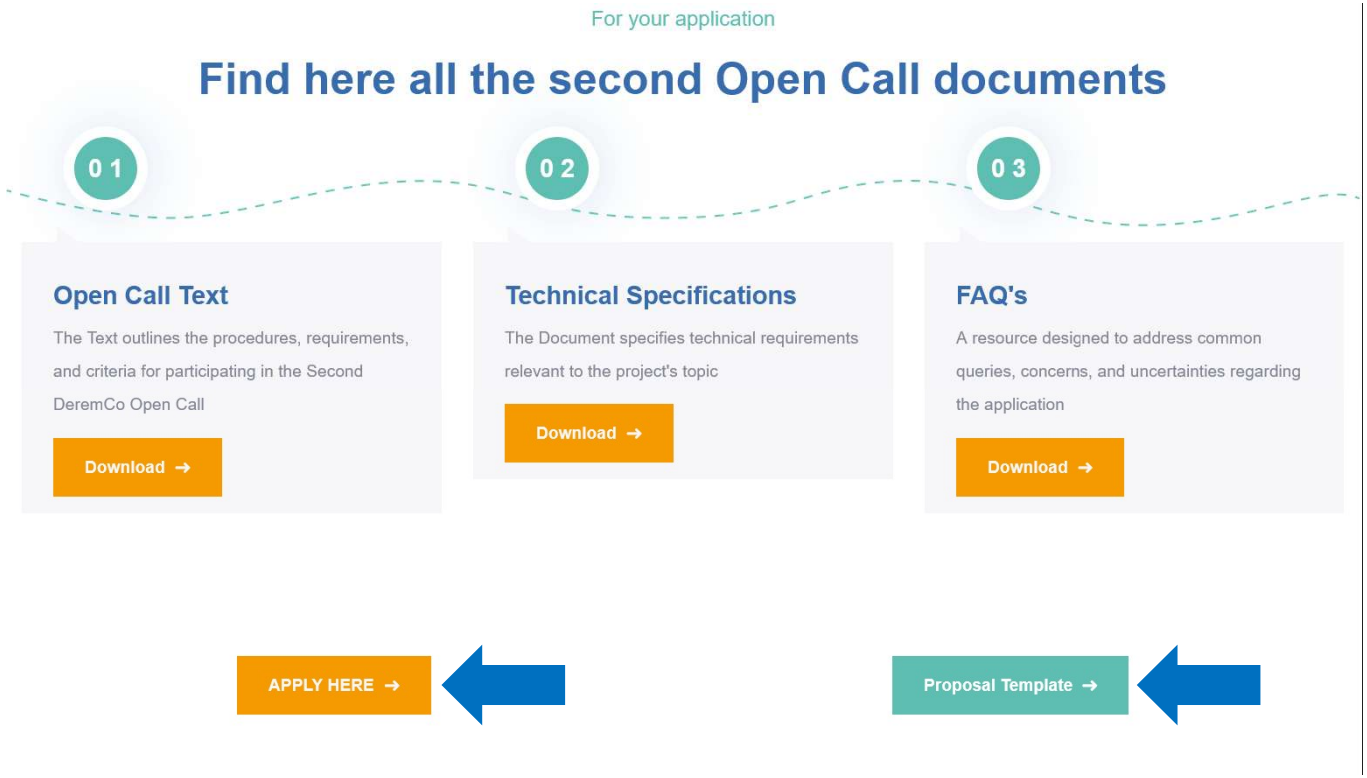
Pagina dedicata sul sito web DeremCo



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PROPOSAL TEMPLATE →

Annex 2 - Proposal Template

- Documento scaricabile in formato word e da utilizzare per scrivere la propria proposta
- Contiene 3 sezioni:
  -**1**. Descrittiva della soluzione innovativa proposta, del potenziale sul mercato e dei rischi correlati
  -**2**. Descrittiva dell'approccio, della metodologia e delle azioni del Progetto proposto
  -**3**. Dettagli relativi all'organizzazione proponente e al team.
- Lunghezza massima della proposta: 20 pagine

DeremCo - De & Remanufacturing for Circular Economy Investments in the Composite Industry

Open call proposal template

Disclaimer: *This project has received funding from the European Union's ERDF under grant agreement No 101084037. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Innovation Council and SMEs Executive Agency (EISMEA). Neither the European Union nor the granting authority can be held responsible for them.*

