



KYKLOS 4.0

An Advanced Circular and Agile Manufacturing Ecosystem
based on rapid reconfigurable manufacturing process and
individualized consumer preferences

Open Call #2 Overview

July 2022

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1. The KYKLOS 4.0 project

KYKLOS 4.0 aims at providing an ecosystem that creates and supports the configurations, methodologies, production techniques, decisions and actions at all different levels and stages of the equipment manufacturing value chain to achieve the goals of:

- Increased energy efficiency.
- Reduction of raw material through to the second use of parts or material (including waste from manufacturing process).
- Customer centricity.
- On-demand manufacturing to best meet the Industry 4.0 objectives of operational excellence, where mass customization and personalization have become the norm.

KYKLOS 4.0 will thus allow to increase production efficiency, reduce waste, boost competitiveness and lower costs for European manufacturers, particularly for SMEs.

The project will deliver an advanced configuration framework and state-of-the-art production paradigm, embedding key technologies into a unified platform ecosystem to manage live product innovation. This involves a set of intelligent tools for real-time analytics and prediction, and recommender systems, further integrated into the KYKLOS 4.0 configuration environment.

Thus, the KYKLOS 4.0 ecosystem will create favourable conditions for the rapid reconfiguration of manufacturing processes, to continuously follow a circular manufacturing framework and the individualised consumer/customised products demands.

More specifically, the KYKLOS 4.0 project will create a holistic production ecosystem in the form of an advanced service platform for manufacturing stakeholders. This collaboration platform will extract customer needs, after-sales information and any data deemed relevant for identified production needs and will incorporate this data to product specification and design. Participating stakeholders (e.g., customers, manufacturers, suppliers, software vendors, etc.) will have the ability to (semi-) automatically enter a virtual – agent based – marketplace where needs, captured by the factory and expressed through a shared, high level and machine understandable format, will be matched with offers, described in the same language.

Figure 1 represents the KYKLOS 4.0 collaboration platform that applicants should consider when proposing solutions to use or extend the collaboration platform.

Additional details on the KYKLOS 4.0 project, including the vision, objectives, technologies, and ongoing pilots can be found on the project [website](#).

As part of the KYKLOS 4.0 vision, the project offers through two open calls up to €2M for SMEs and manufacturing companies to carry out manufacturing experiments using the technologies and services from the KYKLOS 4.0 ecosystem.

