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beautiful forms of energy

MARCH 14, 2022

SEPTEMBER 4, 2022

landartgenerator.org/competition2022.html

Design competition in partnership with BUGA 23 — the German Federal Garden Show.

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BESTE AUSSICHTEN

LAND ART GENERATOR

RENEWABLE ENERGY
CAN BE BEAUTIFUL

LAGI2022 Mannheim

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OPENING STATEMENTElizabeth Monoian & Robert Ferry

Society is in the midst of the renewable energy revolution.

The old model of large-scale power plants located far from city centers is adapting to a new model of distributed energy resources. The cities of the 2030s will generate a significant amount of their energy through solar and wind resources located within or near to city centers, because bringing power production closer to where power is used can save capital, conserve natural landscapes, reduce the need for transmission lines, and deliver more resilient, reliable, and equitable electricity.

A net-zero world will require rapid electrification of transportation, domestic heating, and heavy industry, which will require a doubling of existing electrical generation infrastructure. We will need to install as many as 50 times more solar panels than the number in global operation today.

As we do, there will be more land use conflicts with existing rural uses such as agriculture, recreation, visual resources stewardship, land conservation, forest preservation, and biodiversity.

It is already difficult to get approval for renewable energy developments, with most proposed solar projects never reaching commercial operation.

With so much push-back and objection to the aesthetic and perceived impacts of renewable energy landscapes, it is essential that we begin to plan these new installations with intention, being mindful of their relationship to nature, place, and people.

It can be challenging to imagine what renewable energy might look like in the city beyond rooftop solar, but a just and equitable 100% clean energy future will most certainly require more creative thinking.

The more solar generation we can bring into our cities the more we can ease the burden on rural landscapes. Solar installations in the city can take opportunities to provide co-benefits to the built environment, reducing heat island effects, providing greater resilience and energy independence, co-existing with community gardens, and providing opportunities for cooperative investment.

Agrivoltaic installations where solar power shares land use with food production can increase crop yields, radically conserve water, and generate clean energy across scales from large farms to small urban gardens.

How can cities and towns take advantage of the opportunity presented by the energy transition, deploying renewable energy in ways that not only increase urban sustainability but also support human culture and thriving?

How can distributed energy resources across a variety of scales help to advance the United Nations Sustainable Development Goals of food security, economic justice, public health, education, gender equity, and clean drinking water?

Is it possible to design renewable energy systems and storage as an integral and democratic component of our lives and public spaces, so that we rely less on centralized utilities and more on community-led solutions?

Because energy is so fundamental, thinking deeply about the co-benefits of distributed energy resources can lead to a paradigm shift in the way that we design all of our urban support systems. In our quest to discover what cultural co-benefits climate solutions can provide, we can learn from the inherent beauty in natural systems that reflects their steady-state—established over eons of coevolution—where the life cycles of living things are set in harmony with the energy and the material resources that naturally flow through them. Nothing is wasted and all that is required to thrive, to defy entropy, comes from the sun, the wind, and the flow of water.

Could it be that when humans are capable of designing such systems we will discover inherent beauty emerging from them as well?

It's time to tell a new and inspiring climate story—a narrative that moves beyond the doom and gloom of what will happen to our planet if we don't act. Instead we can paint a detailed picture of the wonderful, equitable, and thriving world we will create through our collective action. This story is about the incredible quality of the life and the wonderful experiences of those who will live in a world beyond carbon.

Desire is the motivation that will drive massive change. As artists and designers you hold the magic key to unlock that desire. Through your entry to LAGI 2022 Mannheim we want you to tell your story and open a window onto the greatness of our post-carbon future.

BUGA 23The German Federal Garden Show



BESTE AUSSICHTEN

The Federal Garden Show—BUGA for short—refers to the horticultural exhibition itself, which has been held every two years in various cities in Germany since 1951. At the same time, the BUGA is also a planning process for open spaces, green and urban development that lasts for several years. Since the 2000s, fallow land or former industrial landscapes have been transformed into new local recreation areas through conversion measures in relation to the conversion areas and renaturation. The resulting sports, games and leisure activities support regional structural change, urban and regional development and improve our quality of life in the long term. For the realization of the green corridor northeast, which is of great importance for the climate of the city as well as for living and recreation in Mannheim.

