# LENBACHHAUS

## THE COLLABORATORY IS GOING ONLINE!

**As part of the German Federal Cultural Foundation's "dive in. Programme for Digital Interactions" 2021 project phase, the Lenbachhaus is developing a process-based prototypical digital Open Space that is now going online with a 3D universe and basic interactive capabilities. The Collaboratory is inaugurated with a digital live event at 5pm on August 31.**

Complementing the museum's traditional home, new wing, and garden and the Kunstbau exhibition space, the Collaboratory is now the Lenbachhaus's fifth venue. The Collaboratory invites visitors to explore the potentials of interaction, communication, and collaboration in virtual spaces. It combines elements from online multiplayer games, a 3D universe, real-time interaction, and physics simulations with a backend content management system for an **experimental online meeting place**. As an experiment in technology, it exploits the possibilities of software libraries and the capabilities of today's web browsers to create a novel user experience that is as intuitive and playful as it is spellbinding.

In the Collaboratory, all **participants** are transformed into colorful spheres: after they have selected a color and entered a username, their sphere drops into the Collaboratory's virtual 3D universe. Using a mouse or the cursor keys, they can set their avatar in motion. They encounter other users, with whom they can exchange views in chats. Objects set out in the virtual world await exploration; touching them releases sounds and light or opens doors to applications that allow for interaction and participation in creative processes.

Like the museum's other venues, the collaborative laboratory has its own **formal design**. The logo epitomizes the overall conception: it is interactive, responding to the movements of the user's mouse. The "Antarctica" typeface used throughout the project is a highly versatile font family, coming in 132 styles—from extremely lightweight to extremely bold—making it especially suitable for variable digital environments. The interface, too, is built to be interactive throughout. Users can open and close info boxes and chats and configure them as needed.

**The following modules are now going online in the Collaboratory:**

After many months of social distancing, many of us long to attend live events and be part of a packed crowd. One central module is the "**Open Stage**," where the live event launching the platform is also held. The stage can be used for performances and theatrical productions, screenings, lectures, and discussion forums. It moreover features a video archive that lets users access recordings of events individually and at a time of their choice through the Lenbachhaus's YouTube channel. What makes the Collaboratory's stage special is that users can actually feel the

presence of others, whose spheres appear clustered next to, behind, and in front of their own avatars. Not unlike in a movie theater or lecture hall, participants choose their own seat. Using the chat function, they can exchange observations and ask questions.

"**Laden 2021**" lets users upload pictures of their funny, weird, interesting, beloved, hated, beautiful, ugly, extraordinary, useful, or useless everyday implements, contributing to a collective portrait of contemporary society. This module was inspired by [Hans-Peter Feldmann's installation "Laden 1975–2015"](#) in the Lenbachhaus's collection.

In addition to the various modules, the 3D world is furnished with participatory **gamification elements** whose full functionality comes to life when multiple participants put them to collective use: Anna Schübel and Jonas Till Hoffmann of the program DAF (Dynamic Acoustic Research) worked with Jan St. Werner from the electro duo Mouse on Mars to develop an **interactive sound element** that undertakes an acoustic inquiry into community, closeness/distance, and collaboration. When several users steer their spheres through the assembled artifacts, a new collective sound composition can be heard that is different every time. The element's sonic universe also incorporates sounds that will be part of Mouse on Mars's installation "Spatial Jitter" in the Lenbachhaus's Kunstbau in 2022. The **light element**, which was inspired by various works in the Lenbachhaus's collections in which light plays a key role, similarly revolves around the shared experience of a setting fleshed out by individual design choices: as spheres navigate a labyrinth composed of cubes, the latter flash up in a variety of colors, resulting in a collective light installation.

In keeping with the Collaboratory's experimental and modular development process, additional modules will go live in the next few months. They are designed for various specific target audiences but open to all users.

In time for the beginning of the new school year in Bavaria, a module will go online that lets students (ages 13 and up) work together to create **digital zines** addressing concerns such as community, collaboration, and group dynamics. Drawing on a limited selection of visual elements (headline, text, illustration), they learn basic principles of graphic design and experience the collaborative editing process. The "Blue Rider" almanac and the manifestos of various international artists' collectives are available as sources of inspiration.

**Kollektiv Crèmbach**, the Lenbachhaus's youth committee, is currently working on a module for young visitors that is expected to go online in October. Targeted interventions into the 3D universe will prompt reflections on "safer spaces," which are essential to many communities by facilitating conversations without distinctions of rank. The collective is also planning a coding workshop in which it will share what it has learned with other teenagers.