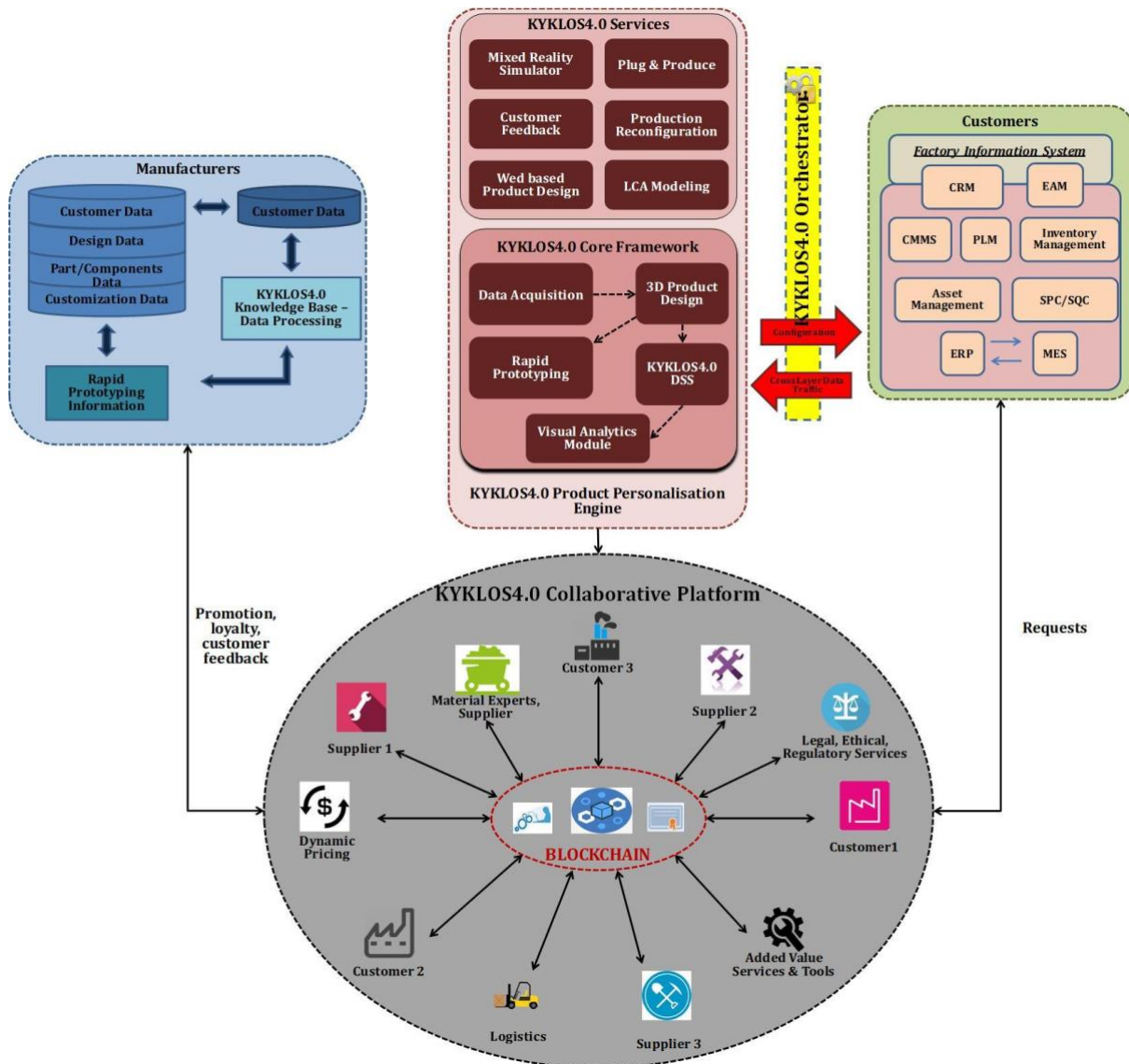


Figure 1. KYKLOS 4.0 collaborative platform

2. Open call #2 objectives and requirements

The objective of the KYKLOS 4.0 - Open Call #2 is to fund SMEs and manufacturing companies to carry out manufacturing experiments using the services and technologies from the KYKLOS 4.0 project.

The open call invites consortiums of 2-3 partners (led by an SME) to submit a proposal for the development of an innovative solution(s) for a manufacturing scenario in which they will have to carry out a pilot experiment in a manufacturing environment. The defined scenario must be addressed by developing a solution that adopts one or more services selected from the KYKLOS 4.0 platform (see Annex 1.1), which should be integrated and validated as part of the defined experiment. These services can be integrated alongside the consortium partners' existing technological solutions.

The services are grouped into two main categories - (1) **Smart Design** and (2) **Product Optimisation** - and are supported on several technological components developed within the KYKLOS 4.0 project.

These services will ultimately integrate the KYKLOS 4.0 marketplace, which centralises the full description of the services and respective technological components that are to be used.

The defined scenario must describe the 'as-is' (*current*) and 'to-be' (*future*) situation, detailing the current state of manufacturing processes in the industrial partner and the expected future state of processes having developed the proposed solution and integrated the selected KYKLOS 4.0 services and technologies. The scenario must also clearly describe the contribution to circular manufacturing, validated through the experiment.

The validation of the services must follow specific guidelines that will be made available to the awarded projects by KYKLOS 4.0, focusing on items related to usability, interoperability, and circularity. Funded projects will be required to integrate their developed solutions as part of the KYKLOS 4.0 marketplace.

The project will have to include and work toward achieving one or more KPIs defined by the KYKLOS 4.0 project, to be selected by the applicant according to the nature of their project (see Annex 1.1, section 5). Such KPIs address sustainability and circularity and will focus on, among others, waste reduction, resource consumption reduction, and machine life). Other project specific KPIs should be provided by the applicant with a clear rationale and justified targets.

The validation procedure of the KYKLOS 4.0 services and the KPIs to be addressed will be further discussed and refined as part of the Planning stage.

The open call will prioritise proposals that are able to demonstrate the applicability of the scenario and/ or services in multiple manufacturing and industrial environments. Furthermore, experiments should clearly demonstrate the role of the circular economy within the manufacturing domain in their activities.

3. Open call #2 funding scheme

A total of €3,000,000 has been budgeted for the two KYKLOS 4.0 open calls. For the KYKLOS 4.0 - Open Call #2, **€2.1 M is available**, which will fund a minimum of **14 projects**.

Proposals will be eligible to receive financial support up to €150.000 (for a consortium of three partners), with a limit of €60.000 per applicant. Consortia of two partners are also eligible. KYKLOS 4.0 will fund 70% of the project costs. The remaining costs are to be covered by the awarded beneficiaries.

The financial support will be negotiated with each project after the evaluation and selection process and before the contract signature. The basis for negotiation is the amount requested by each proposal.

Activities that are already funded by other grants cannot be funded by KYKLOS 4.0.

The funding will be disbursed to beneficiaries according to three stages of the funding programme (total duration: 8 months): (1) Planning, (2) Implementation and (3) Commercialisation & Business Sustainability. At the end of each stage, beneficiaries will be required to submit a report. The funding will be disbursed upon approval of the report.

4. KYKLOS 4.0 funding programme

The KYKLOS 4.0 funding programme is an 8-month programme divided into three stages (Figure 2): (1) Planning, (2) Implementation, and (3) Commercialisation and Business Sustainability. The KYKLOS 4.0 - Open Call #2 is the entry point to access funding and participation in the funding programme.

