



Annual Review

2023

Heureka

Joy of Discovery!





Annual Review

Heureka 2023

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Mission

Joy of discovery!

Vision

Everyone will fall in love with science.

Values

We base ourselves on research.

We are reliable and transparent and promote scientific understanding.

We inspire everyone to be curious.

We increase society's science capital by making science easy to approach. We provide meaningful and memorable experiences.

We act sustainably.

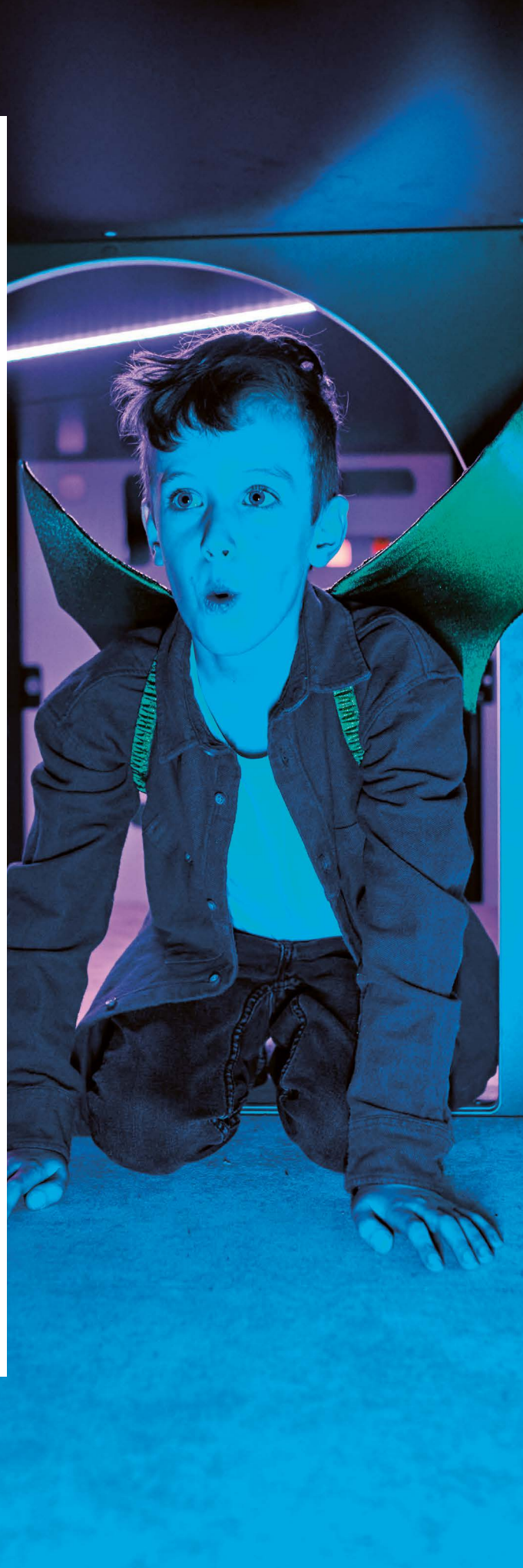
Ecological, social and economic sustainability steer all our activities.

We learn and succeed together.

We encourage creativity and renewal. We build collaboration and respect diversity.

Heureka's environmental promise

Heureka, the Finnish Science Centre takes environmental aspects into account in all its activities and develops its activities to reduce adverse environmental impacts. We encourage our staff and visitors to be ecological and sustainable. Heureka increases environmental awareness through its content.



Sustainable activities for everyone

Heureka assumes its share of responsibility for the general knowledge base in the society and the future by encouraging curiosity and lifelong learning on a broad scale. The numbers show we are succeeding well at this: with 348,000 visitors, 2023 was the fifth busiest year in Heureka's history. Our biggest attraction was the Power of Play exhibition, produced in cooperation with early childhood education specialists. In this day and age, this topic appeals widely to the public, not only to families with children. Playing and spending pressure-free time together generate mental well-being in a serious world.

Heureka is for everyone. As part of our social responsibility, we continuously think about extending our message about science to an increasing number of people and communities and removing obstacles of participation – physical, mental, and financial alike. We now also offer our exhibition-related texts in easy Finnish in addition to Finnish, Swedish and English. Our science sponsor activities implemented with our cooperation partners lower the threshold for school visits (read more on page 28). We introduced special pricing for Thursday nights: €10 for admission. People have taken advantage of this inexpensive alternative, and it is attracting new visitor groups to Heureka. The most culturally diverse city in Finland offers a magnificent setting for diverse audiences. We must listen to our targeted visitor groups to understand their needs and interests.

Ecological sustainability is visibly reflected in our offerings, many of which deal with the interaction of people and the environment and encourage visitors to make sustainable choices. In the past year, we also looked at our own operations. We went through all our activities and analysed their environmental impacts. We made an environmental promise and earned the EcoCompass certificate, which entails commitment to using natural resources wisely and continuously improving our activities. For example, we have installed solar panels on the Heureka building's roof that cover ca. 5% of our electricity needs.

Public interest and popularity form an important pillar of Heureka's financial performance. According to research, we are among the top leisure time attractions

in Finns' minds, a valued, trusted and desired operator. Another important pillar consists of social subsidies, which we use responsibly to implement our important mission. In terms of financial responsibility, we are taking a leap forward by participating in a project that aims to enhance Finns' economics-related competence.

Heureka also assumes responsibility for developing the science centre industry. We had the honour of planning, organising and hosting the first ever global leader forum, which brought 120 leading industry experts and operators from 40 countries and six continents to Heureka to reflect on responding to the challenges of misinformation and the planetary crisis.

The only way to succeed is to cooperate and include everyone.

Mikko Myllykoski
Heureka's CEO



Heureka's visitors

In 2023, Heureka had a total of 347,926 visitors. 2023 was the fifth busiest year in the science centre's 34-year history.

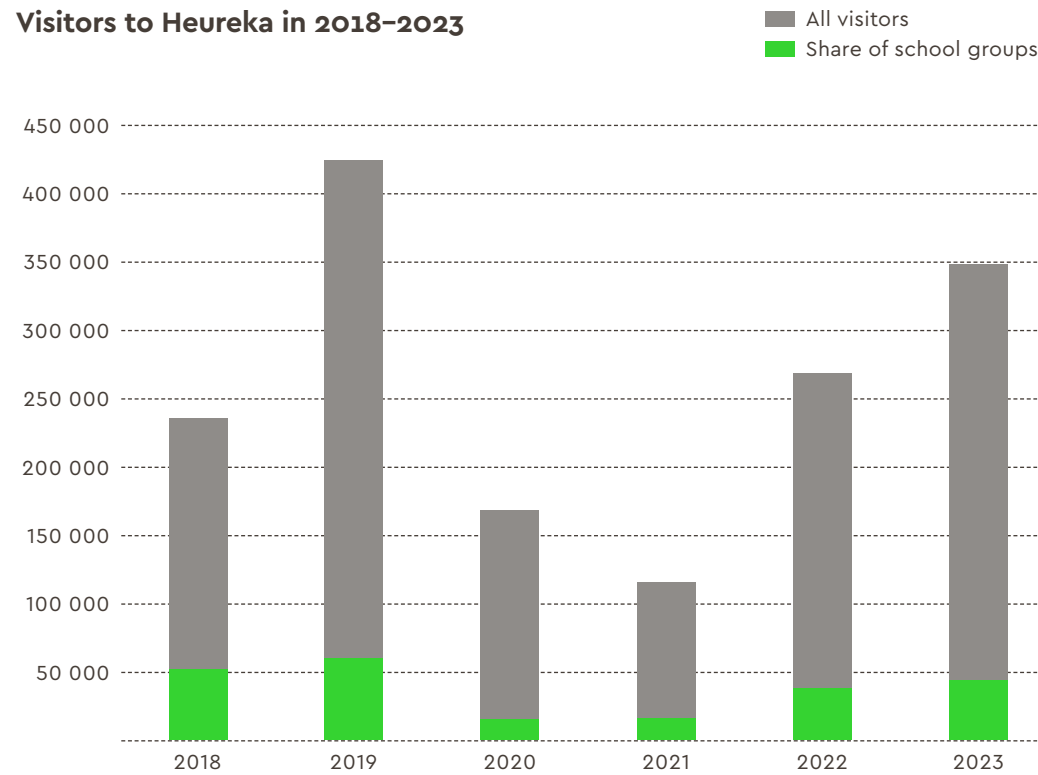
The majority of Heureka visitors consists of families and groups visiting the centre in their leisure time, especially at weekends and during the school holidays. The busiest months are February and July. On weekdays during the school year, the most common visitors are school trip groups, which accounted for 41,887 visitors (ca. 12% of all visitors) in 2023. In addition, the outreach activities implemented outside Heureka reached approximately 10,000 participants, a large part of which were school groups.

The popularity of the Museum Card also contributed to the visitor count development at Heureka. Heureka was the seventh most popular Museum Card

attraction in 2023 and the second most popular museum in terms of visitor numbers.

