

FREQUENTLY ASKED QUESTIONS AND ANSWERS

ARCHITECTURAL COMPETITION „24-HOUR SUNDIAL”

The announcement of the competition for the design of the "24-Hour Sundial" caused quite a stir, as the very name of the competition seems intriguing, difficult to understand or even impossible to design. But is it really impossible? As we agreed that our complicated rules and regulations need to be explained, here are the answers to the most frequently asked questions. We are sure that they can help you understand the concept of the contest. However, the most important thing is to remember that:

When preparing your design, do not bother about the technical aspects of the clock mechanism (we will help you to prepare them). Suggest your vision of a sundial for the 21st century, in terms of its architectural and sculptural dimension. All the technical details concerning the proper functioning of the sundial mechanism will be worked out during its construction. This will be carried out in cooperation with our experts in astronomy and mechanics and with the author of the winning design. The idea of the Creator of the architectural and sculptural vision is always paramount.

Remember about a very important thing - this is not a competition like thousands of others, in which, after being awarded, the winning projects end up in drawers and archives or one has to wait for years or even decades for their implementation. In the case of this competition, the "24 Hour Sundial" will be efficiently built on the basis of your ;) winning design and will decorate the square at Powiśle 11 street in Krakow (at the foot of the Wawel Royal Castle).

FAQ

- **What is the idea behind the 24-hour Sundial?**

Sundials have been with us for thousands of years, but they used to show the time only from sunrise to sunset, only on sunny days, but even then a little cloud made it impossible to see the shadow of the clock hand.

Imagine a clock that works despite the cloud cover, one that tells the time even after dark. What is needed to make this possible? A source of artificial light (reflector, laser, etc.) whose "rays" imitate the movement of the Sun, falling in exactly the same way as the Sun would. Thanks to this we obtain the same effect - we see a shadow, indicating the exact time - the Sun!

- **How is a clock supposed to work at night when the sun does not shine?**

At our latitude, the Sun roams the sky for a few hours in winter and a dozen in summer. However, the sun does not "shine" only during the day, the sun has been shining all the time

FREQUENTLY ASKED QUESTIONS AND ANSWERS

ARCHITECTURAL COMPETITION „24-HOUR SUNDIAL”

for 4.5 billion years ;). If the sun sets in one place, it rises in another. If in some point of the globe it is for example 21:00 (9:00 PM - nine o'clock in the evening), then on the opposite side of the globe it is 7:00 (7:00 AM - seven o'clock in the morning).

The idea behind the 24-hour Sundial is that during the day it shows the time according to the shadow cast by the Sun - solar time (on cloudy days: see question 1). At dusk, however, an artificial light source shines permanently from sunset to sunrise, simulating the path taken by the sun on the other side of the globe. Thus an ordinary sundial becomes a 24-hour clock..

- **How does an 'ordinary' sundial work?**

Surely each of us has seen many sundials. Their construction is rather simple - a board with hour numbers marked on it and a kind of diagonal "hand", whose shadow shows the time. As a result, we can see rather imprecisely what time it is. The shadow of the pointer is only visible when the sun "shines brightly". It should be assumed that the difficulty in designing an ordinary sundial is to adjust the arrangement of the hour mark and the hour digits, as well as the inclination of the "hand", which must be adapted to the geographical location and plane of the board (vertical, horizontal or diagonal).

- **What is the difference between a 24-hour Sundial and a "normal" clock?**

The working principle of a 24-hour sundial is exactly the same as a "normal" sundial. However, there are some differences:

- ✓ an additional light source (reflector, laser, etc.) should be installed on the clock, which will move in the same way as the Sun. By simulating the movement of the Sun, a shadow effect of the hand will be achieved, also after dusk or on cloudy days,
- ✓ after sunset, this additional light source will continue to operate until sunrise and show the time on the other side of the globe,
- ✓ the position of the dial itself and the inclination of the hands will be adjusted automatically, depending on the geographical location where the clock will stand.

- **What is solar time, world time and official time?**

Solar time is the time determined in relation to the Sun. 12 o'clock noon is when the Sun is up on a given meridian. Each place on Earth has its own solar time, which is the same on the same meridian. For example, the solar time near Cracow is the same as in a place on the same meridian near Cape Town. On the equator, places that are about 1666 km apart have a solar time that differs by 1 hour. The parallel at our latitude measures about 24,000 km, so in places that are 1000 km apart the difference in solar time is one hour (e.g., the difference in solar time between Białystok and Szczecin, which is about 500 km away - is about 30 minutes).