The KYKLOS 4.0 - Open Call #2 aims at selecting and funding a minimum of 14 projects, led by an SME that acts as a technology developer/ integrator, and including at least an industrial manufacturing partner.

The KYKLOS 4.0 - Open Call #2 will be open from **27 July 2022 to 12 October 2022 (17:00 CEST)**.

In all stages, project beneficiaries will receive technical support (as described in Annex 1 - Guidelines for Applicants).

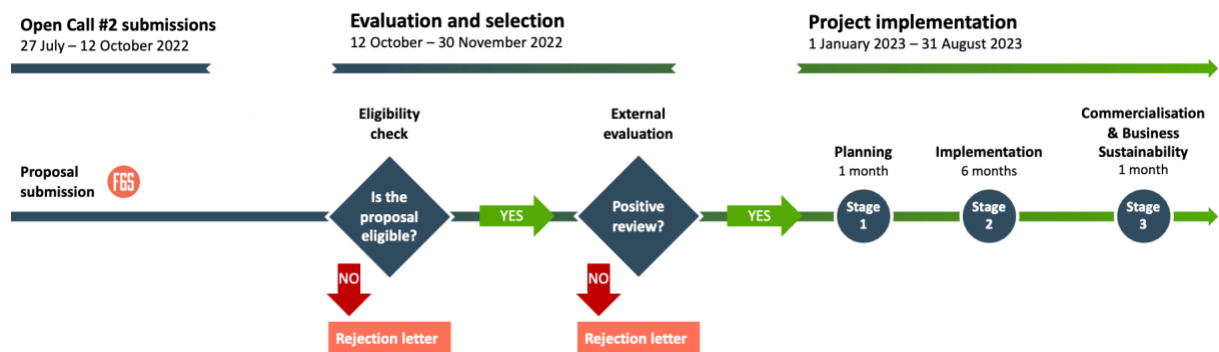


Figure 2. KYKLOS 4.0 funding programme - Open Call #2

Submissions are exclusively accepted through the F6S platform at: <https://www.f6s.com/KYKLOS4.0opencall02/apply>. Please see Annex 1 - Guidelines for Applicants for additional details on proposal submission, funding, eligibility, and technical support.

Deadline: 12 October 2022 (17:00 CEST)
Call identifier: KYKLOS 4.0 - Open Call #2
Language of the proposal for submission: English

NOTE: Opening and closing dates of the KYKLOS 4.0 - Open Call #2, as well as the evaluation and selection phase, can be subject to change in case of any modifications in the project's schedule. All applicants will be notified of changes.

5. Support to applicants and contacts

The KYKLOS 4.0 consortium will only provide information to applicants via the F6S platform or communications from opencalls@kyklos40project.eu

More information at: <https://kyklos40project.eu/open-calls/open-call-2/>

Apply via: <https://www.f6s.com/KYKLOS4.0opencall02/apply>

Open call support team: opencalls@kyklos40project.eu (Open call questions only)

F6S support team: support@f6s.com (F6S platform issues only)

6. Open call documentation and templates

Annex no.	Document name and description
Overview	Open Call #2 Overview Overview of the KYKLOS 4.0 project and Open Call #2
Annex 1	Guidelines for Applicants Detailed information on how to apply to the KYKLOS 4.0 - Open Call #2, such as eligibility criteria, the evaluation process, the funding support scheme, and the funding programme.
Annex 1.1	Technical information on services and components Description of the services and respective components that applicants must select and integrate as part of their experiments.
Annex 2	Proposal form [Reference document] Export of the proposal form taken from F6S where applicants provide administrative data and upload mandatory annexes. This document is provided as reference; all proposals must be submitted online.
Annex 2.1	Technical proposal [Template] Template of the technical proposal to be submitted and that will be evaluated by external experts. Consists of five mandatory sections. A mandatory document to be submitted with the proposal.
Annex 3	Sub-grant Agreement [Template] Template of the sub-grant agreement to be signed between the sub-granted project and KYKLOS4.0 consortium.
Annex 4	Declaration of Honour Template of the declaration that declares all conditions of the open call are accepted by the participating entity's legal representative. The signed declaration of honour is to be submitted only during final eligibility check and contracting procedures.
Annex 5	Consortium Declaration of Honour Template that provides information about the consortium leader and the budget allocated per participating entity and declares that all conditions on exclusion

Annex no.	Document name and description
	criteria and absence of conflict of interest between the consortium and the contractor are accepted. The signed consortium declaration of honour is to be submitted only during final eligibility check and contracting procedures.
Annex 6	SME Declaration form Template of the SME declaration where SME status is assessed. The signed SME Declaration form is to be submitted only during final eligibility check and contracting procedures.
Annex 7	Bank account information Template of the bank account information of the consortium leader. The signed form is to be submitted only during final eligibility check and contracting procedures.