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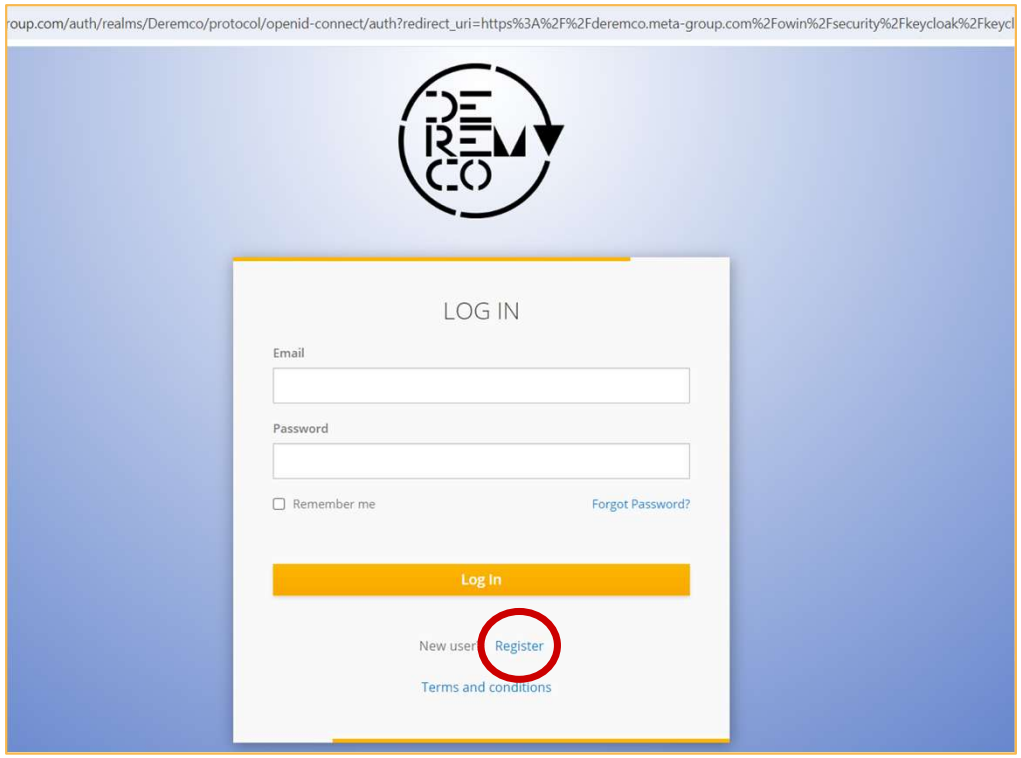