Two additional modules are scheduled to be developed before the end of November. One will be designed especially **for children**. The other will allow users to propose new titles for selected works in the Lenbachhaus's collections and write down their own observations and thoughts. In May 2021, we invited all users to submit wishes and ideas for the Collaboratory. **Alternative notes on the works** and the ability to compare viewpoints were among the most widely expressed desiderata.

This participatory approach is pivotal to all applications within the Collaboratory and reflects the paradigm shift that defines the contemporary media experience: the internet lets users step outside the role of passive consumers and become actively involved. All modules are developed in consultation with art educators, artists, and designers and tested with users. Each module has its own functionalities, is designed with a specific audience in mind, and addresses a set of issues, work of art, or question. This lets many and diverse voices and narratives become part of the Lenbachhaus.

As a municipal museum, we place great importance on sharing our works of art with the public and encouraging cultural participation. Our exhibition and art education venues were closed for many months due to the pandemic, and the remaining restrictions still put limits on our engagement with visitors who come to the museum. Hoping to tap the potentials that digital media offer as we pursue the educational mission that museums have in our society, we propose to put novel forms of digital interaction to the test. We are pleased that the program [“dive in. Programme for Digital Interactions”](#) gives us an opportunity to make more extensive use of the digital universe, which has become an integral part of our lived reality, in order to remain relevant as a cultural institution to various target audiences.

The German Federal Cultural Foundation's [“dive in. Programme for Digital Interactions”](#) supports cultural institutions throughout Germany in their efforts to respond to the current pandemic-related situation by deploying innovative digital formats of dialogue and exchange.

[**www.collaboratory-lenbachhaus.de**](#)

**Digital launch event program, August 31, 2021, 5–6pm**

Livestream inside the Collaboratory: www.collaboratory-lenbachhaus.de

No registration required, participation using a PC is recommended (the Collaboratory is best experienced on a desktop computer).

- The Collaboratory project team welcomes the visitors
- The Lenbachhaus team and collaborators present the objects they have uploaded to "Laden 2021"
- Anna Schübel and Jonas Till Hoffmann of DAF (Dynamic Acoustic Research) present the interactive soundscapes and invite the audience to try them out

**Project leadership**

Tanja Schomaker, Jacqueline Seeliger

**Project and community management**

Laura Wünsche

**Conception**

Art education, Lenbachhaus:

Tanja Schomaker, Charlotte Coosemans, Clara Laila Abid Alsstar, Diana Schuster

Digital communication, Lenbachhaus:

Jacqueline Seeliger, Juness Beshir

**Editing**

Tanja Schomaker, Jacqueline Seeliger, Laura Wünsche

**Design**

Serve and Volley is a studio for graphic and interaction design founded by Klaus Neuburg and Simon Roth in 2019. The studio's work cuts across disciplines and media, with a majority of projects in the fields of society, education, and culture.

https://serveandvolley.studio/

**Programming**

Since 2002, Brauchbarkeit has designed and programmed practicable interfaces for online representations and digital projects. The bureau's members also have pursued their own art and design projects and taught classes at the intersections between technology and art, building expertise grounded in innovation, a love of experimentation, and openness.

https://www.brauchbarkeit.de/

**Collaborators**

Virtual 3D object development
Zina Ghannadan, 3D generalist

Consulting
Vera Tollmann, cultural scholar and expert on digital worlds

Typeface
"Antarctica," developed by the type design studio newglyph, Lausanne

Interactive soundscapes
Anna Schübel and Jonas Till Hoffmann for DAF (Dynamic Acoustic Research), with sounds by
DAF, Mouse on Mars, and the project Sonic Synchronicity

Digital zine module
P5 prototype: Tim Rodenbröker, creative coder
School workshop: Mako Sangmongkhon, artist and freelance art educator

Kollektiv Crèmbach module
Stephanie Marie Cedeño, artist and interaction designer

Alternative title and work note module
Aida Bakhtiari, media artist and digital transformation consultant

**Technologies and information privacy**

The Collaboratory is designed for optimum user experience on a desktop computer. All
technologies involved in the Collaboratory are based on open-source applications. In keeping with
the project's accessible and low-threshold design, no login is required to enter the Collaboratory.
The software is built to collect as little personally identifiable information about users as possible.

Socket.IO (real-time collaboration/chat)
Node.js (multiuser server)
Enable3D/Ammo.js (physics simulation/serverside headless physics)
ThreeJS (3D rendering)
Vue.js (user interface)
Tween.js (animation)
WebAudioAPI (sound FX)

Kirby CMS (content management)

Matomo (statistics)

The Collaboratory is developed as part of the German Federal Cultural Foundation's "dive in. Programme for Digital Interactions," with funding support from the Federal Government Commissioner for Culture and the Media (BKM)'s program NEUSTART KULTUR.