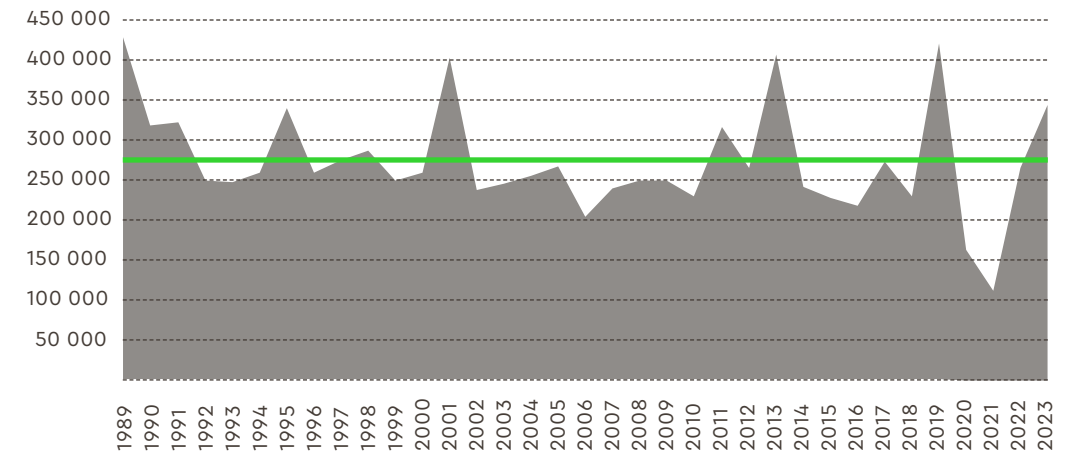
Heureka's popularity is also reflected in research results: it again achieved a high ranking in the 2023 Leisure Centre Image survey by Taloustutkimus. Based on the combination of net promoter score and image factors, Heureka was number one, and based on overall ratings, it was ranked second among a total of 31 Finnish leisure centres. One of the survey questions concerned which leisure centre the respondents would go to the following year if they could choose freely. According to the responses, Heureka was the most attractive destination.

Visitors to Heureka in 2018–2023



Number of visitors in 1989–2023

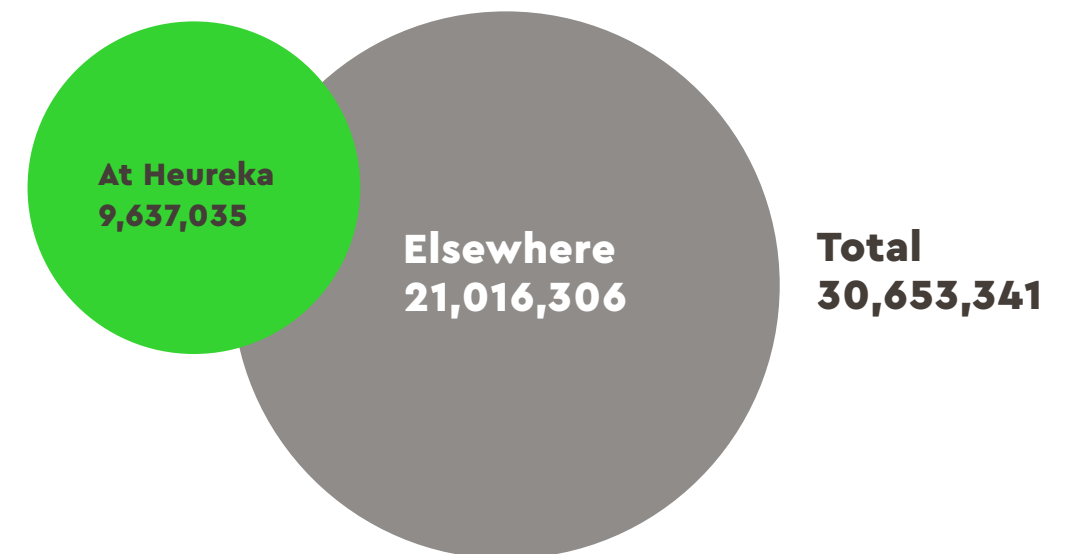
In terms of its number of visitors, Heureka is among Finland's most popular leisure destinations. When the science centre was in the planning phase in the 1980s, the number of visitors per year was estimated to be 250,000. The long-term average has risen 10 % higher than predicted, to a total of 275,000 visitors per year. The annual number of visitors varies from year to year quite significantly depending on, for example, the range of exhibitions offered by Heureka and its competitors as well as the economic situation, which has an impact on the demand and consumer decisions of different visitor groups.



Number of visitors to Heureka in 1989–2023. The threshold of 400,000 visitors has only been exceeded four times in Heureka's history: during its opening year in 1989 and in connection with the exceptionally successful exhibitions in 2001 Family Life of the Dinosaurs, in 2013 Body Worlds and in 2019 The Giant Dinosaurs. The number of visitors in 2020 and 2021 remained low due to the COVID-19 pandemic.

Visitors to Heureka's exhibitions at Heureka and elsewhere in 1989–2023

Heureka opened its doors to the public in April 1989. Since then, Heureka's exhibitions have been seen at Heureka by almost 10 million visitors. When expanded to include those who have seen Heureka's exhibitions on display elsewhere in the world, the figure rises over 30 million.





Exhibitions and exhibition projects

Two new exhibitions opened at Heureka in 2023. The Power of Play exhibition was launched in the Cube Hall on 4 February 2023. This exhibition takes every visitor on a journey to their own attitude towards play. The joint exhibition Kurotuksia – Higher Powers was implemented in cooperation with Aalto University at the Event Square from 6 June 2023 to 19 November 2023. The exhibition was the final project of a course combining architecture, art and mathematics, and the airy exhibits played with geometry, symmetry and organic shapes.

The Facing Disaster exhibition dealing with human communities' crisis tolerance in the face of the natural elements, which opened in November 2021, was still on display. Additionally, Heureka's range of exhibitions included the Heureka Classics, which examine various phenomena in the fields of physics and perceptual psychology, as well as the theme exhibitions in the main exhibition area, including Circular Factory, Electri City, Wind in the Bowels, Artificial Intelligence – Me, Myself & AI and Science on a Sphere. Science Park Galilei was open from spring to autumn.

The Power of Play

4 Feb. 2023 – 12 Jan. 2025

The Power of Play exhibition that opened in February 2023 has been very popular. It is aimed at playful people of all ages, particularly for daycare and primary school children and their families. The visitor numbers indicate that the empowering effect of play appeals to all kinds of people in this day and age, not just families with small children. Playing and spending pressure-free time together generate mental well-being, regardless of age.

The goal of the exhibition is to increase our understanding of the importance of play and playfulness for everyone – play is the foundation of a happy life. The exhibition is an ode to childhood, play and children's curious view of the world. The Pavilion of Play offers 24 different games that sprout and thrive from studying the science of play. They revolve around the themes of silliness, creativity, adventure and exploration, daring, and caring.

The exhibition is produced in cooperation with PPG Tikkurila. Experts from the University of Helsinki, the Mannerheim League for Child Welfare and the University of Turku, among others, have been involved in the planning and production of the exhibition.

319,947 visitors during 2023 | 970 visitors/day

Facing Disaster

20 Nov. 2021 – 7 Jan. 2024

The Facing Disaster exhibition let visitors build their resilience – crisis tolerance – in gamified exhibits and experience the forces of nature as audiovisual art installations. The exhibition demonstrated methods for functional cooperation and building mutual trust. The exhibition also demonstrated consequences of disasters arisen when people have encountered extreme forces of nature, based on true stories.

The exhibition partners included the Hanken HUM-LOG Institute, the National Emergency Supply Agency, Maa- ja vesiteknikan tuki ry, the Finnish National Rescue Association (SPEK) and the 72 Hours concept group, and the Finnish Red Cross (SPR). The exhibition also received a grant from the Jenny and Antti Wihuri Foundation. The video projections of the exhibition were designed and produced in co-operation with Bordos Art Works.

340,068 visitors during 2023

934 visitors/day

634,567 visitors while on display

818 visitors/day



Our Journey in Space

10 Feb. 2024 – 11 Jan. 2026

The Our Journey in Space exhibition is an interactive science exhibition for the whole family. The exhibition provides an overview of current space activities and the plans that will most likely be realised in the following three decades. The key message of the exhibition is: Earth is our best spaceship – let's take good care of it! Space activities are necessary for protecting Earth and the life on it.

When the visitor enters the exhibition, they enter a space station of the future that orbits Earth. Behind the space station windows is the shining dome of Earth. On the space station, visitors contribute to the tasks of space professionals that aim at protecting Earth and learning more about the universe.

The exhibition is set in a time where humans have returned to the Moon and use its resources and conduct research on its surface. A trip to Mars is being planned and the related challenges are being studied. The individual exhibits are space missions focusing on themes such as removing space debris, space weather and making rocket fuel out of lunar ice. Visitors also get to practice experience driving a lunar rover with a delay and think about ethical questions.

The exhibition partners include the Union of Professional Engineers in Finland, Linde Gas, and the Radiation and Nuclear Safety Authority in Finland (STUK), and it was created in collaboration with Finnish and international experts in space technology and research as well as companies and organisations in the field.

The exhibition opened on 10 February, 2024 and will be on display until January 2026.

Upcoming exhibitions in the planning

Giants of the Ice Age

The exhibition describes nature during the most recent Ice Age, the large mammals that lived at that time, and the humans who migrated from Africa, first to Europe and then to other continents. The aim of the exhibition is to create a multisensory experience of the living conditions and nature of the Ice Age. The exhibition presents large Ice Age mammals in the form of robots in staged habitats. Visitors get to experience the life of humans in the Ice Age by making cave paintings, for example.

The exhibition is based on research on the Ice Age. What kind of flora and fauna were there at the edge of the retreating ice 10,000 years ago? Why did the large mammals of that era disappear when the climate warmed quickly? What was the role of humans in the extinction of large animal species, and are we possibly facing a similar major wave of extinction now that the climate is warming? Experts in palaeobiology, human ecology and palaeoclimatology are participating in the planning of the exhibition.