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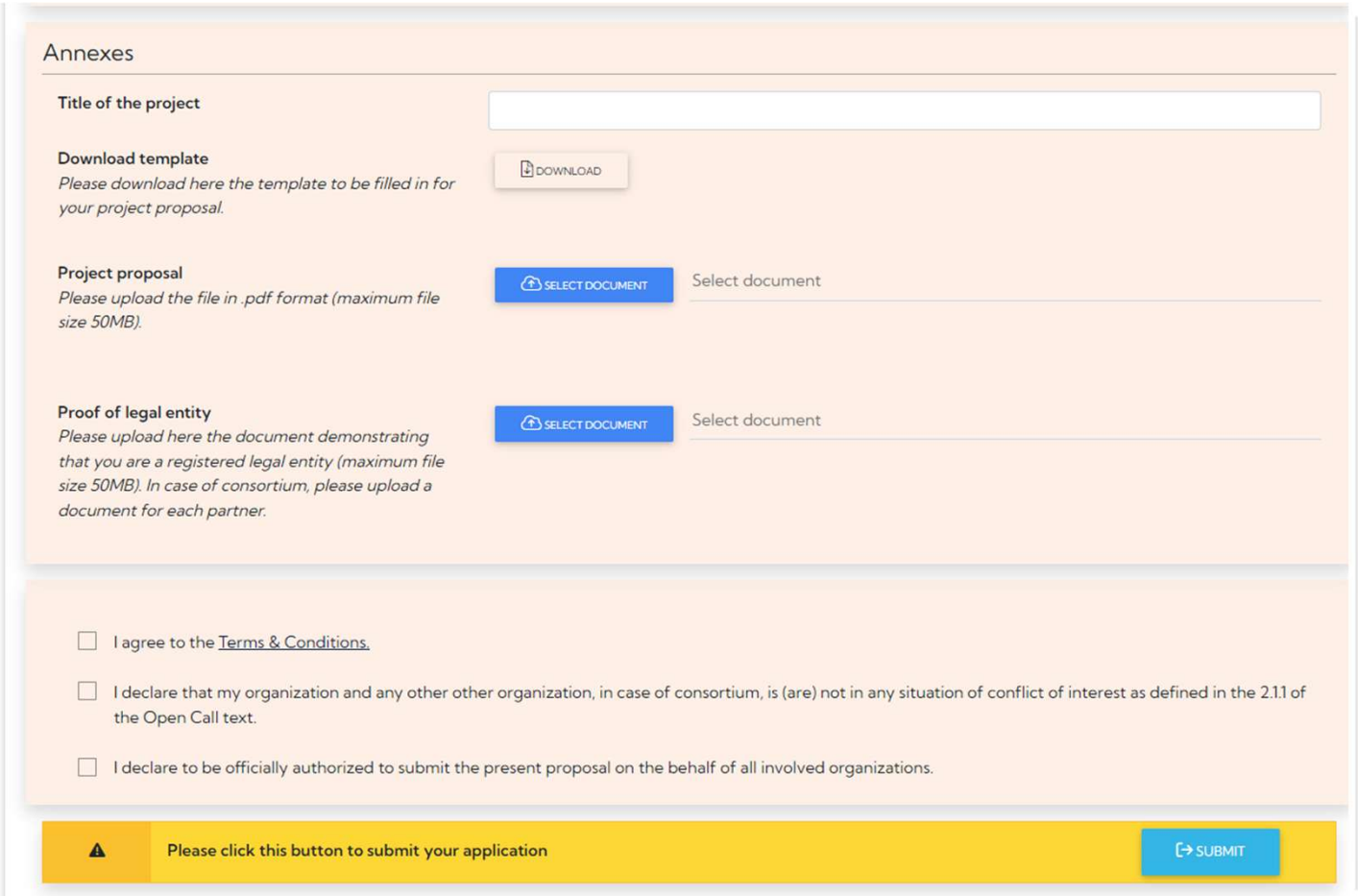

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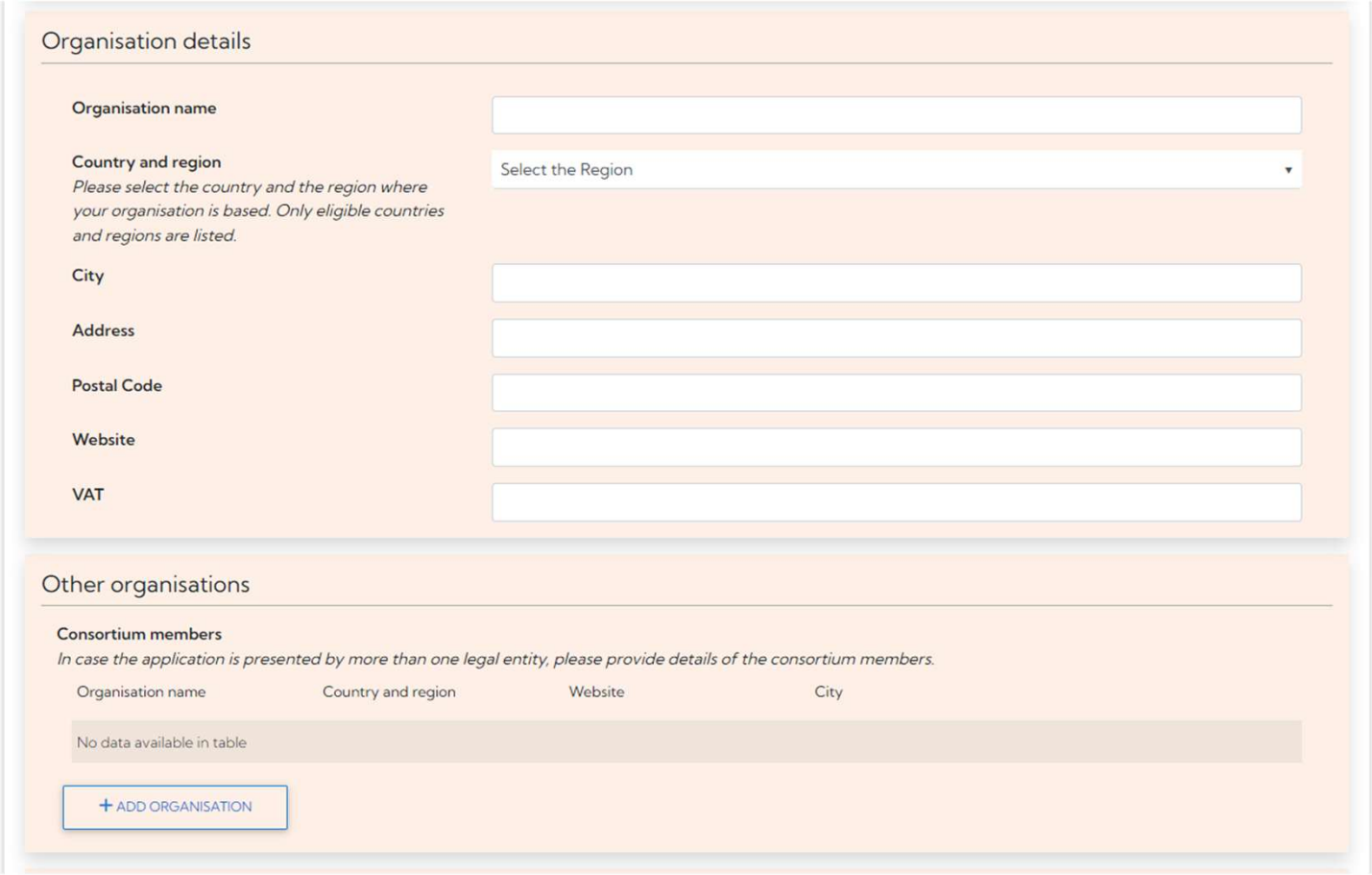