The core area of BUGA 23 is the conversion area around the former Spinelli barracks. Once used by the German Wehrmacht as a pioneer barracks and after the Second World War by the US armed forces as a warehouse, Spinelli-Park stretches from the Aubuckel to the Käfertal district of Mannheim. BUGA 23 on the former military site is part of the northeast green corridor, which extends from Luisenpark across the Neckar to the Vogelstangseen. The aim is to dismantle the large barracks areas and to connect them to a continuous green corridor, which improves the microclimate and the fresh air supply in the surrounding districts in the long term.

From April to October 2023, Spinelli will host the social and cultural mega-event for Mannheim and the entire Rhine-Neckar metropolitan region: More than 5,000 events will take place over 178 days on the former Spinelli military grounds and in Luisenpark. In the course of BUGA 23, the Luisenpark will be extended by 3,000 square metres and a new park centre will be created in organic shapes. The first BUGA in Mannheim took place in Luisenpark in 1975. The two parks will be connected by a cable car that visitors can use to travel across the grounds.

BUGA 23 has a clear goal: it wants to be the most sustainable BUGA of all time. In addition to attractive flower shows and garden landscapes, the exhibitions and events will focus on environmental and climate protection, resource-saving energy production and sustainable food security. With a clear focus on the 17 UN Sustainable Development Goals, BUGA 23 wants to demonstrate solutions and create space for experimentation and research.

The four main themes of BUGA 23 find their horticultural expressions throughout the experimental field north of the U-Hall.

Jagged edges like ice floes mark the "Climate" area; leaf structures are the hallmark of the "Environment" area; Waves represent "energy;" and "food" is reflected in the shape of agricultural parcels. Seventeen future gardens weave like a thread through the experimental field reflecting the seventeen United Nations sustainable development goals.





UNITED NATIONS Sustainable Development Goals

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries—developed and developing—in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth—all while tackling climate change and working to preserve our oceans and forests.

- Goal 1. End poverty in all its forms everywhere
- **Goal 2.** End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- **Goal 3.** Ensure healthy lives and promote well-being for all at all ages
- **Goal 4.** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5. Achieve gender equality and empower all women and girls
- Goal 6. Ensure availability and sustainable management of water and sanitation for all
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all
- **Goal 8.** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- **Goal 9.** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Goal 10. Reduce inequality within and among countries
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
- **Goal 12.** Ensure sustainable consumption and production patterns
- **Goal 13.** Take urgent action to combat climate change and its impacts
- **Goal 14.** Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- **Goal 15.** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- **Goal 16.** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- **Goal 17.** Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

LAND ART GENERATOR INITIATIVE LAGI

The Land Art Generator Initiative (LAGI) was founded in 2008 to engage the world in an exploration of how art and design can actively contribute to a sustainable future, and how renewable energy infrastructure can become a beautiful and relevant extension of human culture.

