FUTUR 2 FESTIVAL

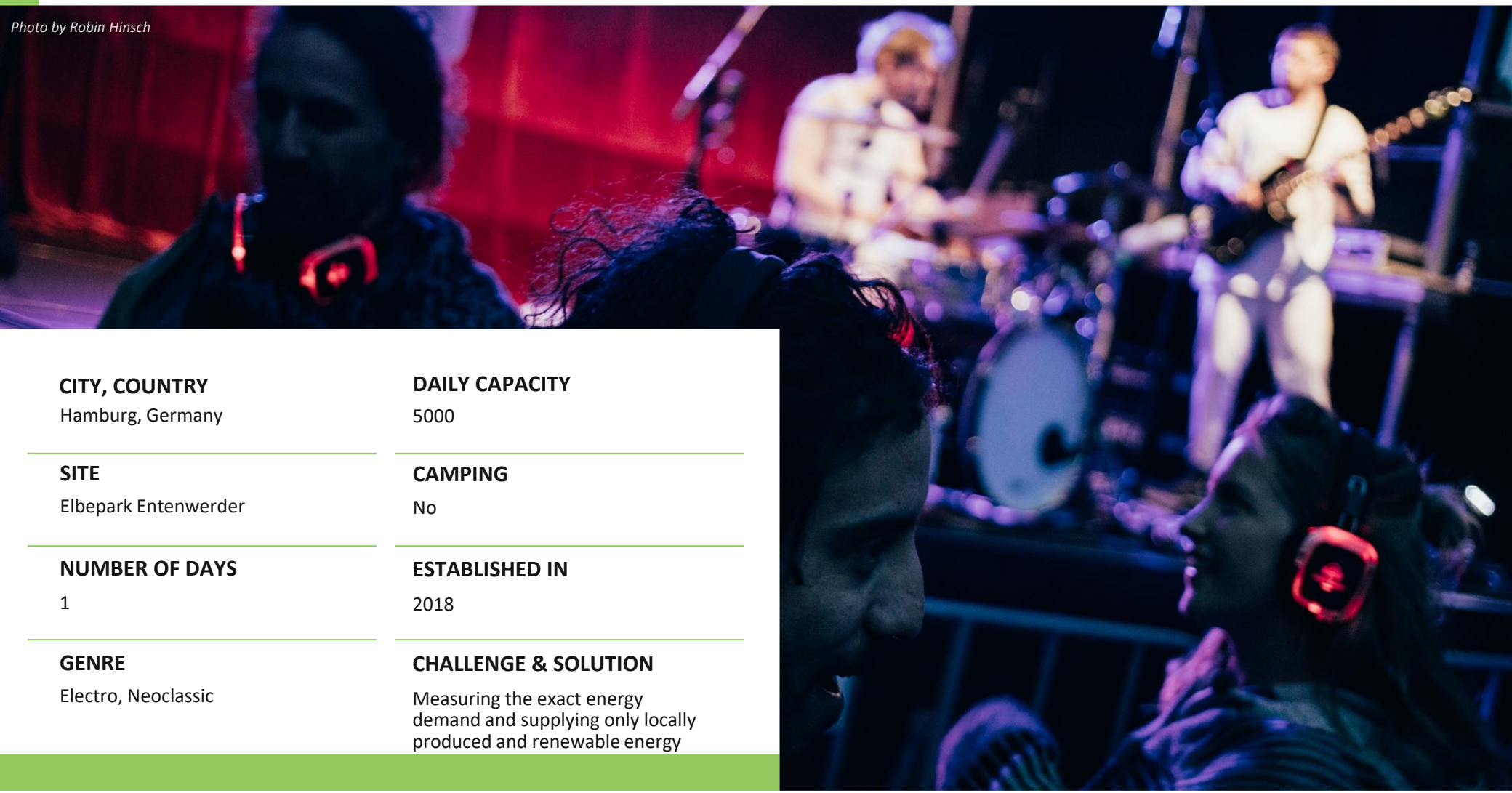

Photo by Robin Hinsch

CITY, COUNTRY
Hamburg, Germany

DAILY CAPACITY
5000

SITE
Elbepark Entenwerder

CAMPING
No

NUMBER OF DAYS
1

ESTABLISHED IN
2018

GENRE
Electro, Neoclassic

CHALLENGE & SOLUTION
Measuring the exact energy demand and supplying only locally produced and renewable energy

Co-funded by the Erasmus+ Programme of the European Union

Photos by Robin Hinsch

A FESTIVAL CREATED ENTIRELY AROUND ITS ENERGY DEMAND

Futur 2 is an “umsonst und draußen-Festival” – an admission-free, open-air festival. What makes Futur 2 special is that the team did not create a festival and a programme before figuring out how much energy they would need to run it. Instead, they approached it the other way round. “We looked at how much energy we could generate in this area using solar power. And from this we deduced what kind of entertainment we can offer our guests, which is the reversal of the usual festival planning,” explains Björn Hansen, the founder and managing director of Morgenwelt GmbH, the company behind Futur 2.