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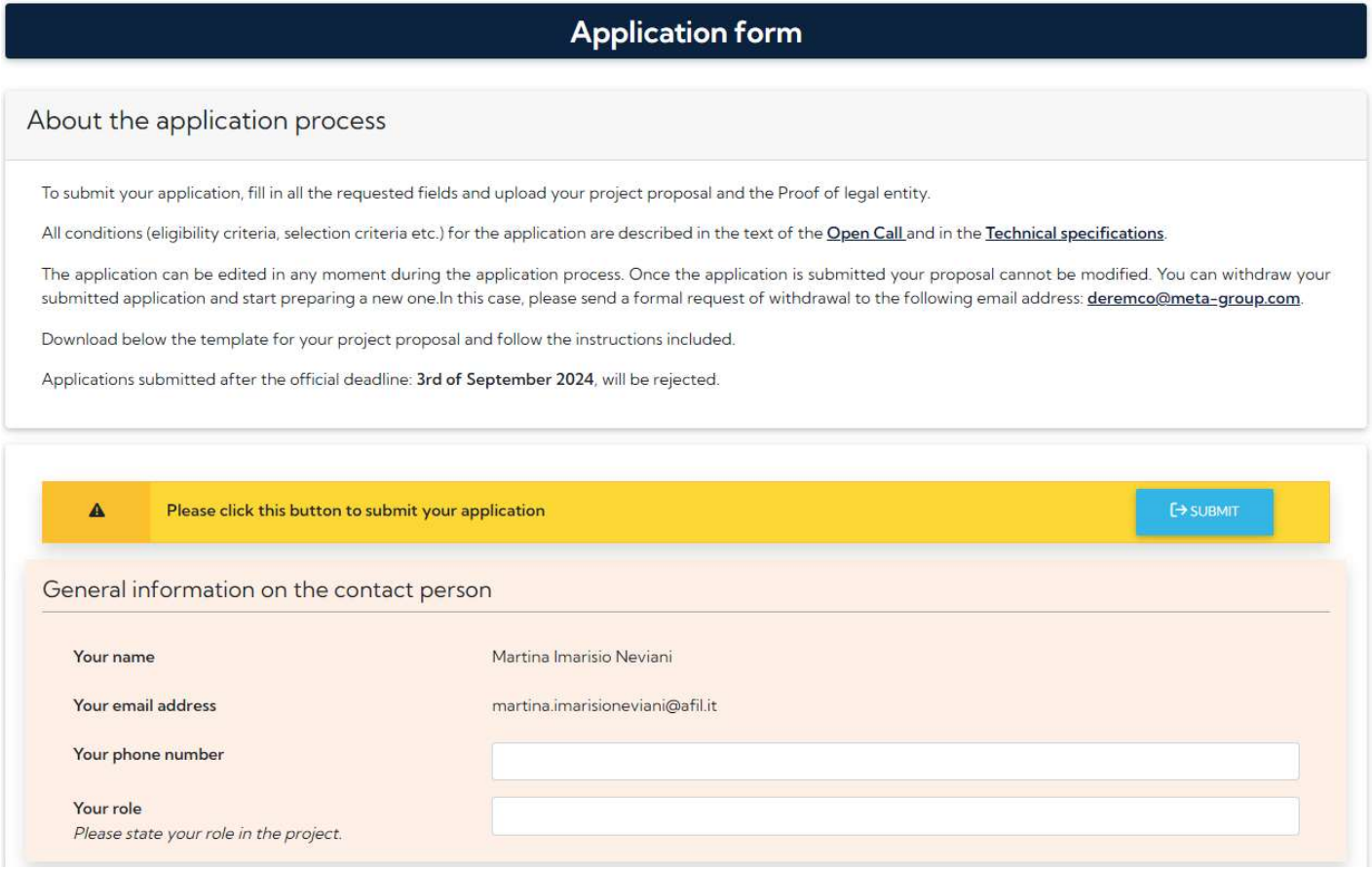