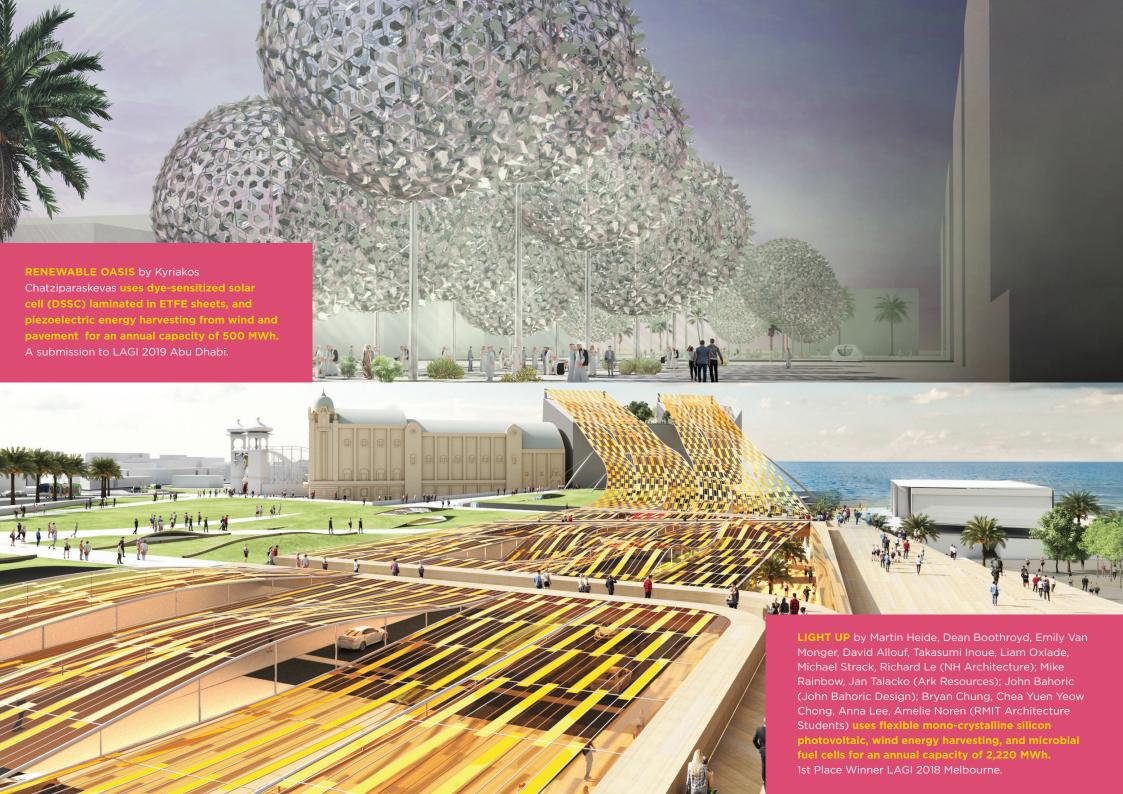
Since the launch of the first LAGI open-call design competition in 2010, thousands of creative minds from over 80 countries have responded to the free and open challenge with designs for site-specific public art installations that have the added benefit of large-scale clean energy and water generation. Open design competitions for Dubai/Abu Dhabi (LAGI 2010), New York City (LAGI 2012), Copenhagen (LAGI 2014), Santa Monica (LAGI 2016), Melbourne (LAGI 2018), Abu Dhabi (LAGI 2019), Fly Ranch (LAGI 2020) have captured the imagination of the world.

As we move closer to a 100% renewable energy world over the coming decades, it is important that art and design have an influence on the aesthetics of sustainable infrastructures within our cherished urban places and our scenic landscapes.

The great energy transition offers an opportunity for artists and designers to leave a lasting cultural legacy through which future generations can remember this important time in history.

Thanks to their innovation and creativity, LAGI design competition participants are inspiring people everywhere about the beauty and promise of a net-zero carbon future, and providing new ways of thinking about how we can integrate sustainable infrastructure into the cultural fabric of our cities.

For more information about past LAGI design challenges, see https://landartgenerator.org.



LAGI 2022 MANNHEIM

The LAGI 2022 Mannheim design competition is an opportunity to propose solutions that can weave renewable energy into our lives in ways that improve human thriving.

As a part of the German Bundesgartenschau that will open in Mannheim in April of 2023, the design challenge includes a number of themes and ideas for inspiration.

Just as a garden is a productive landscape for nourishment that also brings us joy and pleasure, how can we re-imagine our energy landscapes so that they bring joy and pleasure to our communities?

How can renewable energy be integrated in beautiful ways into everyday life so that it is not some cold and utilitarian technology, but is instead an indispensable accessory that we all desire to have?

What does a residential scale renewable energy system look like if it is designed to be a statement of personal expression, similar to how our automobile is a reflection of who we are?

At the same time, how can we make renewable energy accessible to everyone so that the benefits of a 100% clean-energy economy are equitably shared?

LAGI 2022 will expand our collective imagination of what is possible using existing clean energy technologies to propose beautiful, sculptural modules that can plug into the smart post-carbon city.