The exhibition will open in February 2025.

Water – the Flow of Life

A new permanent exhibition focusing on water is being planned. The exhibition will be set up in the Cylinder Hall next to the Children's Laboratory. The exhibition showcases the natural water cycle, and its central element is a large pool of running water, which will bind the exhibits together. The key message of this exhibition is that water and its natural cycle are pre-conditions for life. Water circulates on our planet, and the amount of water is finite. We must manage water sustainably to make sure that there is enough of it to sustain all life on our planet, now and in the future.

The exhibition aims to demonstrate the multiple ways in which water is connected to life on Earth, our dependency on water, and the ways in which our activities affect the natural cycle of water. Water-related expertise plays an essential role in curbing climate change and preventing biodiversity loss. A new laboratory programme focusing on water is also being planned to support the exhibition contents. The laboratory programme can address themes that are difficult to implement in exhibition form.

The exhibition will open in the autumn 2025.



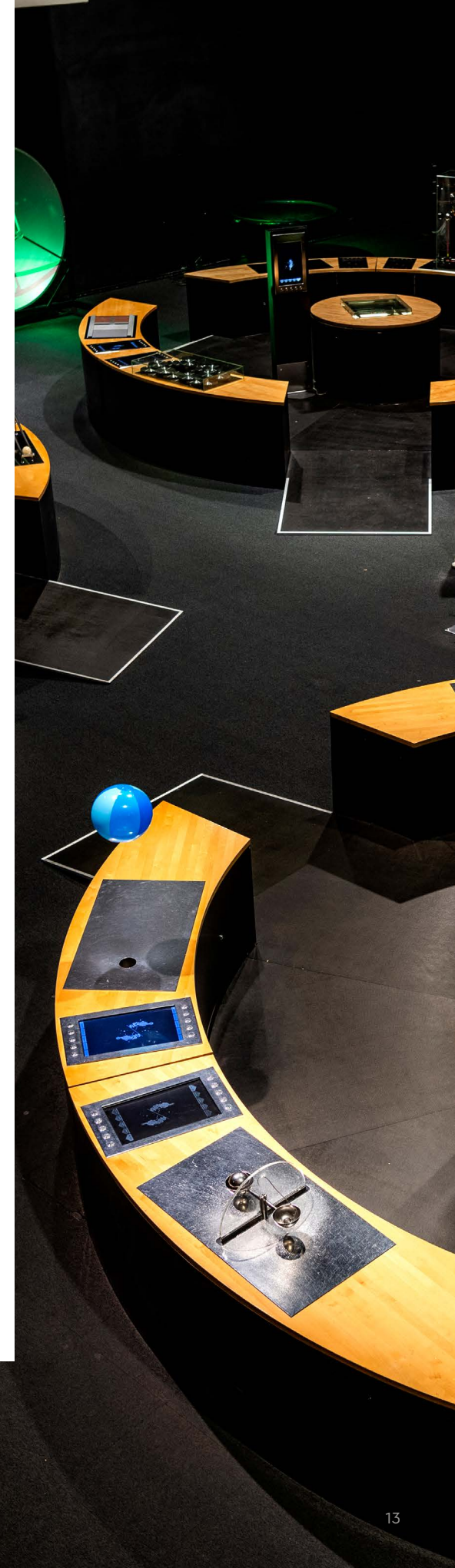
Renovation of the Cylinder Hall

Preparations for the overhaul of the Cylinder Hall were initiated last year. The purpose of this renovation is to relocate – and at the same time, revamp – the continuously popular Heureka Classics exhibition from the Pillar Hall to the Cylinder Hall. Heureka Classics will replace the thematic exhibitions that are currently on display in the Cylinder Hall, as they are reaching the end of their life cycle. In conjunction with this, the AI exhibition will be moved to the Pillar Hall along with the Idea Workshop, which is currently at the Event Square. This renovation is related to the implementation of the new water-related permanent exhibition in the Cylinder Hall. The renovation will enhance clarity in both the Cylinder Hall and Event Square, and the new exhibitions will get the best possible settings. The renovation is scheduled to take place in several phases in 2025 and 2026.

Other projects

A preliminary plan concerning an exhibition about economics and personal financial decision making was also prepared in 2023. The planning of this exhibition will continue in 2024, and it is scheduled to be opened in 2027. Other exhibition plans include an exhibition about the circular economy of clothes and new textile fibres, which is to be implemented in the 2024 summer season as part of the FINIX research project funded by the Strategic Research Council, and a creativity-themed exhibition to be implemented in the autumn of 2024 in cooperation with Aalto University.

In addition, we conducted a preliminary survey in 2023 concerning the goals and content of a democracy centre that, according to plans, will be implemented in the library premises of the Parliament Building. The survey is connected to the temporary exhibition we are planning to open in Heureka in 2028 under the working title “Power and Democracy”. As a separate project, we implemented a pilot version of the audio show tentatively titled Tikkurilan tiedereitit (“Tikkurila Science Routes”), which won the Vantaa Innovation competition in 2022. A pilot service will be launched in early 2024, once the pedestrian bridge to Heureka is reopened after renovation.



Planetarium

The Finnish Ministry of Culture and Education granted Heureka a substantial grant for the renewal of the Planetarium's presentation technology and the improvement of its accessibility and the user experience. The competitive bidding process for subcontractors to carry out the renovation was initiated in the summer of 2023, and it is scheduled to be completed in the spring of 2024. The Planetarium renovation will begin in August 2024, and it will last approximately one year. The renewed Planetarium will be opened to the public in late 2025.

The Planetarium shows are included in Heureka's admission, and they are available for all visitors aged five or older. There are 135 seats in the Planetarium. Visitor surveys indicate that the Planetarium is one of the most memorable experiences in Heureka.

Due to the ventilation system renovation that started in late 2022, the Planetarium shows were on hold until February 2023. Planetarium movies were therefore shown over 11 months in 2023, and especially in July, they attracted an unusually high number of visitors – nearly 26,000. In 2023, the Planetarium movies had a total of 137,699 viewers.

The first movie in 2023 was the animation “3–2–1 Liftoff!”, aimed at families with small children. This movie is a fun introduction to how spaceships can travel from the Earth into space and back, and which laws of physics they apply. In the autumn season, a new movie was introduced: Satelix, which deals with satellites and space exploration technology. This movie replaced the “Beyond the Sun” movie, which was about exoplanets. In addition, the Dynamic Earth movie dealing with our planet's climate and its mechanisms, which was launched in December 2022, remained in the programme. The northern lights movie Áróra, which has been in the programme since 2020, also continued showing on Thursday nights.

In addition to movies, the guided programmes, called Windows to Space, continued from last year. Subject to pre-booking, these programmes are produced by Heureka. During the year, 27 Windows to Space were implemented and seen by over 750 pupils and around 70 teachers.

Planetarium films, visitors and shows 2023

Film/programme	Shows	Visitors	Visitors/show
Dynamic Earth (6 Feb. – 31 Dec.)	876	52,661	60
3–2–1 Liftoff! (6 Feb. – 31 Dec.)	719	39,356	55
Beyond the Sun (6 Feb. – 13 Aug.)	441	33,132	75
Satelix (14 Aug. – 31 Dec.)	322	10,519	33
Áróra (6 Feb. – 31 Dec.)	68	2,121	31
Avaruuden ikkunat (Windows to Space)	27	829	31
Total	2,453	138,618	47



Events

Heureka's events targeted at various visitor groups deepen and enliven the science centre offering. The events highlight contemporary topics, attract new visitors, create encounters, and increase people's understanding of different topics and their interest in science. Our events are designed to generate insightful science experiences in memorable and novel ways. We have a strong focus on positive visitor experiences. Heureka produces various events for families, adult audiences, school pupils and teachers, and older students in cooperation with an extensive partner network.

The events feature inspiring content and activities: instructed laboratory programmes and workshops, science theatre and Science on a Sphere shows, engaging presentation stands organised by our partners, and talks by and meetings with different experts. The event themes stem from Heureka's impact programmes, projects and contemporary science content. In 2023, a total of 18 events were arranged, and they reached approximately 15,500 visitors.

Events in 2023

Time	Event	Visitors
20 Jan.	Student event Makers of the Future. In co-operation: SKF.	27
9 Feb.	Teachers' event, Power of Play and AI theme.	108
10 Feb.	H18 adults' night: Our Friend AI.	1,185
11 Mar.	Space day for early childhood educators. In co-operation: ESERO Finland.	153
25 Mar.	Children's Day of Medicine. In co-operation: THL and Metropolia.	3,109
29 Mar.	Science Night Live! In co-operation: E2 and Haaga-Helia.	160
22 Apr.	Family day: Heureka's Play Day. In co-operation: Finnish Red Cross.	1,504
31 Aug.	Teachers' event, space theme. In co-operation: ESERO Finland.	120
2 & 16 Sept.	iGem Workshop Day. In co-operation: Aalto University and University of Helsinki.	220
23 Sept.	Family Day: Älyä kone! In co-operation: CSC and Finnish Red Cross.	2,255
18.-29 Sept.	Robotics weeks for schoolchildren. In co-operation: Robotiikka ja tiedekasvatus ry and Aalto-Junior.	2,624
11 Oct.	Day of the Girl Child. In co-operation: Soroptimist International Finland.	817
13 Oct.	Launch event of the book Mitä tekoäly on? + open workshops. In co-operation: professor Hannu Toivonen, University of Helsinki.	130
3 Nov.	H18: Halloween.	1,500
24 Nov.	Student event Makers of the Future. In co-operation: SKF.	75
30 Nov.	Teachers' event, AI and robotics theme.	80
4 Dec.	ESA In-Flight Call event for schoolchildren. In co-operation: ESERO Finland.	1,181
5 Dec. & 7 - 8 Dec.	Space Week for schoolchildren. In co-operation: ESERO Finland and Lockheed Martin.	222
Total		15,470

Learning programmes and materials

Heureka's activity-based learning programmes combine different fields of science and technology in an innovative manner. They promote learning in the field of sciences and encourage children and teenagers to study STEM subjects (Science, Technology, Engineering and Mathematics). The learning programmes accumulate knowledge and competence, enhance participants' research and working life skills, as well as creative problem-solving abilities and responsibility.

