

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

Project idea

Circular management of Spare Parts from decommissioned assets



Context

Extending the lifetime of capabilities and systems is a straightforward way to increase the operational availability while reducing the environmental impact of the military. Decommissioned assets hold a huge potential in this regard.

Decommissioning in the military domain means withdrawing military equipment from service. One reason for decommissioning is the increasing effort of maintenance, specifically when it comes to older devices: the costs for maintenance are no more in balance with the economically cost of operating the asset, as well as the fact that some parts are becoming obsolete and cannot be manufactured anymore.

Gaining (high value) spare parts from decommissioned military assets and sharing those among nations who are keeping operating the same assets will bring added value to all

participants and is a very efficient way to save natural resources on the one hand side and to provide an operational advantage on the other hand side.

Creating ad-hoc processes and a marketplace for the reuse of such parts (either direct or after retrofit/remanufacturing), is needed to deliver on this potential. Where parts cannot be ultimately used anymore, re-design and materials substitution allowed by technologies like additive manufacturing will help closing the loop.

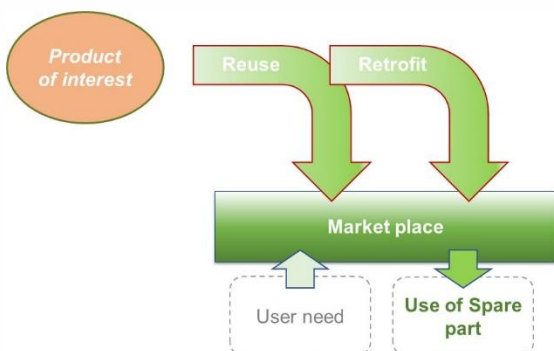
Objectives

The project idea aims at developing a (legally and technically) robust and systematic approach to retain maximum value for parts/materials originating from decommissioned assets.

The **specific objectives** are to:

- Develop a scheme for assessment for reuse and sharing of spare parts from decommissioned assets (SPDA).
- Establish complementary procedures for, respectively, remanufacturing/retrofit and recovery of (critical raw) materials.
- Set up a marketplace for SPDA (or evolution of existing system) and associated logistics.
- Demonstrate, on military use cases (aircraft parts, land vehicles, naval components), the developed procedure and systems.
- Identify parts and components which have to be replaced and can be improved by re-engineering and new manufacturing technologies.

Methodology



Stakeholders

- Entities engaged in the IF CEED Project Circle "Spare Parts Management".
- Ministries of Defence, industry, research-and-technology organisations

Timeline & Milestones

The project duration is 36-48 months.

Expected Outcome

- Process and tools for circular management of spare parts from decommissioned assets.
- Demonstration on use cases representative of the different domains (air, naval).

Operational benefits

- Enhancing availability and extending operating lifetime of military assets by gaining access to additional sources of spare parts.
- Enhancing logistic processes for Mutual Logistic Supply (MLS).

Budget & funding

Type of project: collaborative project.

Budget: EUR 5 000 000 to 10 000 000