

OPEN FOOD FACTORY

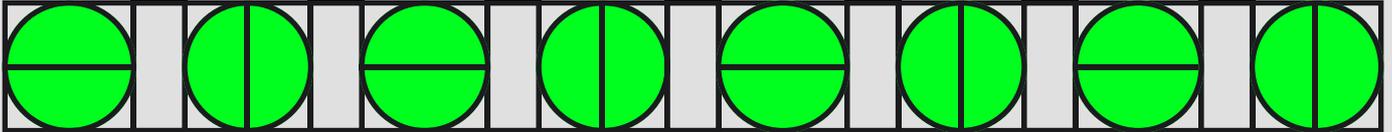
DISTRIBUTED DESIGN FOR PLANT-BASED FOOD

Open Call for Ideas

POLIFACTORY
POLITECNICO MILANO 1863

 Distributed
Design

 Co-funded by the
Creative Europe Programme
of the European Union



OPEN FOOD FACTORY is an experimental initiative that explores the connection between distributed design, and food processing with the aim of designing innovative open-source solutions that stimulate the circularity of urban agrifood systems, focusing on two processes: **fermentation** and **distillation** or **extraction**.

Historically, in Europe as in the rest of the world, **fermentation** has been important in transforming a wide variety of foods by increasing their nutritional value and shelf life. Pasteurisation, refrigerators and other modern food preservation techniques have made certain types of fermentation less necessary and many products have been forgotten. Today, especially among the new generations of Europeans, we are witnessing the rediscovery and revival of fermented foods and traditional fermentation processes combined with a growing interest in fermented foods from other cultures such as kombucha, kimchi, tempeh, kefir or miso. Fermentation is aligned with the principles of the circular economy because it ranges from the valorisation of food waste to the adoption of natural, low-energy food processing, production and preservation processes. In addition to the production of alcoholic beverages, **distillation** also allows the production of natural extracts such as essential oils and aromatic waters from wild and aromatic plants and herbs (leaves, flowers, fruits and twigs) and food waste such as citrus peels. Extracts obtained through distillation have been known since antiquity and can be used not only in cooking, but also in beauty practices, to alleviate the symptoms of illnesses, to aromatise environments and, more recently, even in the preparation of zero-alcohol cocktails. The development of innovative solutions dedicated to these techniques is interesting to explore as a function of the development of distributed production models and micro-production processes related to emerging behaviors and diets such as plant-based diets.

OPEN FOOD FACTORY is an activity developed by [Polifactory](#), Fab Lab of the Politecnico di Milano, within the [Distributed Design Platform](#), a project funded by the Creative Europe Programme to implement the global Fab Lab network, promoting and improving the connection between designers and makers with the European market.

OPEN FOOD FACTORY is developed in three phases:

1. An Open call for ideas invites young designers together with makers, independent innovators, and experts interested in agri-food systems to submit ideas related to open-source solutions for fermentation and distillation or extraction.
2. Two ideas, one dedicated to fermentation and the other to distillation or extraction, submitted by two teams, will be selected by a jury of design, making, and food (processing) experts. The teams will develop their projects and make prototypes with the technical-scientific support of Polifactory operating as "Makers in Residence", demonstrating the possibility of materializing solutions with real potential in terms of production and distribution.
3. The two projects will be promoted on the [Distributed Design Platform](#) and presented at events and initiatives dedicated to design, making, and food.

OPEN FOOD FACTORY does NOT offer cash prizes and does NOT provide contributions to participating designers, makers, and independent innovators, but supports the realization of innovative-demonstrative projects dedicated to the development of open source solutions for the circularity of agrifood systems.

The solutions we are looking for

The Open Call for Ideas encourages young designers to freely propose ideas for open source solutions dedicated to non-alcoholic fermentation and distillation.

Projects can concern products, analogue and digital tools, IoT devices, etc., designed to improve the control of fermentation and distillation processes, to make these processes more accessible and inclusive, to experiment with new fermented and distilled foods or new fermentation and distillation techniques.