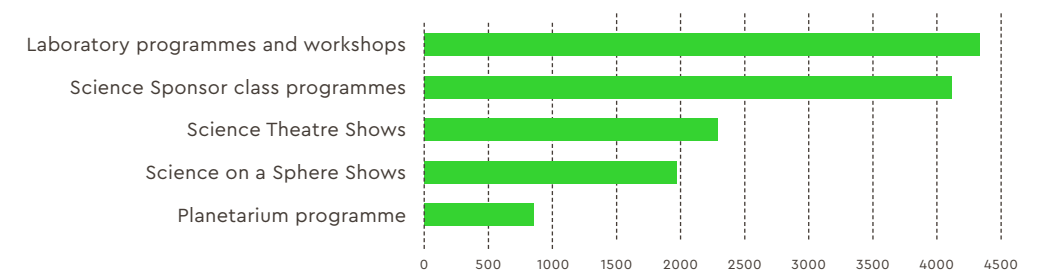
The programmes are led by Heureka's inspirers within a diverse learning environment: laboratories, workshops, Idea Workshop, Makerspace, Science Theatre, Planetarium as well as by the Rat Basketball and the Science on a Sphere exhibits. The programmes can be booked in advance by schools and companies. The programmes are also presented to leisure time visitors without advance booking. Programmes are also implemented at science camps and clubs. The mobile Pop-up Heureka and other outreach activities help the impact of Heureka's learning programmes to extend beyond the walls of the science centre. During 2023, altogether

22 new learning programmes were produced for use in connection with school group visits, Science Sponsor class visits, science camps and clubs and events.

Heureka provides learning materials that support learning through experiencing, observing, contemplating and applying knowledge to practical exercises. The learning materials can be used as orienting or deepening assignments before or after a school group's visit to Heureka, or as supplementary material during the visit. The materials are diverse and multidisciplinary, phenomenon-based and experience-oriented. They are produced in cooperation with Heureka's partners.

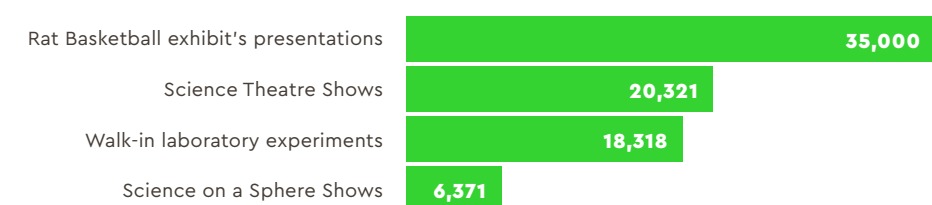
In 2023, Heureka offered online supplementary material and exercises related to the exhibitions Power of Play and Facing Disaster, as well as to the exhibitions Artificial Intelligence, Wind in the Bowels and Electric City. There are also materials for the Heureka Bedrock Exhibition and Trail of useful plants in Galilei. Learning material was also produced within the projects ESERO Finland and OTA.

Participants in learning programmes for school groups during 2023



Heureka's learning programmes are provided in the form of pre-booked presentations, particularly for school groups. In 2023, they reached about 13,500 pupils and teachers at Heureka.

Participants in public programmes for leisure-time visitors in 2023



Idea Workshop and Makerspace

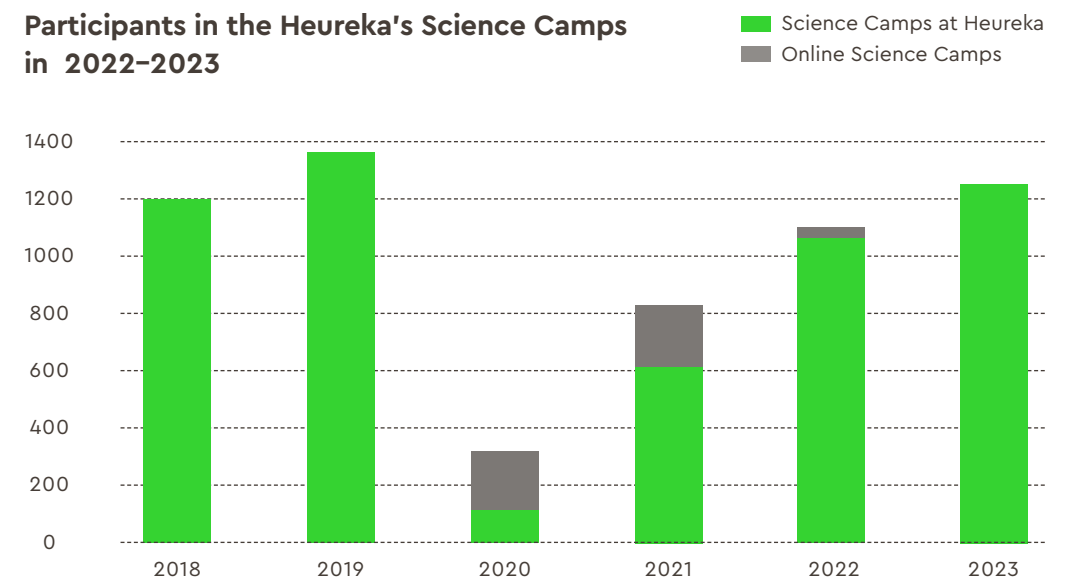
Crafting, creativity and approachable ways of building, experimenting and developing are key concepts for the Idea Workshop and Makerspace. The high visitor numbers in 2023 were reflected at the Idea Workshop as a high level of joyful experimenting and innovation. The “Design a nerdy derby car” activity sponsored by the Union of Professional Engineers in Finland is a classic. Approximately 40,000 crafters tried their hand at creating a racer from one cubic metre of timber. New workshops related to innovation, construction, material knowledge, and AI and robotics were developed for Heureka’s science camps, clubs and events. The Idea Workshop and Makerspace continue their partnership with Elgood Oy/Partco. In addition, new partnership agreements were signed with Tevella Oy and Abloy in late 2023.

Heureka's Science Camps and Science Clubs

During the school holidays, Heureka organises multidisciplinary and experiential science camps intended to inspire young people to get excited about science and technology. During the Finnish winter break in week 8 and the autumn break in week 42, two-day science camps were offered for children aged 7 to 12. As a new addition, a space camp was implemented as part of the autumn break science camps. In the summer, one-week day camps were arranged in weeks 23–28, and three-day camps in week 32. Summer camps were also arranged for students in grades 7–9.

In the 2023–2024 school year, Heureka is organising Science Afternoons for pupils of grades 4 to 9 in Vantaa’s schools as part of the ‘Harrastusten Vantaa’ project supported by the City of Vantaa. The Science Afternoon activities familiarise pupils with natural phenomena utilising Heureka’s laboratories, workshops, the Idea Workshop, Makerspace, the Science Theatre, Planetarium and exhibitions. During 2023 in the spring 54 and in the autumn 58 pupils participated in these activities, 58 pupils from grades 1–6, and 47 from grades 7–9.

Participants in the Heureka's Science Camps in 2022–2023



In 2023, a total of 1,275 children participated in Heureka’s Science Camps. During the COVID-19 pandemic, online science camps were arranged, but there was no longer any need for such activities in 2023.

Projects that advance learning

Heureka participates in both national and international projects that advance learning, teaching and teacherhood. The projects create and share science education models and methods for teaching broad-based competencies and skills as well as phenomenon-based approaches. Additionally, Heureka has a representative on the National LUMA Advisory Board and the Board of the Tiedeopetusyhdistys (science education association) and Ursa Astronomical Association, and on the Advisory Committee on Education (ACE) of the ESA.

During 2023 Heureka contributed to the following projects:

- **ESERO, the European Space Education Resource Office**, enhances interest in STEM and space-related expertise on a nationwide basis by offering additional training to teachers, events and learning material packages with support from the European Space Association ESA, the Finnish National Agency for Education, the Jenny and Antti Wihuri Foundation, and the Magnus Ehrnrooth Foundation. Heureka coordinates the network's activities in Finland.
- **GenerationAI** is a consortium project with funding from the Strategic Research Council. The project addresses topics related to artificial intelligence and data-driven technology through various events
- **Finix** is a project funded by the Strategic Research Council, developing a system for Finnish textile production and consumption with the aim of promoting sustainable development at a global scale.
- **Pop-up Nuta** -hankkeessa Brita Maria Renlundin muistosäätiön tuella Heurekan Makerspace otettiin nuorisotalojen yläkouluikäisten asiakkaiden käyttöön torstai-iltaisin.
- **OTA (Online Teaching Advancement)** was a two-year Erasmus+ project that ended in March 2023. The project produced online learning material that combined chemistry, physics and mathematics with art. TuKoKe Tutki-kokeile-kehitä -kilpailua koordinoi Kehittämiskeskus Opinkirjo ja Tekniikan Akateemiset TEK.