We are seeking designs that can exist simultaneously across a variety of scales—variations for a residential garden or for a large civic space using modular components or scalable solutions that are consistent in concept and form, and that give back regeneratively by making and storing energy to support a thriving community.

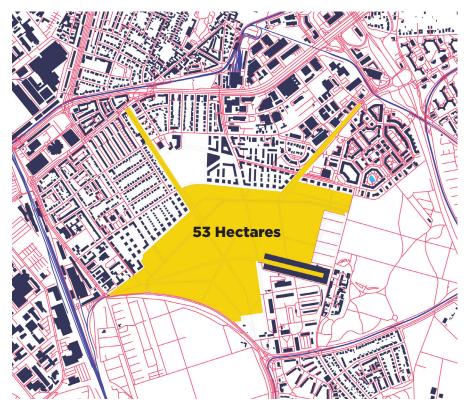
LAGI 2022 Mannheim **DESIGN SITE BOUNDARY**

The LAGI 2022 Mannheim design site boundary invites you to imagine your renewable energy design across multiple scales.

At the civic park scale is the vast landscape recently made available in the city of Mannheim following the closing of the U.S. Military's Spinelli Barracks. The land has been remediated and the space will open to the public during BUGA 23. Following the Bundesgartenschau, the site will become primarily a public park—a gateway to the Rhein-Neckar Green Corridor—and may incorporate a productive energy landscape that can significantly contribute to Mannheim's renewable energy generation capacity. We invite you to design that energy landscape as a public park.

On the other end of the scale spectrum we ask that some element of your design proposal fit beautifully to power a private garden. The German Schrebergarten is a small plot of land that provides opportunity for urban dwellers to engage with nature and grow ornamental or edible gardens. Visitors to BUGA 23 will want to see how your energy landscape design can translate to the scale of their own Schrebergarten.

Your design can exist anywhere within the yellow area, covering some part of the site or multiple locations across the site, and should share space to support the future use of the site as a public park.





LAGI 2022 SUPPLEMENTAL MATERIALS

All materials available at

https://competition.landartgenerator.org

» Design Site Boundary

- Public Google Map (KML File) located at https://tinyurl.com/LAGI2022
- $\,\,$ ZIP file containing DWG and PDF versions of the design site boundary

» Design Site Photos and Panoramas

- Spinelli Park Aerial (ZIP file)
- Spinelli Park Ground (ZIP file)
- Schrebergarten Aerial (ZIP file)
- Schrebergarten Ground (ZIP file)

» Meteorological Data

» Q+A Document

Updated regularly throughout the open design period. Please check back often and email questions to lagi@landartgenerator.org.

» LAGI 2022 Terms & Conditions

» UN Sustainable Development Goals

https://sdgs.un.org/goals

» German Energy Policy Review

International Energy Agency Report

- » BUGA 23 Framework Concept
- » BUGA 23 Planning Document
- » Feasibility Study of the Green Corridor
- » Green Corridor (video)

https://www.youtube.com/watch?v=jb6_kIP5FSE

- » Implementation of Communal Climate Adaptation at Spinelli
- » Spinelli Rahmenplan (masterplanning document)
- » Field Guide to Renewable Energy Technologies (2nd Edition) Land Art Generator Initiative

THE DESIGN BRIEF

a qualified entry must

- Create a three dimensional outdoor human space using one or more renewable energy technologies as the predominant sculptural media;
- Be considered from a perspective of modularity and/or scalability in order to address both civic and residential scales as outlined in the Design Site Boundary section above;
- Be safe for people by housing power electronics and energy storage systems away from easy access;
- Seek to inspire people about the beauty of renewable energy and bring a positive message about life in a postcarbon future.
- Help to advance one or more of the UN Sustainable Development Goals;
- Fit within the design site boundary area, illustrating beautiful energy generation capacity for both private garden and civic park*;
- Provide social co-benefits through the design including but not limited to urban farming, gardening, recreation, education, public engagement, interactivity, play, energy security, and economic opportunities;