It is essential that the ideas proposed think pragmatically and professionally about the use of digital technologies available in Fab Labs: microcontrollers, microprocessors and sensors applied to or incorporated in products, digital fabrication technologies that could also be combined or integrated with industrial or craft products or components. This means paying close attention not only to the opportunities but also to the constraints and limits that these technologies have in making products that have aesthetic and technical qualities and effective performance, that are really distributable on the market and above all used and appreciated by users.

Evaluation and selection of ideas

A panel made up of design, making and agrifood experts will assess, at its sole discretion, all the proposals submitted. Two ideas will be selected for development and prototyping using the following main criteria:

- the idea's ability to solve a problem related to food fermentation in a useful or innovative way;
- the technical feasibility of the ideas as a future open-source product that can be partially or fully realized in spaces such as Fab Labs and distributed online on the Distributed Design Platform.

“Makers In Residence” and prototyping of projects

The two selected groups will enter Polifactory as "Makers in residence" to realize the prototype of their idea with the support of the Fab Lab.
create the digital documentation of the project;
support the promotion of the project on distributeddesign.eu;
document the prototyping phases with photos and videos;
participate in events and initiatives related to the Distributed Design project.

Polifactory, in addition to the technical-scientific support for the development of the projects, will provide its technologies to realize the prototype and will bear the costs for the purchase of materials and components.

Project promotion

Polifactory will organize a final event dedicated to the presentation of the projects. Polifactory will also support the promotion of the projects and designers on the Distributed Design platform, through its communication and social channels and within initiatives dedicated to design, makers, and the world of food.

Key dates

21 September 2022	Open Call for Ideas presentation
15 October 2022	Deadline of the Open Call for Ideas
31 October 2022	Selection of Ideas
1 November 2022 – 28 February 2023	Prototyping and presentation of the projects
From 1st March 2023	Promotion of the projects

Who can participate and composition of the project teams

Due to the complexity of the theme, group participation is mandatory. Ideas may be submitted by groups of at least 3 people composed of students from Politecnico di Milano and professionals who have graduated in the last 5 years or less, to which external members such as scholars and experts in gastronomic sciences, designers, makers, programmers, researchers, artists, scientists, and independent innovators may be added. Distributed Design Platform adopts principles of inclusiveness in the composition of the groups. For this reason, the presence of one or more foreign members resident in Italy and the presence of members of both sexes is mandatory within the selected project groups. If these requirements are not met at the time the idea is submitted (see next point), the Commission will reformulate the composition of the groups selected to develop the project during the "Makers in Residence" phase, to respect the principles of inclusiveness.

How to submit your ideas

Participation is simple. Applications can be submitted until **15th October 2022** by 23:59. Proposals must be sent to the email address polifactory@polimi.it indicating in the subject line "Open Call for Ideas Distributed Design Platform + idea name" and must contain two attached documents:

1. Project Outline. PDF file resolution 150 DPI (maximum size of the PDF file = 10 MB) named as follows: "Nomeldea.pdf" and containing:
2. Text in Italian and English (max. 1,000 characters including spaces) explaining how the project idea is open source, what is its level of innovation and usefulness in the field of agrifood systems, what its technical feasibility at prototype and product-level using one or more of the technologies present in Fab Labs (3D printing, laser cutting, vinyl cutting, CNC milling machines, microprocessors and microcontrollers, sensors and actuators);
3. Overall rendering or illustration (1 or more images), rough technical drawings, and main technical and construction details of the object can help the Evaluation Committee understand the idea.
4. Contact details and profile of participants. Text file with personal data (name and surname, address, e-mail, and telephone) and a short profile (max. 500 characters including spaces) of each member of the group.

Polifactory will NOT be held responsible for any computer errors attributable to third parties, fortuitous events, or force majeure.

Intellectual Property

The projects selected and subsequently developed in collaboration with Polifactory - Politecnico will be released in open-source mode under a Creative Commons license and will be published on the [Distributed Design Platform](#) with the relevant documentation.

Contact and Information

Throughout the opening period of the Open Call for Ideas, there will be a helpdesk providing guidance and information to anyone who wants to submit an idea.

mail polifactory@polimi.it
tel +39 02 2399 7134

facebook.com/polifactory
instagram.com/polifactorypolimi
linkedin.com/company/polifactory-polimi