Fostering Finnish Science Capital FINSCI project

FINSCI (Fostering Finnish Science Capital) is a research project focusing on investigating and fostering Finnish science capital. The project is funded by the Strategic Research Council. The FINSCI consortium includes Heureka and the Finnish Science Center Association, as well as the University of Turku, the University of Eastern Finland, the University of Helsinki and science association Skope ry.

FINSCI conducts research to find ways to create better facilities for increasingly large and diverse groups of people to better understand the world and its complex phenomena. The basic assumption in the project is that fostering science capital promotes fairness and equality in society through the improved accessibility of research-based information. Heureka is responsible for implementing a work package that democratises science in cooperation with the entire Finnish science centre network. The goal is to advance inclusive science centre work, i.e. provide equal settings for everyone to participate in science, regardless of their background. This is pursued by studying science inclusion and developing science centre cooperation by means of co-creation.

In 2023, FINSCI conducted science capital interviews with 28 science centre visitors and 23 potential visitors from different communities in Vantaa. The interview material increased the understanding of people's relationship with science from the perspective of everyday life. People's experiences related to visiting a science centre were studied in five focus group discussions with participants representing diverse cultural and educational backgrounds. In the autumn, network meetings with local stakeholder groups were initiated, followed by a pilot of the Tiederetki ("Science Excursion") concept, featuring positive communal special treatment. In addition, FINSCI provided Heureka's employees with equality and diversity training. The aim of the training was to foster inclusive science centre work and lay a foundation for developing the relationship between science centres and the public.



International Heureka

Heureka hosted the first ever International Directors Forum on Science Engagement between 14 and 17 November 2023. The event was organised based on the decision of six regional umbrella organisations: Ecsite (Europe); ASTC (North America); ASPAC (Asia); RedPOP (Latin America); NAMES (Middle East and North Africa); and SAASSTEC (Southern Africa). The main topics of the Forum were misinformation and the planetary crisis – two global problems whose solutions require peer learning and cross-border cooperation. The Forum was attended by 120 science centre directors and experts from 40 countries, representing all six inhabited continents.

Heureka participated in the Future Museum project organised by the Austrian Museum Booster and German Fraunhofer Institute, which explores and develops museums' relationship with their visitors and opportunities offered by digitalisation. Between 6 and 8 June, Heureka hosted the project's meeting, whose main topic was understanding visitors with the aid of different research methods. The meeting was attended by 44 people from 27 science, art or cultural history museums or organisations from 14 European or North American countries.

Active participation in international cooperation enables Heureka to develop its activities based on an awareness of the industry's innovations, new openings and topical questions. With its own expertise, Heureka contributes to the industry's progress but also promotes the exports of its exhibitions and services. Heureka's export activities are presented on page 32.

Heureka is a member of the following international co-operation organisations:

- ASPAC, The Asia Pacific Network of Science & Technology Centres
- ASTC, Association of Science-Technology Centers
- Ecsite, European Network of Science Centres and Museums
- EUSEA, European Science Engagement Association
- ICOM, International Council of Museums
- IMERSA, Immersive Media Entertainment, Research, Science & Arts
- IPS, International Planetarium Society
- NPA, Nordic Planetarium Association
- NSCA, Nordic Science Centre Association
- VSA, Visitor Studies Association



The participants of the International Directors Forum in a group photo.

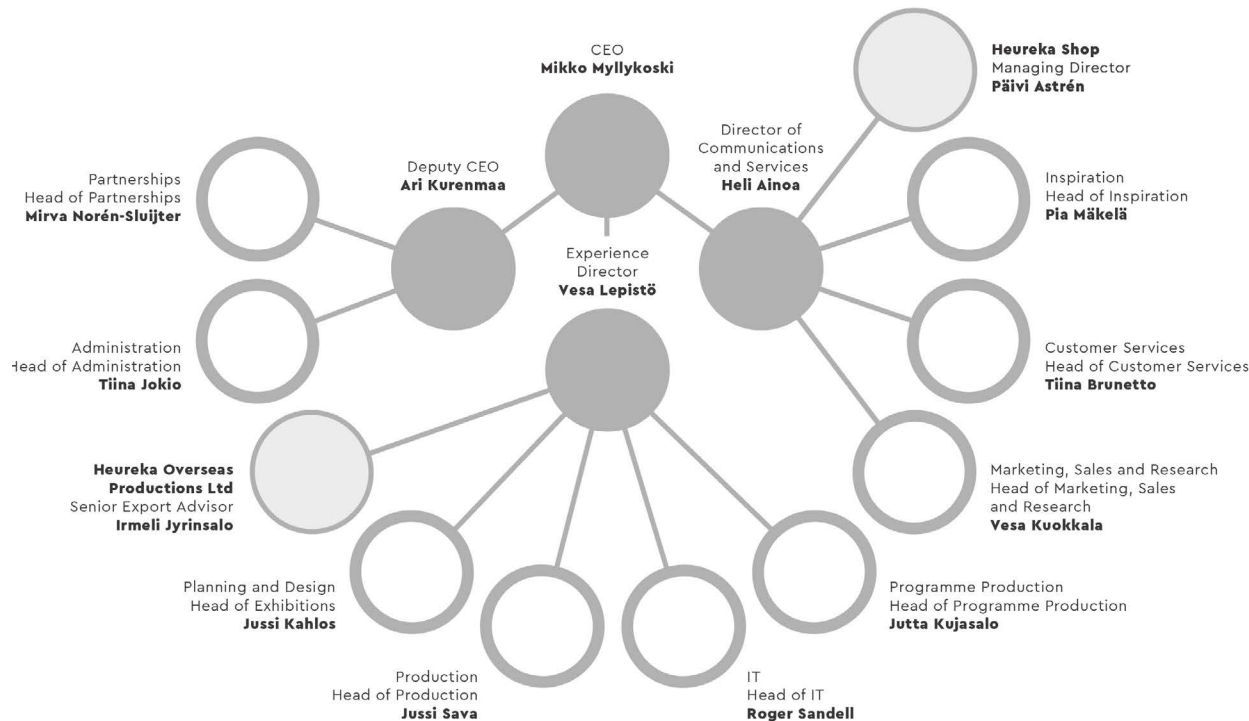
Personnel and organisation

At the end of 2023, the Finnish Science Centre Foundation had a staff of 66 (65 in 2022) full-time employees, 7 (5) fixed-term employees and 17 (17) part-time employees. The total number of person-years was 81 (77). The number of person-years worked returned to the pre-pandemic level. In addition, some school and work interns, as well as a non-military service volunteer, worked in Heureka during the year. Personnel expenses accounted for 45% (46%) in the total expenses, which corresponds to 5.6 (5.1) million euro. There were 13 (13) days of absence due to sickness per person. The nationwide reference rate for all wage earners for 2022 is 13 (Statistics Finland).

Occupational well-being remained a focus area in our operations in 2023. During the year, supervisors received coaching in occupational well-being management. An equality and non-discrimination survey was conducted in the spring and was followed by the preparation of internal principles for a safer space jointly with the employees. This work will continue in 2024 and will also be expanded to external operators. Significant investments were made to continue the development of our employees' data security competences. Friday Seminars intended for the entire staff were arranged 34 times.

During the year 2023, 52 people participated in volunteer activities. A total of 2,938 hours of volunteer work was conducted. Upper secondary school students' volunteer programmes were restored after a break caused by the COVID-19 pandemic, and five students participated in them.

Heureka's organisation at the end of 2023



Organisations represented in the Finnish Science Centre Foundation

Aalto University	Ministry of Education and Culture
Central Organisation of Finnish Trade Unions	Ministry of Employment and the Economy
City of Vantaa	Ministry of Finance
Confederation of Finnish Industries, EK	Trade Union of Education in Finland
Federation of Finnish Learned Societies	University of Helsinki

Board of the Finnish Science Centre Foundation in 2023

Markku Kuula Chairman	
Susanna Blomqvist	Samuli Siltanen
Päivi Laakkonen	Timo Valtonen
Anniina Pyly	Tapani Vuorinen
Lea Ryyänen-Karjalainen	Vesa Välimäki

Delegation of the Finnish Science Centre Foundation in 2023

Kaarle Hämeri Chairman		
Otto Aalto	Tuomas Laiho	Varpu Peltonen
Hussein al-Tae	Lasse Laitinen	Pasi Pesonen
Juha Antila	Markku Leskelä	Ellen Pessi
Jarkko Haanpää	Miia Lindell	Mika Rautio
Säde Heikinheimo	Pasi Liukkonen	Jenni Taipalkoski
Minna Heikkinen	Yrjö Neuvo	Ann-Christine Teir
Eeva Helén	Pirkko Niemi	Tuuli Toivonen
Antti Karetie	Panu Nykänen	Mikko Vieltojärvi
Vesa Kupila	Ari-Matti Näätänen	
Pirjo Kääriäinen	Kirsi Peltonen	

Heureka's honorary members 1989–2023

Eeva Ahtisaari	Timothy Kopra	Simo Parpola
Kalevi Alén	Erkki Kurenniemi	Per-Edvin Persson
Kaarina Dromberg	Lauri Lairala	Maija Pohjakallio
Jan Fast	Olli Lehto	Yrjö Pessi
Leif Fast	Martti Lipponen	Harry Pyykkö
Paul Fogelberg	Olli Lokki	Timo Relander
Jarkko Hautamäki	Tapio Markkanen	Päivi Setälä
Erkki Huurtamo	Hannu I. Miettinen	Riitta Uosukainen
Jouko Joensuu	Carl G. Nordman	Paavo Uronen
Matti Karjalainen	Heikki Oja	Matti Virtanen
Toivo Katila	Ernst Palmén	Johan Wrede

Finances

Heureka is run by the Finnish Science Centre Foundation. The support pillars of the Foundation's funding include the subsidy for operational costs from the City of Vantaa and the general subsidy from the Ministry of Education and Culture. Vantaa's subsidy was 3.9 million euro and the general subsidy of the Ministry was 2.8 million euro. The key item in the Foundation's revenues from its own operations was admission income, which totalled 3.9 million euro. Other important sources of our own revenue include partnership and project income, rental fees and science camps. In addition, the research information provided by the science community and the support offered by companies are of vital importance to Heureka's operations. Although the value of these activities is significant, they are not included (in monetary terms) in Heureka's financial statements.