- Not generate greenhouse gas emissions or other forms of environmental pollution.
 - Each entry must provide a brief (approximately 300 words) environmental assessment as a part of the written description in order to determine the effects of the project on natural ecosystems and to outline a strategy to mitigate any foreseeable issues;
- Be informed by an understanding of the history and surrounding context of the design site;
- Support the objectives of the Green Corridor (Klimopass), a component of the Baden-Württemberg climate adaptation plan (see Reference Documents).
 - The Green Corridor is intended to allow fresh air to flow unobstructed into the city. Therefore your proposal should not create an impediment to the flow of air;
- Be pragmatic and constructible, employing technology that can be scalable and tested. There is no limit on the type of technology or the proprietary nature of the technology that is specified; and
- Use English language for all text and metric scale for all drawings.

^{*}Note: The U-Halle building footprint is included in the design site boundary.

SUBMISSION DEADLINE

Submissions will be accepted until September 4, 2022 at 23:59 (11:59 pm) anywhere on Earth (AOE). This means that the deadline has not passed if, anywhere on Earth, the deadline date and time has not yet passed. Submissions received after the deadline will be deemed non-compliant.

PRIZE INFORMATION

1st Place \$30,000 USD

2nd Place \$10,000 USD

One representative of each winning team will be flown to Mannheim in April 2023 for the award ceremony.

PROCESS

Following the submission deadline, projects that meet the requirements of the design brief will be reviewed by a shortlisting committee of subject matter experts and community stakeholders.

Shortlisted proposals will be considered by the jury and two projects will be chosen as winners.

The shortlisted projects will be on display at BUGA 23 and selected projects will be included in a hardcover publication to be released in April of 2023.

March 14	September 4	September –	December	April	April - October
2022	2022	December 2022	2022	2023	2023
LAGI 2022 Mannheim design competition opens	Design competition closes	Selection process	Teams contacted	Winners publicly announced and book launch at BUGA 23	

SUBMISSION FORMAT

GENERAL CRITERIA

Your entry must not have been used in any other context, and it must not have been previously published or exhibited anywhere in the world.

The design must be kept confidential and anonymous until the results of the competition are announced.

Anyone is eligible to enter the LAGI 2022 Mannheim design competition.

There is no fee to enter.

See Terms & Conditions for more information.

FORMAT

1. Exactly three (3) A1 size layout boards (PDF only).

Each layout board may not exceed 20MB file size.

Layout boards must be landscape in orientation for consistency in jury review.

For examples of layout boards you can visit the below links where you will find a portfolio of submissions from previous LAGI design competitions. For example:

landartgenerator.org/LAGI-2020

Nowhere on the layout boards or written description file can there be any personal identifying information. The jury will see these boards and we must maintain anonymity of the entries throughout the selection process.

During the upload process, all of your files will be automatically assigned a random character code and this will be used by the jury to identify your team.

- 2. One (1) DOC or DOCX file containing:
 - » a 1,500-word maximum written narrative that tells the story of your artwork and includes the information listed below (do not include any information within the written description file that could identify who the team members are);
 - technology used in your design;
 - description of public activities and social co-benefits your design would support;
 - how your design will support UN sustainable development goals;
 - > MWh generated per year;
 - » In the same DOC or DOCX file, include a 300-word maximum environmental impact summary (this may be in addition to the 1,500 word narrative).

SUBMISSION FORMAT (continued)

3. Between three (3) and twelve (12) high resolution 300 dpi JPG image files (without text) or simple diagrams (without text). These should be the same images used in the layout boards. Images can be any orientation and dimension, but must not exceed 50MB each in file size.

The purpose of these image files is to facilitate the production of the book and exhibitions. The top submissions will be published in this book. Please note that we might contact you for more images for the purposes of publication and exhibition. CMYK images are preferred.

REGISTRATION

Register your team by creating an account at https://competition.landartgenerator.org.

- Click "Register" at the top of the page.
- Enter your name, email address, and pick a password.
- If you encounter any difficulties or have any questions, please email lagi@landartgenerator.org.

HOW TO SUBMIT YOUR ENTRY

- Teams may submit only one entry to the challenge. Individuals may not be on more than one team.
- Be sure that no personal identifying information is visible on any of your layout boards, written description, or JPG images.
- The naming convention for your files is not important. The LAGI submission process will automatically name the files and automatically assign a random 8-character code for anonymity.