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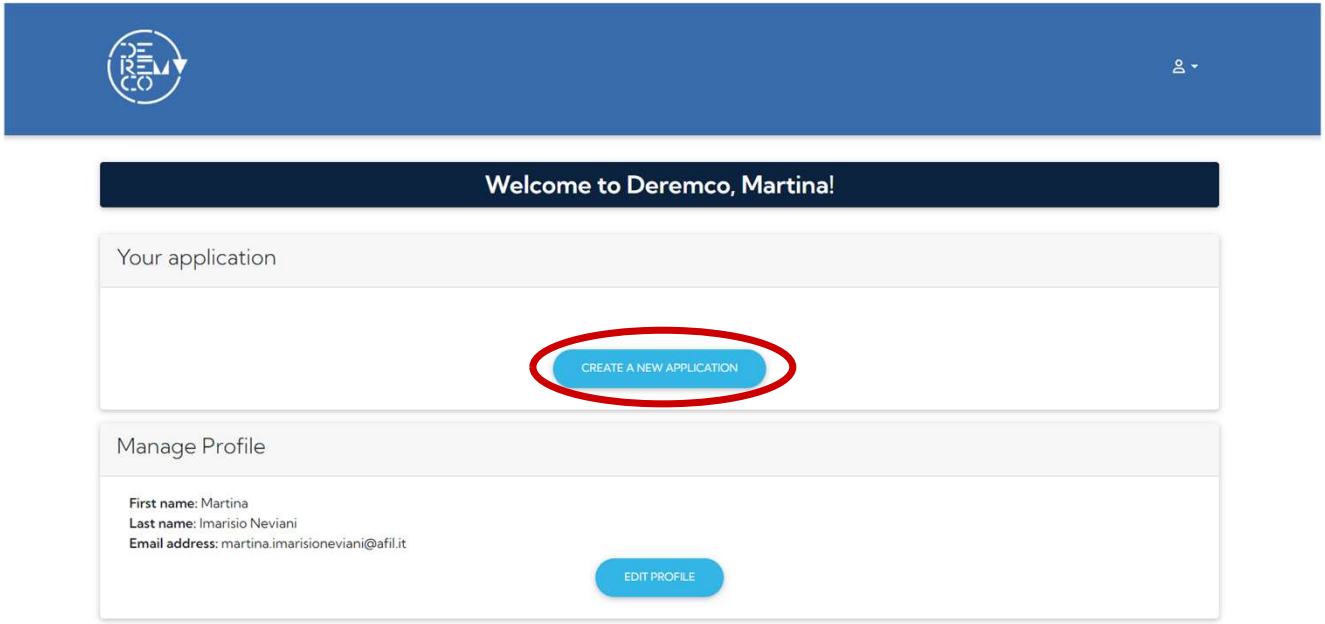

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THANKS

DOES ANYONE HAVE ANY QUESTIONS?

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Q&A e chiusura lavori

Marcello Colledani

Coordinatore DeremCo

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