Revenues from our own operations increased significantly from the previous year due to the increased visitor numbers. The share of revenue from our own operations in the company's total income was 47% (43% in 2022). The share of admission fees in the entire operational funding was 31%. The average admission income per visitor decreased by 3.2%, totalling EUR 10.81. This decrease was caused by the decrease

in Museokortti (Museum Card) contributions per visitor. The increased visitor numbers also increased rental income. Partnership and project income was approximately one million euro, as was also the case in 2022, and accounted for 8% of the total income.

Thanks to visitor numbers being higher than expected, the Foundation's operating result showed a surplus of 0.2 million euro. Investments totalled 0.2 million euro. In 2023, we started preparations for the significant investment in renewing the Planetarium. The dismantling and construction work will begin in 2024. The Ministry of Education and Culture supports this investment with a special subsidy of two million euros, half of which was received in 2023. The subsidy increased the advances received, leading to a significant decrease in the share of equity in the balance sheet total to 49% (from 57%). The Foundation remains debt-free.

The firm of authorised public accountants (KHT) BDO Oy served as auditors for the Finnish Science Centre Foundation, with Eeva Koivula, KHT, as the responsible auditor.

Heureka's Financial Structure in 2023

Income from operations	€	%
Admission income	3,862,360.48	30,5 %
Facility rentals	516,785.12	4,1 %
Partnership and project income	984,927.79	7,8 %
Export income	71,544.40	0,6 %
Other income	557,891.69	4,4 %
Total	5,993,509.48	47,4 %
Subsidies for operations	€	%
Ministry of Education and Culture	2,750,000.00	21,7 %
City of Vantaa	3,908,184.32	30,9 %
Total	6,658,184.32	52,6 %
Funding total	12,651,693.80	100 %

Key performance indicators

The key performance indicators concerning activities are determined by the Letter of Intent between Heureka, the Ministry of Education and Culture and the City of Vantaa for the purpose of ensuring Heureka's activities. The indicators have been calculated as three-year averages. The target level is shown in brackets.

The key performance indicators	2021-2023	2023
1. Number of visitors to Heureka (> 300,000)	243,589	347,926
2. Number of school visitors (> 55,000)	30,616	41,887
3. Level of recommendation in visitor profile studies (> 82%)	90	89
4. Visitors from outside of the Helsinki metropolitan area (> 50%)	56	53
5. Visitors per full-time equivalent (> 3,500)	3,194	4,290
6. Share of earned financing (> 43%)	42	47
7. Financial result (> 0 EURO)	292,749	179,172
8. Solvency ratio (> 20%)	53	49
9. Targeted external funding (>500,000 euro/year entered into accounts)	1,001,482	984,928
10. Total turnover of subsidiaries (> 2,2 million euro)	1,519,349	1,605,973

Profit and loss statement

	2023	2022
Income		
Admission income	3,862,360.48	3,069,473.16
Rental income	516,785.12	317,205.43
Partnership and project income	984 927.79	1 016 873.66
Other operating income	515,403.48	334,432.59
Total income	5,879,476.87	4,737,984.84
Expences		
Exhibitions and planning	-1,811,660.40	-1,910,452.16
Production	-810,664.67	-768,531.16
Programme production	-1,297,003.86	-980,810.18
Sales and marketing	-1,187,535.17	-1,110,002.47
Customer service	-474,776.92	-396,988.60
Inspiration	-765,821.20	-632,718.97
IT	-555,822.18	-451,947.89
Directors and administration	-1,734,718.63	-1,368,947.14
Real estate and park	-3,349,563.39	-2,908,817.29
Export expenses	-61,928.83	-70,684.08
Depreciations	-419,872.93	-313,700.49
Total expences	-12,469,368.18	-10,913,600.43
Deficit	-6,589,891.31	-6,175,615.59
Financial income and expences	110,878.78	3,530.32
Operating deficit	-6,479,012.53	-6,172,085.27
Subsidies		
Ministry of Education and Culture	2,750,000.00	2,670,000.00
City of Vantaa	3,908,184.32	3,673,747.24
Yleisavustukset yhteensä	6,658,184.32	6,343,747.24
Surplus/Deficit for the period	179,171.79	171,661.97

Balance sheet

	31.12.2023	31.12.2022
Assets		
Non-current assets		
Long-term expenditure	528,491.46	497,043.92
Tangible assets	569,871.49	852,175.18
Shares and participations	287,914.10	287,914.10
Non-current assets	1,386,277.05	1,637,133.20
Current assets		
Short-term receivables	905,602.22	883,127.85
Cash and equivalents	3,963,246.59	2,545,955.48
Current assets	4,868,848.81	3,429,083.33
Assets	6,255,125.86	5,066,216.53
Equity and liabilities		
Capital and reserves	3,043,554.49	2,864,382.70
Liabilities		
Short-term liabilities	3,211,571.37	2,201,833.83
Equity and liabilities	6,255,125.86	5,066,216.53

Partnerships

Heureka is an ethically sustainable, responsible partner that with its cooperation partners, aims to increase children's and adolescents' interest in science and thus contribute to the securing of Finland's future competitiveness. With the help of partners and sponsors, Heureka implements several different productions and supports such activities as school group science centre trips every year. Partnership with Heureka can cover an entire impact programme or a single event, for example. Many cooperation projects continue for several years, and their content is developed with the partner.

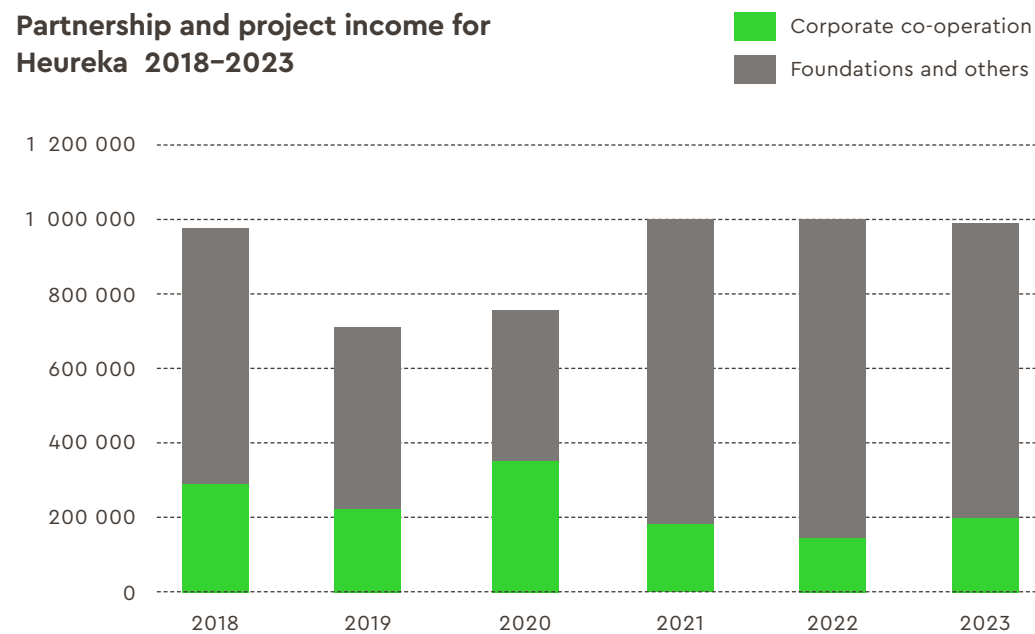
One of Heureka's long-term supporters, the Centre for Electrical Engineering and Energy Efficiency STEK ry, decided at the end of 2023 that it would continue the cooperation in 2024–2027. This partnership enables such activities as sponsored class trips, Pop-up Heureka school tours and exhibition development. Class sponsorship and inspiring science content for schoolchildren at Heureka have also been provided by the Swedish Cultural Foundation in Finland and Foundation Brita Maria Renlunds Minne. The Swedish Cultural Foundation in Finland participated in the organisation of two career option days for students in 2023. Foundation Brita Maria Renlunds Minne brought the new Pop-up Youth Centre concept to Heureka.

PPG Tikkurila is the sponsor of the Power of Play exhibition, which opened in February 2023 and has proved to be much loved by visitors. Tikkurila also cooperates with Heureka in arranging workshops for schoolchildren, in which Tikkurila's paint containers are turned into drums in the spirit of joyful recycling.

The Space impact programme is supported by the Union of Professional Engineers in Finland, Linde Gas, and the Radiation and Nuclear Safety Authority in Finland (STUK). These partners, along with other experts, have helped create the prerequisites for the new Space Travel exhibition. Linde Gas (formerly AGA) is a long-term partner for Heureka, and it has supplied the gas needed to power many science shows. In 2023, cooperation with a new partner, Abloy, started. The outcomes of this cooperation will be visible at Heureka in the spring of 2024.

