

# Dual-use technologies for green defence: European opportunities for Luxembourg research and industry

18 April 2023 (Luxinnovation, Esch-sur-Alzette)



## INCUBATION FORUM FOR CIRCULAR ECONOMY IN EUROPEAN DEFENCE (IF CEED)

"IF (we) 'CEED' now, we will harvest tomorrow!"

The Incubation Forum for Circular Economy in European Defence (IF CEED) is co-funded by:

The LIFE Programme of the European Union

The Luxembourg's Ministry of Foreign and European Affairs - Directorate of Defence





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circular.economy@eda.europa.eu eda.europa.eu/ifceed

## CIRCULAR ECONOMY

#### Incubation Forum for Circular Economy in European Defence (IF CEED)

#### **AIM**

- Implement circularity principles in European Defence by:
  - incubating collaborative projects;
  - enabling transnational innovative solutions and revised business models.

Contributing to the EU Climate Change & Defence Roadmap



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#### WHOM FOR?

- Ministries of Defence
- ▶ Any pertinent EU / national / international public body/organisation
- Academia

- ▶ Industry
- Research-and-Technology-Organisations

RAW MATERIA

▶ Financial institutions

#### HOW?

▶ Under 2 Incubation Clusters, experts works within below 9 "Project Circles" (PC)

Incubation Clusters [ICs]								
IC 1 "Materials & Innovative Designs" [MIS]				IC 2 "Processes & Digitalisation" [PD]				
PC Critical Raw Materials	PC Circular Additive Manufacturing	Materials	PC Sustainable Ecodesign	PC Waste Framework Directive, 9.1.i)	PC EMAS Uptake Strategy	PC Green Procurement	PC Circular Data	PC Spare Parts Management

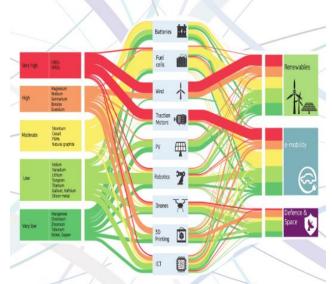
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### "Critical Raw Materials" (CRM) Project Circle

#### MAIN TOPICS

- ▶ Evaluation of the main applications involving CRMs in defence.
- ▶ Reuse and recycling to keep CRM in the EU loop.
- ▶ Substitution of CRM.





Source <u>Critical Raw Materials for Strategic Technologies</u> and Sectors in the EU

## "Circular Additive Manufacturing" (CAM) Project Circle

#### MAIN TOPICS

- ► Circularity and resource efficiency in Additive Manufacturing (AM) (Materials, recycling & recycled content, processes)
- ► Deployable AM solutions



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### "Circular Materials for Textiles" (CMT) Project Circle

#### MAIN TOPICS

- ▶ Avoid contamination, presence of impurities and degradation in the textile recycling process
- ▶ Pre-evaluate the circularity levels by design, especially for textronic-based textiles



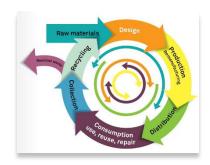


Source: EDA's STILE: Smart TextILEs in Defence factsheet

## "Sustainable Ecodesign" (SE) Project Circle

#### MAIN TOPICS

- ▶ Identify ecodesign requirements for circularity for a certain number of defence capabilities / intermediate products along the whole life cycle
- ▶ Sustainability assessment / environmental evaluation
- ▶ Support the Safe and Sustainable by Design framework



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## "Green Procurement" (GP) Project Circle

#### MAIN TOPICS

- Support MoDs to procure goods, services and works with a reduced environmental impact
- ▶ Development of a knowledge platform and a reference system of criteria / standards
- ▶ Feasibility of a training on Green Procurement in defence for MS

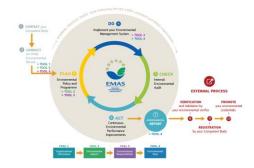




## "EMAS Uptake Strategy" (EUS) Project Circle

#### MAIN TOPICS

- ▶ Analysis of the EMAS/ ISO 14001 (or equivalent) certifications for the proposed case studies, including identifying drivers & barriers
- ▶ EMAS certification uptake at military installations.



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## "Waste Framework Directive Art. 9.1.i" (WFD) Project Circle

#### MAIN TOPICS

- Implementation of the WFD/SCIP database requirements & defence exemptions.
- ▶ Link between SCIP reporting and wider data sharing schemes. Joint activity with "Circular Data" Project Circle





#### "Circular Data" (CD) Project Circle

#### MAIN TOPICS

- ▶ Sharing of data on products along circular value chains & associated schemes (including legal, technical, organisational and economical aspects).
- ▶ Data for (reverse) logistics.



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## "Spare Parts Management" (SPM) Project Circle

#### MAIN TOPICS

- ▶ Common pooling and sharing of spare parts.
- Certification of spare parts.
- ▶ Focus on spare parts from decommissioned assets.

NB: Link with eco-design and additive manufacturing.





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#### Status of the activities

#### PROCESS FOR DEFINITION OF PROJECT IDEAS

- 1. Identification of priority areas per Project Circle
- 2. Definition of scope, objectives, expected outcome and impact of project ideas
- On-going

3. Identification of relevant funding sources

Upon first consolidated definition (Started).

#### **TIMELINE**

Experts in Project Circles are working on the definition of project ideas:

- ▶ to be finalised by May/June 2023;
- ▶ as basis for application to funding & implementation (timeline depending on funding scheme).



If you would like to

join a Project Circle

or ask for more info,

please email:

circular.economy@eda.europa.eu

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