FREQUENTLY ASKED QUESTIONS AND ANSWERS

ARCHITECTURAL COMPETITION „24-HOUR SUNDIAL”

World time was introduced in the 19th century, initially in Great Britain. Until then, each city lived according to its own solar time, which did not bother in the era of stagecoaches, but after the expansion of railway lines, posed a huge problem for British railways known for their punctuality.

Zonal (official) time is the time that applies within a given country. In Poland there are (still) two types of official time: winter and summer.

- **How to show the differences between the times in the project?**

The organiser's idea is to equip the 24-hour sundial with a professional geodetic GPS module, thanks to which the geographical position of the place where the sundial is currently presented will be determined. This in turn will result in indicating the sundial's time with great accuracy.

In the place where the sundial is displayed, the local time zone and possibly other official times will be in force. The design should include any way you choose to show these time differences (displays, screens, dials, etc.).

You may also present all other time-related information in these places: e.g. when will the sun rise/set, how many days are there until the solstice, until the end of the year, how many seconds elapse from the moment when the light on the Sun hits the clock's face, or even how much time is left until the end of the world. :)

- **What must the first stage competition design contain? How accurately is the mechanism to be shown? What are the expectations?**

The key is to show the creator's vision. Present your architectural and sculptural idea of how you want the 24-hour sundial to look. Your design should include:

- ✓ The placement of an additional light source. It is obvious that it cannot levitate (be suspended in a vacuum). It must be attached to the elements of the clock (e.g., arm, elliptical rod, cords, etc.) so that it can move along the same path as the Sun does.
- ✓ Presentation of the differences between solar and world times, and optionally - show other information about time. It is entirely up to you whether you place this information on elements built into the art installation itself or as a separate, independent part of the exposition.
- ✓ a form of depicting the movement of the pointer after sunset, using a simulation of the movement of the Sun along the ecliptic (artificial light source). Since, after sunset, the solar time shown will already refer to the place on the other side of the globe, the fact that it is solar time shifted by 12 hours should be emphasised.

FREQUENTLY ASKED QUESTIONS AND ANSWERS

ARCHITECTURAL COMPETITION „24-HOUR SUNDIAL”

- **What does it mean that the sculpture - a 24-hour sundial - has to be mobile?**

The Competition Organiser - IDEANOVA Foundation intends to present the sundial in various prestigious locations in Poland and Europe. Your project must therefore take into account the possibility of easy disassembly of the sculpture together with all its elements and the possibility of transport in a small or medium-sized truck (or e.g. a 20-foot container). This does not mean that the 24-Hour Sundial does not have its base place. It is a square in Kraków, at 11 Powiśle street (right next to Vistula river and at the foot of Wawel castle). This is where the sundial will return after its voyages. See how the mobile system works in the case of our previous project: The Time Capsule, which was presented in Cracow: near the National Museum, in the Dolne Młyny complex, on Szczepański Square, and then it went to its base place - the Jagiellonian University Campus. This year the Time Capsule will start its journey across Poland. It will visit Łódź (Manufaktura), Warsaw (promenade on the Vistula River near the Syrenka) and Giżycko (boulevard by the Marina).

We assume that each time the clock is set in a new exhibition location and the mechanism is activated, the sculpture will automatically read the geographical position and thus set the correct time on its own.

- **Can I count on technical assistance and getting answers to my questions about the clock mechanism?**

You can always count on technical (and not only technical) help from our experts and members of the Competition Jury, i.e., astronomers, engineers, architects, sculptors, university teachers and journalists.

If you need any help, contact us via e-mail (konkurs@ideanova.org.pl) or call the Competition Coordinator (+48 692 422 717 or +48 664 969 900). We will be happy to dispel all your doubts.

We also plan to organise online group consultations: in the form of audio conferences with our experts and selected members of the Jury. The meetings will be held in full anonymity of the Competition Participants. We plan such meetings in the second stage of the contest, so that you can refine your final projects.

- **If I make it to the second stage of the competition, can I expect more help to refine the design as much as possible?**

In the first stage of the competition, you should show an overall vision when designing your sundial. The five designs selected by the Jury will pass to the next stage of the competition. Technical assistance will then be intensified, so that the time allotted for developing - refining the concept, will also be used for "making the clock mechanism technically feasible". We

FREQUENTLY ASKED QUESTIONS AND ANSWERS

ARCHITECTURAL COMPETITION „24-HOUR SUNDIAL”

plan to schedule audio conferences during which you will have the opportunity to ask technical questions.