Cooperation with different organisations brings innovative content and top specialists' expertise to Heureka. This is why partnerships are extremely valuable and useful for the creation and implementation of impact programmes. In 2023, partners also met each other in person at Heureka's partnership forums and the partner breakfast event arranged just before Christmas.

Partnership and project income for Heureka 2018–2023



The following companies and organisations supported the operation of Heureka in 2023

- | | |
|--|---|
| Abloy Oy | Ministry of Justice |
| Center for Electrical Engineering and Energy Efficiency STEK | National Emergency Supply Agency |
| CSC – IT Center for Science Ltd. | Nokia |
| Efima Plc | Nokia Solutions and Networks Oy |
| Elgood Oy | Nokia Technologies Oy |
| Erasmus+ | Oy Linde Gas Ab |
| European Space Agency ESA | Radiation and Nuclear Safety Authority (STUK) |
| Finnish Institute for Health and Welfare (THL) | Solita Oy |
| Finnish National Agency for Education | Stiftelsen Brita Maria Renlunds minne |
| Finnish Red Cross | Strategic Research Council (SRC) |
| Geological Survey of Finland GTK | Svenska kulturfonden (Swedish Cultural Foundation in Finland) |
| Gofore Plc | TEK Academic Engineers and Architects in Finland |
| HUMLOG Institute (Hanken School of Economics) | The City of Vantaa |
| Jenny and Antti Wihuri Foundation | The Finnish National Rescue Association (SPEK) |
| KOKO The Unemployment Fund for Highly Educated | The Union of Professional Engineers in Finland |
| Lockheed Martin Corporation | Tieteen tiedotus ry |
| Maa- ja vesiteknikan tuki ry | Tikkurila Oyj/PPG Tikkurila |
| Magnus Ehrnrooth Foundation | |
| Microsoft Ltd | |
| Ministry of Education and Culture | |

Science Shop Magneetti Ltd

The Science Shop Magneetti, owned by the Finnish Science Centre Foundation, operates as an essential part of Heureka's service concept. The company has shop facilities operating under the name Heureka Shop at the science centre itself and at the Kamppi Shopping Centre in central Helsinki. In addition to the shops, the company has an online shop located at heurekashop.fi.

The company's turnover for 2023 totalled approximately 1,2 million euro, and the result was approximately 37,000 euro. The turnover increased by 25% from the previous year.

During this operating year, visibility was enhanced by branded products and marketing. Sustainability was made a stronger and more visible part of the company's operations.

The company's carbon footprint was measured in cooperation with the Kierrätyskeskus recycling organisation as part of Heureka's overall carbon footprint

calculation. The results could be used to increase awareness of sustainable operations and detecting development targets to minimise negative environmental impacts. In November, the company was granted the EcoCompass certificate as part of Heureka's certification.

The EcoCompass environmental programme also helps implement environmental acts in a goal-oriented and planned manner at the Heureka Shop. In its environmental programme's objectives, the company committed itself to increasing the share of environmentally certified products and products made from recycled materials from the current 33% to over 50% by 2026 and to preferring non-fossil deliveries and manufacturing chains. At the end of the year, environmental action objectives were made publicly visible in the shops and in the online store.

Heureka Overseas Productions Ltd Oy

The affiliated company, Heureka Overseas Productions Ltd Oy (HOP), owned by the Finnish Science Centre Foundation, supports the activities of the Foundation by renting and selling Heureka's exhibitions and individual exhibits, as well as by selling programme services, training and consultation services. In 2023, the company's turnover totalled about 0,4 million euro. Through HOP's activities, 640,019 visitors were able to view Heureka's exhibitions abroad during 2023.

Created to celebrate Finland's 100-year independence, the Seven Siblings of the Future exhibition concept was sold to Arizona State University's (ASU) Center for Innovation in Informal Science Learning. ASU implemented a small version of the exhibition at the Arizona Science Center in Phoenix, where it opened on 4 February 2023 with the title Mission Future Arizona 2045. The exhibition has proved very successful, and the exhibition period has been extended from the originally planned one year until further notice.

The Heureka Goes Crazy exhibition continues touring North America with the title Mental Health: Mind Matters. In 2023, the exhibition was on display in

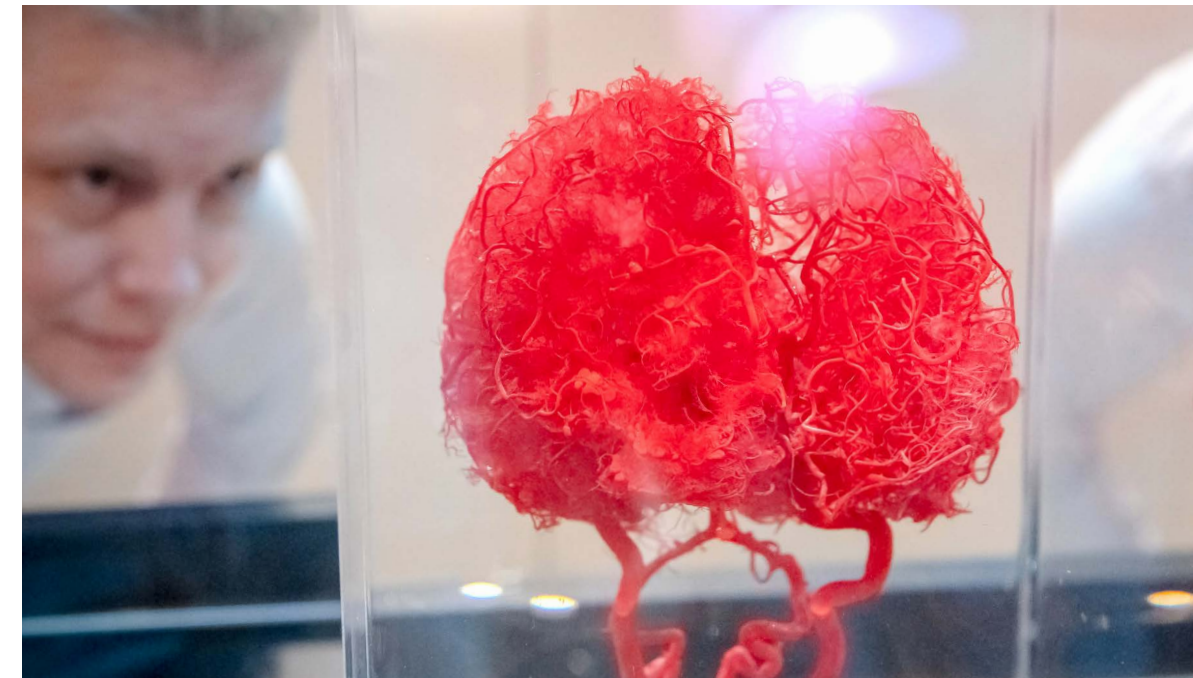
three science museums: Museum of Science, Boston, Massachusetts; Kalamazoo Valley Museum, Michigan; and The Leonardo, Salt Lake City, Utah.

Mind Your Brain! was on display in the Ahhaa science centre in Tartu in Estonia for the first part of the year. It was reopened at the Experimenta science centre in Heilbronn in Germany on 27 October 2023.

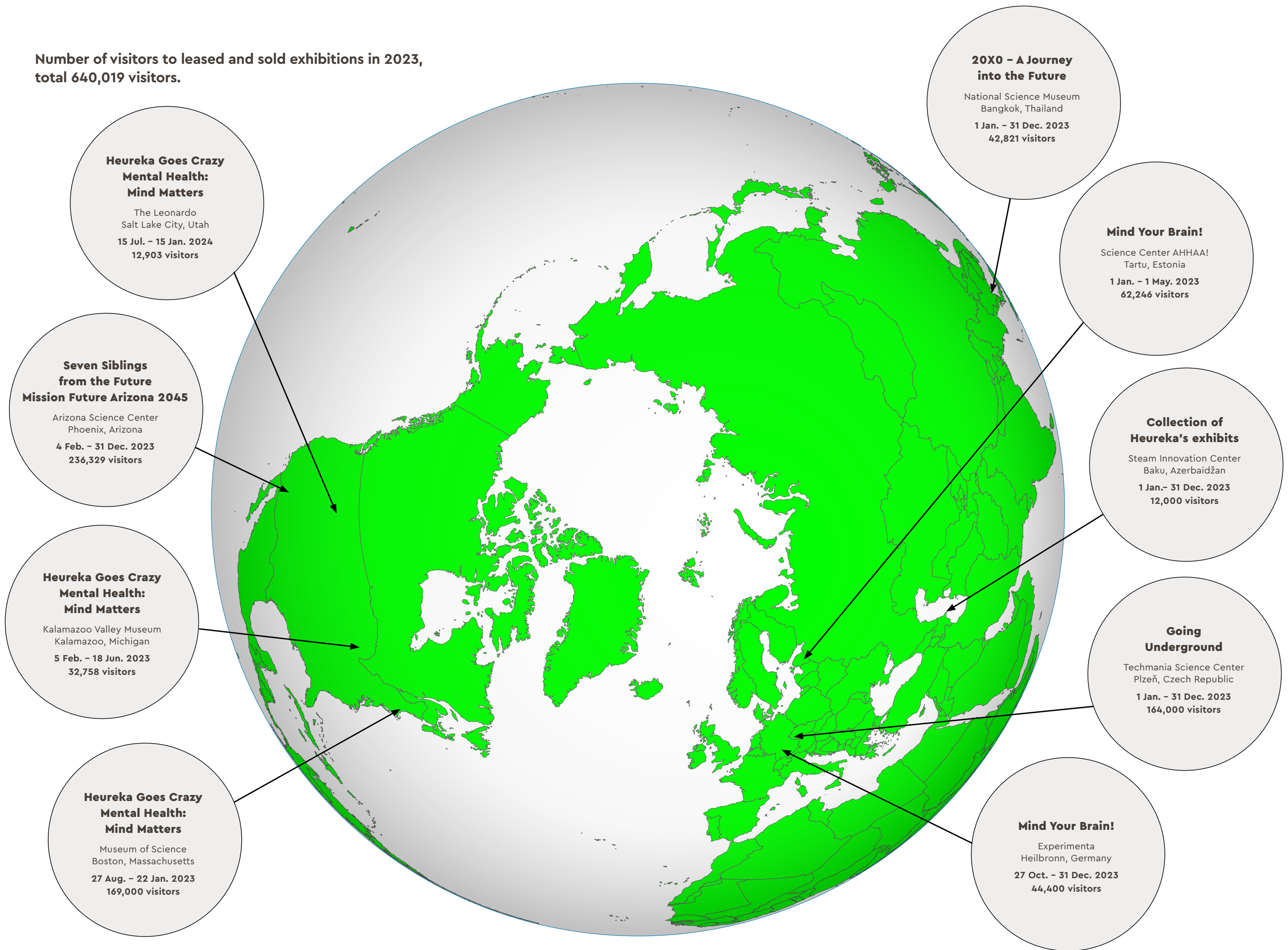
The 20X0 – A Journey into the Future exhibition, which was sold to the National Science Museum of Thailand in 2018, has been extended there. The Going Underground exhibition, which was sold to Plzeň in Czechia in 2015, has still been on display.

