

Delta

In my artistic research and development practice, I investigate Open Source– and Open Hardware–based systems as artistic, technological, and pedagogical tools. The work is grounded in a practice-based exploration of how emerging technologies, materials, and modes of production can contribute to expanding the methodologies, expressions, and societal relevance of the design discipline. The project operates at the intersection of artistic practice, technological development, and critical reflection on contemporary production culture.

Open Source is understood here as more than a technical distribution model; it functions as an artistic and ethical framework for the sharing of knowledge, methods, and tools. By developing open machines and systems in which construction principles and documentation are freely accessible, the project seeks to challenge closed, proprietary production structures and to strengthen the role of the user as an active participant in both the production and further development of technology.

The machines developed within the project are deliberately designed to be simple to build, understand, and operate. This approach is central to the artistic research, as the act of building itself constitutes an integral part of the knowledge-production process. When users construct the machines themselves, they develop an embodied, experiential understanding of technology, materials, and systems that is difficult to achieve through finished commercial solutions. This process fosters self-sufficiency in terms of maintenance, repair, and further development, and anchors technological engagement in practical experience rather than abstract use.

The project articulates a clear sustainability ambition—ecological, social, and pedagogical. Through the development of open and repairable machines, I explore alternative models of production that support local, small-scale, and situated practices. The machines function as infrastructural tools that enable the establishment of independent and sustainable workplaces, where production can be adapted to local material resources, needs, and competencies. This approach offers an alternative to centralized industrial production chains and contributes to a more circular understanding of material use and value creation.

A key principle of the project is scalability and reproducibility. The machines are designed to be duplicated and further developed, in part by being capable of producing many of their own components. This self-referential production logic has both practical and conceptual implications and constitutes an important element of the artistic research. The machine is understood not merely as a tool, but as an open system in continuous development.

The machine currently under development is a large delta-based 3D printer with a build volume of 1.5 × 1 meters. It is designed for additive manufacturing with materials of varying viscosity, such as clay, earth-based composites, plaster, and paper pulp. The selection of these materials is closely tied to the project’s sustainable and exploratory character and enables an artistic investigation of alternative material flows within digital fabrication.

The large build volume allows for work at a human and architectural scale, forming the basis for artistic explorations of themes such as the object as space, modular architecture, and complex structures based on a single continuous material (unibody constructions). Through this work, I investigate how digital fabrication tools can function as both form-giving and knowledge-producing media, and how artistic research can contribute new perspectives on sustainability, technology, and materiality.

