Info Moonshot call 2023

In 2023, Moonshot will focus on 4 project types:

- Early Stage Innovation projects (ESI)
- Later Stage Innovation projects (LSI)
- Feasibility studies for companies (FSC)
- Company-driven research projects (ICON, O&O).

As part of the Moonshot call 2023, this document will focus on the ESI and LSI projects, for which knowledge institutions are the beneficiaries of the financial support. In the future, more information will be made available on other project types within the Moonshot project portfolio.

Early Stage Innovation projects (ESI)

This is the project type previously referred to as “cSBO”. These can be “full” ESI projects (max. 4 years, max. 3 million euros subsidy) or “continuation” ESI projects (max. 2.5 years, max. 2 million euros subsidy, as a continuation of previously approved “sprint” cSBOs). There is a requirement for the consortium to comprise of at least 2 research institutes and 3 research groups. The subsidy percentage is 100%.

Project ideas can be submitted using the early application form in attachment. As before, a two-step evaluation procedure is foreseen. Each project idea will be discussed, and feedback will be given based upon this initial information. Outcome of the selection will be a “go/no-go” decision (a “go” decision can be accompanied with ‘minor’ or ‘major’ remarks) towards the preparation of a fully elaborated project application file.

Later Stage Innovation projects (LSI)

Later Stage Innovation (LSI) projects aim to further support and accelerate research that has already proven its feasibility at low TRL. LSI projects seek to bridge the gap between experimental process/product development and industrial implementation. LSI projects are important instruments to accelerate the future market introduction of new and innovative products, processes and services that significantly contribute to the overall Moonshot goals. LSI projects should also lead to greater economic and social added value and more robust international valorisation of knowledge generated by Flemish research and knowledge institutes. In practice, LSI projects provide support to research and knowledge institutes for subsidising infrastructure, knowledge build-up and de-risking of the intended technology.

The project modalities of the LSI project type remain unchanged: max. 3 years, max. 2 million euros subsidy. LSI projects can be applied for by a consortium or a single research partner. The subsidy percentage is 100%.

Project ideas can be submitted using the early application form in attachment. As before, a two-step evaluation procedure is foreseen. Each project idea will be discussed, and feedback will be given based upon this initial information. Outcome of the selection will be a “go/no-go” decision (a “go” decision can be accompanied with ‘minor’ or ‘major’ remarks) towards the preparation of a fully elaborated project application file.

Timing

This first selection will be made by the Board of Directors (or their delegates) of Catalisti and Flux50 based on a written and leading advice given by the Scientific Advisory Board of Moonshot. Timing for the submission of the early application form for both ESI and LSI projects is 24th of March 2023. Feedback on the early application form (“go/no-go” decision, motivation included) is foreseen for the 25th of April.

Fully elaborated project applications will be given a submission deadline of 30th of June 2023.

Research topics and themes

Following specific areas are deemed of interest to Moonshot by the WAR, and can be used for inspiration in setting up a research proposal:

MOT 1 – Bio-Based Chemistry

- Focus on feedstock (biomass) that is not competitive with the food chain, including organic waste (e.g., tomato waste, malt from breweries), but that is abundant and interesting as feedstock.
- Research into proteins/peptides (can organize themselves and therefore have many functionalities) (e.g., surfactants, coatings, binders, enzymatic catalysis).
- Chemistry based on oils and fats.
- Polysaccharide chemistry based on e.g., algae, seaweed, insect/shrimp exoskeletons, etc.

MOT 2 - Carbon Circularity in Materials

- Detection and identification of different polymers: technology, digitization, optimization routines, etc.
- Focus on mono-materials that are more recyclable (design-for-recycling / eco-design, e.g., to address extended producer responsibility).
- Bio-based materials and recycling: removal of impurities, separation, circularity.
- Composting organic waste (related to packaging): increasing speed and efficiency, circularity.
- Logistics about waste collection and circularity.

MOT 3 - Electrification and Radical Process Transformation

- Avoidance of CO_2 emissions (also look at other processes). Unit operations: intensified separation technology (especially optimizing the energy input).
- From batch to continuous.
- Conversion of CO_2 and partial oxidation (of e.g. ethylene and propylene) by means of electrochemical techniques (these will be needed for defossilization, along with cheap, renewable energy).
- Plasma technology (non-thermal): conversion, avoidance of solvents in coatings.
- Electrification of the chemical industry (inductive heating, etc.) to avoid Scope 1 and Scope 2 emissions. Focus on high-temperature processes (e.g., replacing natural gas heating with electrification). What effect does electrification have on full circularity? Use of surplus electricity.

MOT 4: Energy Innovation

- More efficient heat pumps (can be used at higher temperatures).
- Waste heat (low temperature heat): how to upgrade this?
- How to deal with intermittency (e.g., varying availability of electricity) in the chemical industry (storage of electrical energy (and in which products?) or production of heat if a lot of renewable electricity is available)?

Other topics not specifically mentioned above but that contribute to the realization of the Moonshot objectives are also welcomed.

Contact

Please contact moonshot@catalisti.be or your MOT-representative (Contact – moonshotflanders.be) in case of questions or to obtain more information.