- Log into the LAGI 2022 Registration and Submission Portal the same way you did when you registered.
- Click "Upload Your Submission."
- Upload your files using the online forms.
 - Locate each of your PDFs, JPGs, and your text file on your local computer by clicking "Add File" in each upload field. Click "Save & Continue" to proceed to the next field.
- Make sure that your email address and all other team information is correct, and that all required fields are completely filled in. This is the information we rely on for publications and exhibitions.
- Please be patient while each file upload is in process and do not navigate away from the page.
- The last step is the Review & Submit page where you will find links to all of your files as well as a summary of the team information that you have provided. If everything is accurate, click "Submit" at the bottom. You may return and make changes to files any time prior to the submission deadline.

JURORS

Dr. Peter Kurz

Lord Mayor of Mannheim

Michael Schnellbach

CEO, BUGA 23

Dr. Heinz Ossenbrink

Former European Commission
Joint Research Centre

Dr. Alessandra Scognamiglio

Architect, Senior Researcher at ENEA

Helen Turner

Artistic Director and Chief Curator, E-WERK Luckenwalde

Dr. Clark Miller

Professor; Director, Center for Energy & Society, School for the Future of Innovation in Society, Arizona State University

Marjan van Aubel

Solar Designer

Asha Singhal

Regenerative Designer, Hybrid Futures

Andreas Kipar

Landscape Architect Co-Founder, CEO, and Creative Director LAND

Peter Slavenburg

Co-founder, NorthernLight

Karin Heyl

VP Social Engagement, BASF SE

SELECTION CRITERIA

Adherence to the Design Brief;

The integration of the work into the surrounding environment and landscape;

The sensitivity of the work to the environment, and to local, and regional ecosystems;

The amount of clean energy and services provided by your design;

The way in which the work addresses people;

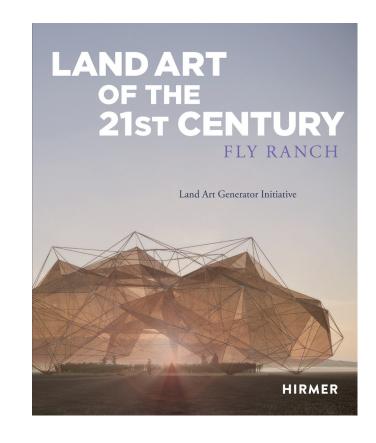
The embodied energy required to construct the work;

And the originality and social relevance of the concept.

LAGI 2022 MANNHEIMPublication

Over sixty LAGI 2022 submissions will be featured in a beautiful hardbound book available globally in museum bookstores, on-line, libraries, and more.

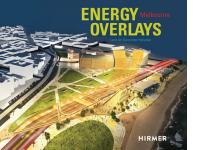
LAGI books have been published with Prestel, Hirmer, and Page One Publishing. LAGI 2012 (Regenerative Infrastructures), 2014 (New Energies), 2016 (Powering Places), 2018 (Energy Overlays), 2019 (Return to the Source), and 2020 (Land Art of the 21st Century) covers are shown here.

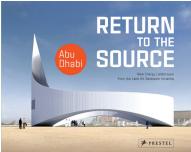












LAGI 2022 Team

Robert Ferry Elizabeth Monoian

LAGI Founding Directors

Kirsten Batzler Anna Maier

Bundesgartenschau Mannheim 2023 gGmbH

Tina Nailor

LAGI 2022 Project Manager

Schifino Design

LAGI 2022 Book Design

Tunnel Monster Collective

LAGI 2022 Educational Game Development

ANSWERS TO FREQUENTLY ASKED QUESTIONS

LAGI 2022 is open to everyone (students, professionals, and others).

There is no fee to enter as we strongly believe in creating an open and accessible platform for creativity and innovation.

We encourage interdisciplinary teams comprised of artists, architects, landscape architects, engineers, scientists, designers, and others. However, we also recognize that great solutions can come from individuals working alone or in smaller teams.

CONTACT

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