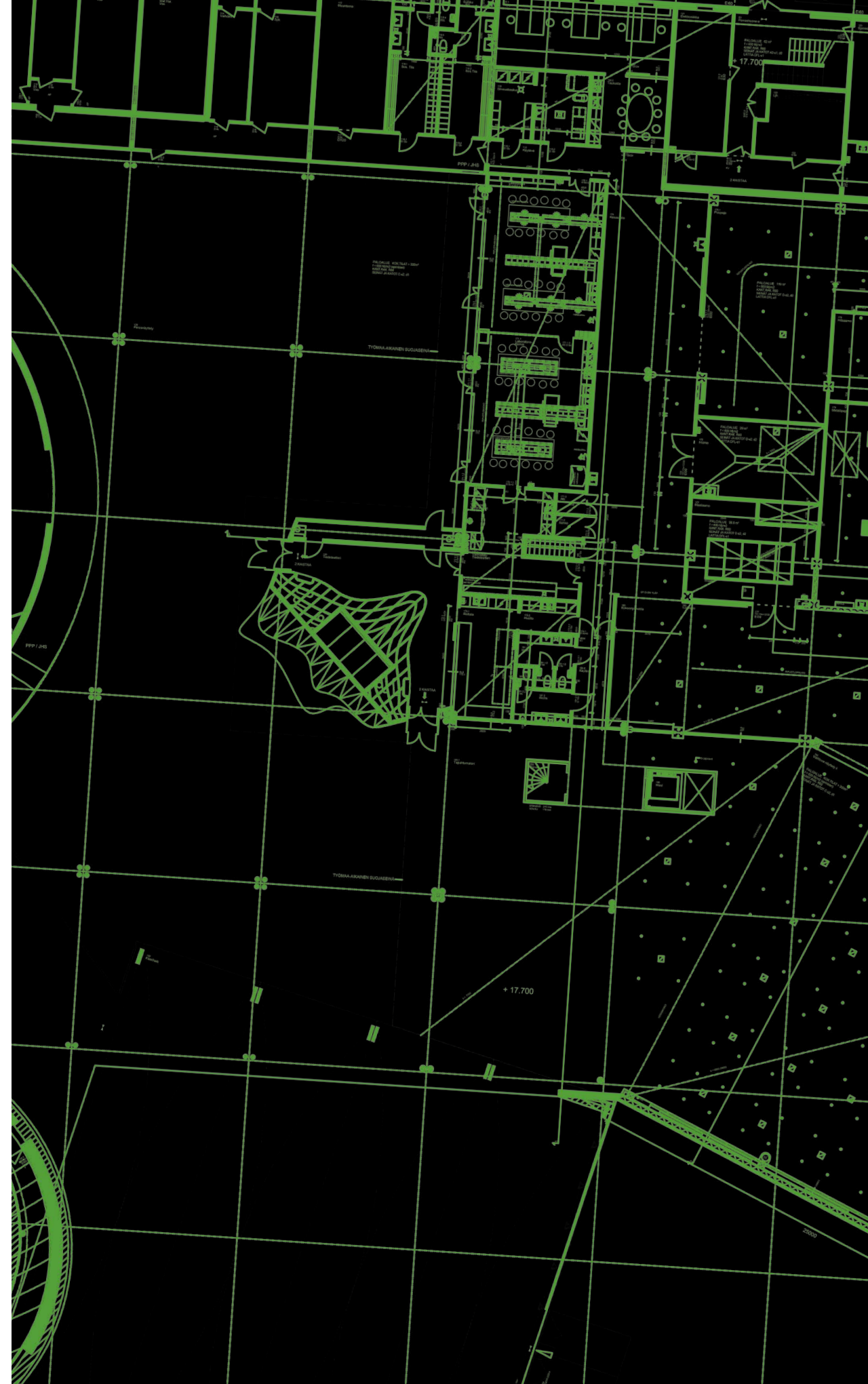
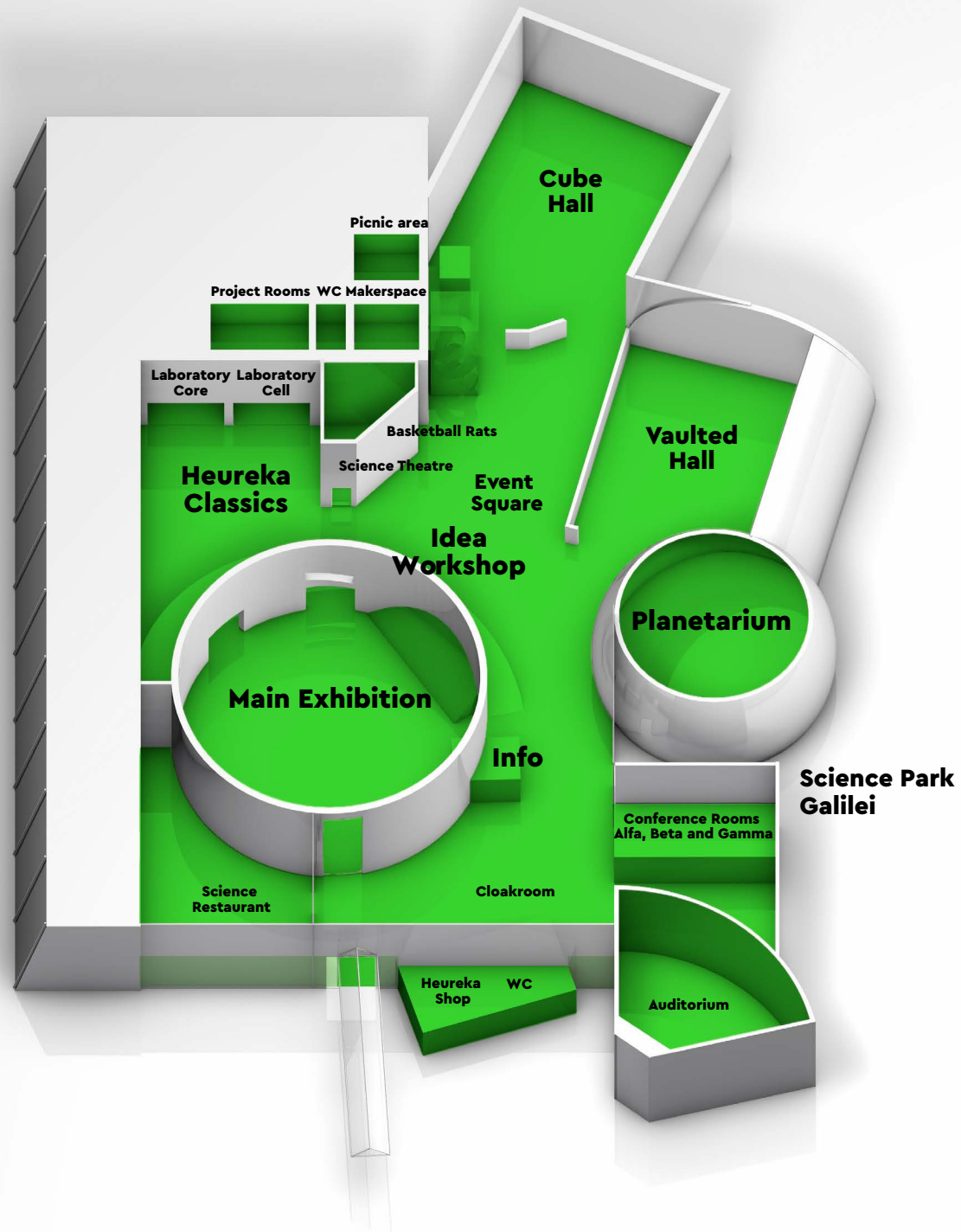
Azerbaijan's first science centre, the Steam Innovation Centre, has been operating on a trial basis in the nation's capital Baku. HOP sold a collection of Heureka's exhibits to the centre in 2022.

In addition, science theatre training was implemented in the Vizium science centre in Ventspils in Latvia in 2023.



Number of visitors to leased and sold exhibitions in 2023,
total 640,019 visitors.







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