



ESA LCA DB Project Presentation 2021-2024

Prime:

Deimos Space Romania

Sub-contractors:

RINA Consulting Defence Limited

University of Strathclyde

GreenDelta

EVERSIS

Suppliers:

ArianeGroup

Argotec

Deimos Spain

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- ❑ Key **objective of the activity**: build and maintain a fully operational and up-to-date environmental LCA database to be used by ESA and European stakeholders from ESA member states.

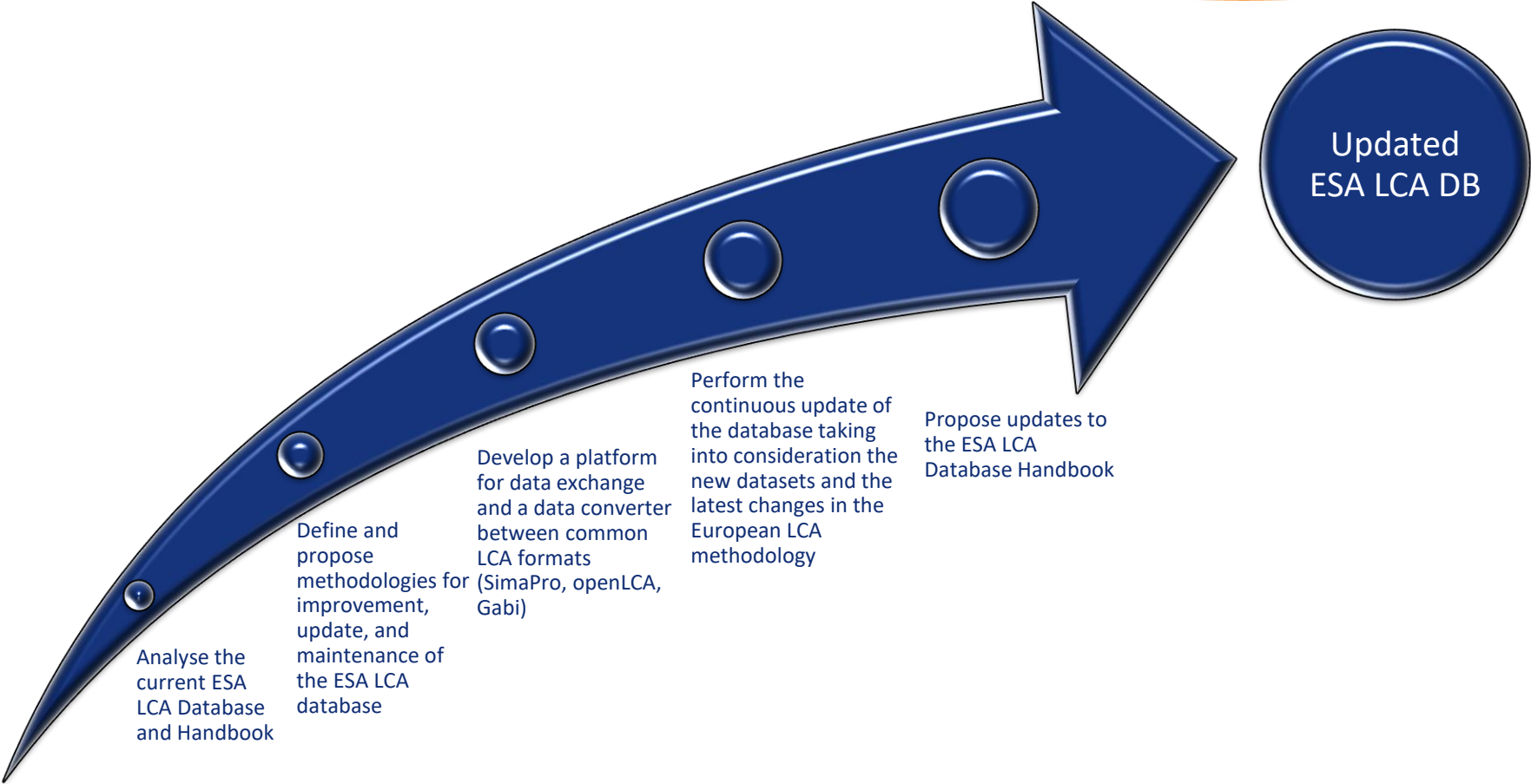
ESA LCA DB Team

- Deimos Space Romania (Prime)
- RINA Consulting Defence Limited
- University of Strathclyde
- GreenDelta
- Eversis

Suppliers

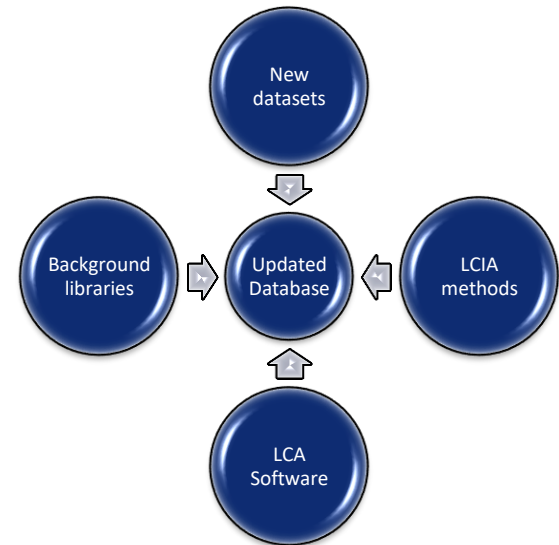
- ArianeGroup
- Deimos Castilla La Mancha
- Argotec

ESA LCA Database - Activities



- ❑ Methodologies definition and consolidation:
 - Methodology for data quality assessment and LCIA methods
 - Methodology for new data sets integration (receive, handle, store and final integration)
 - Methodology for background databases update (Ecoinvent)
- ❑ LCIA Framework update:
 - Determine the most appropriate normalisation and weighting methods to be used for the definition of a single score for the space sector
 - Develop and deliver a single score for the space sector, using a multi-criteria analysis
- ❑ ESA LCA DB Software:
 - Choose one software solution to be use for the ESA LCA Database and define the methodology to transfer the ESA LCA DB to the new software solution.
 - Build a converting tool for data exchange between common LCA data exchange formats (OpenLCA, SimaPro, GaBi)

- ❑ ESA LCA DB improvements:
 - Identify gaps and environmental hotspots at dataset level and fill them with the right data (from space experts and literature review)
- ❑ ESA LCA DB Continuous update:
 - New datasets integration (after completeness and quality is checked)
 - Keep the DB updated to the latest versions of the LCA Software and background libraries (e.g. Ecoinvent)
 - Outputs: Yearly released DB versions.



- ❑ ESA LCA DB dissemination platform:
 - Web platform for ESA LCA DBs dissemination
 - User manuals

- ❑ ESA LCA DB Handbook update:
 - Propose updates to the Handbook



Thank you

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