The project with the highest Jury's score will win the competition, but one of the criteria will be the evaluation of the practical feasibility of the clock.

- **If my project wins, how will we work together to implement the project?**

The winning project will definitely be carried out. That is why your cooperation with us is essential. Thanks to it, the final result - the finished sculpture - will reflect your vision.

This does not mean that you will make implementation projects, however, entering the competition obliges you to participate and consult. You also need to know that this stage of cooperation will not be additionally remunerated. The financial reward for the first place in the competition will be transferred to your account, and the unique benefit that will appear in your portfolio will be your name placed on the 24-hour Sundial. Remember that your sculpture will be placed in the most prestigious places in Poland, Europe and maybe even the world!

- **Who can take part in the Competition?**

The 24-Hour Sundial Competition is open to artists, designers, urban planners, sculptors, and in particular to university students. It is open to anyone who has the knowledge and skills to prepare a design in accordance with the technical guidelines.

- **What are the stages of the Competition?**

The Competition is a two-stage event. In the first stage, a participant or a design team submits to the Organiser their competition work along with a one-page description. From 2 to 5 projects selected by the Jury will go through to the next stage. Their authors will be asked to supplement their work with a 3D model in 1:10 scale. In the second stage, the Jury will choose the winning project, which will be built. A public vote will be held independently. The announcement of the results will be followed by the stage of refining the clock mechanism and selecting the creator of the project.

- **How do I enter the Competition?**

Applications are accepted only via the online form available on the Organizer's website www.ideanova.org.pl

FREQUENTLY ASKED QUESTIONS AND ANSWERS

ARCHITECTURAL COMPETITION „24-HOUR SUNDIAL”

- **Where can I find the results?**

The results of the first stage of the competition, and thus the list of works qualified for further stages, will be published on the competition website www.ideanova.org.pl/en/sundial and on the social-media channels of the Organiser - the IDEANOVA Foundation.

The winner of the second stage of the competition will be announced during the official gala, then this information will appear on the website www.ideanova.org.pl/en/sundial and the social-media channels of the Organiser.

- **What are the deadlines for submitting projects in the stages of the Competition?**

We are waiting for the projects of the first stage until 1.06.2021. The date of receipt of the entries by the Organiser is crucial. Remember to register your participation until then on the competition website www.ideanova.org.pl/en/sundial

The list of works qualified for the second stage will be announced on 11.06.2021.

NOTE 13.05.2021: You have the option to send projects by e-mail. You don't need courier.

- **Can I submit a project that I will prepare together with my friends?**

Of course you can! You may prepare a project individually or in a project team. Remember to include all members of your team.

- **What should a competition entry consist of? What elements are mandatory in the graphic part?**

Your work should consist of a graphic part and a text part. In the first part, you should prepare one B1 size board, in vertical format. The board should be prepared on a stiffening underlay, e.g. foam, PVC, and supplemented with the following elements: land infrastructure in 1:200 scale, projection of an architectural form in 1:10 scale, minimum 2 projections of a model in 1:10 scale in two selected directions and 2 visualisations from the human perspective. If you are unable to prepare 3D presentations, axonometric views are acceptable. Another element that is obligatory for you is to indicate the location of the clock mechanism.

The text part of the application, i.e. the description of the idea consisting of up to 1 typed A4 page, should be attached to the project.

FREQUENTLY ASKED QUESTIONS AND ANSWERS

ARCHITECTURAL COMPETITION „24-HOUR SUNDIAL”

- **How do I submit my project to the Organisation?**

The entry for the first stage of the competition must be sent by courier or traditional mail by 1.06.2021. Remember that what counts is the date of receipt of the package by the Organiser. We will confirm that the work has reached us, in the form of an email containing your individual project number. In the next, second stage of the Contest, we will contact you by e-mail or telephone to determine the way of sending the model.

- **What are the evaluation criteria for the competition entries?**

The project will be evaluated on the basis of the coherence and content of the form, the functional qualities of the sundial mechanism, the artistic features, the scale of the object and its details adequate to the function and the variety of locations, the practical feasibility of the sundial mechanism and the mobility of the sculpture.

- **If I live in or near Krakow, can I bring the project in person instead of sending it?**

No, because it is necessary to remain anonymous. Submissions sent by post or courier will be received and entered into the system only by the Competition Coordinator or his/her Deputy.