All acts playing at the festival, situated in a park on the shores of the Elbe, can run their backline with very little energy.

Sustainability in all its facets drives Hansen and the team. The festival was created together with Jochen Bader, managing director at hejmo GmbH, to take festivals to the next level and create an event that focuses on the idea of energy efficiency and conscious energy use. Hansen and Bader also work with mechanical expert Ole Hering, whose technical knowledge actualises their, as Hansen calls it, “strategically naïve“ ideas.

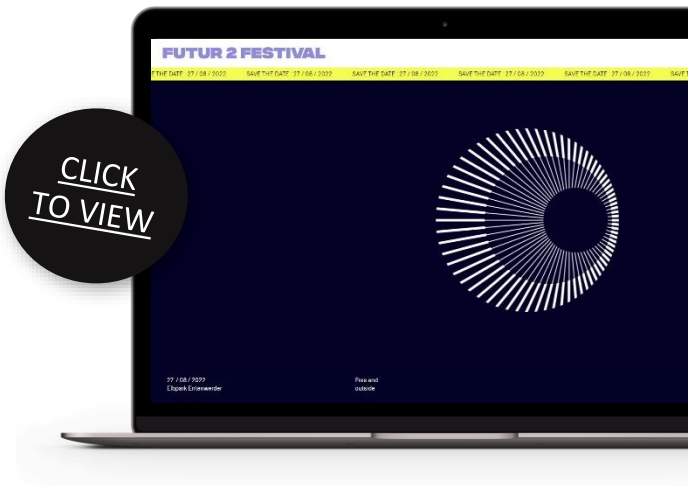

Photo by Robin Hinsch

PRODUCING EXACTLY AS MUCH ENERGY AS NEEDED

The festival creates only as much energy as it is anticipated participants will need. Therefore, the risk of power outages is increased when more energy is suddenly consumed than planned. For instance, when a trader secretly plugs in a private coffee machine or uses outdated equipment. As Hansen knows, devices are often very energy-inefficient in the catering sector. This means, the challenge is to figure out the exact energy demand of every trader they bring on board. Which devices do they use? How much energy do they consume?

Traders usually give the maximum power that their containers can process. For example, the festival's bar container can use a maximum of 20,000 watts. However, measuring the actual energy consumption revealed that the container needs only 900 watts. Applying this example to the total number of modules on a festival emphasises that the disparity between the potential energy demand and the actual energy use of an event is often quite large.

> **"Financially, we have to really strain to achieve this. But we see this festival as an open-air laboratory to test the limits of what is possible.**

COMBINING A SOLAR PLANT WITH A BATTERY

Futur 2 uses a solar plant with a maximum power of 22,000 watts. “If the sun shines on it from a cloudless sky and the system is ideally aligned, it produces this amount of energy,” Hansen explains. The plant is connected to a battery storage system that is fed by the solar panels and that supplies the energy for the festival. This means there is always a buffer between the energy that is being generated and the energy that is being consumed. The team purchased the plant themselves so that they could build it according to their specific requirements.

The solar plant produces three phases, each with 5000 watts. The total 15,000 watts power the entire festival, including catering and the Sunplugged Stage. The Pedal-Powered Stage is mainly powered by physical strength as visitors can pedal on stationary bicycles, creating energy. This is an ideal way to illustrate how much energy is needed to power a stage as the pedalling resistance increases with the energy demand. For example, when the bass kicks in or when the lights turn on, it becomes harder to pedal. Should the energy run out, Futur 2 has back-up generators in place that are powered with ethanol, which is more sustainable than diesel.

Essentially, everything Futur 2 does is scalable to other festivals. For example, the solar system can be put up sooner and the buffer storage can be made larger so that it lasts longer after sunset.

Entrance to the festival is free because the team wants to guarantee easy access to people who have never dealt with sustainability before and inspire them by presenting innovations onsite. This is possible because Futur 2 festival receives funding from Hamburg’s Department of the Environment.

Hansen stresses that sustainable solutions cost more, but only because non-sustainable behaviour is subsidised by the general public. Financially, they are not actually comparable, he finds. “If the CO_2 footprint of an individual service or product was the basis for taxation, which I think is the right way to go, then what we are doing would be unbeatably cheap. Financially, we have to really strain to achieve this. But we see this festival as an open-air laboratory to test the limits of what is possible. We are developing expertise and that, of course, also pays off.”

Photo by Robin Hinsch

EXPLAINING ENERGY TO THE PUBLIC

A condition for the public funding by the city of Hamburg is that the festival must introduce new innovations every year. Hansen says that over the next few years they want to intensify communication to better explain the complex energy processes to the visitors. The festival also plans to make its food and drinks menu more organic, seasonal and local.

Photo by Malte Metag

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