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Copernicus Science Centre's mission is to awaken curiosity, to support individual discovery and study of the scientific world, and to inspire public dialogue about science.

The Copernicus Science Centre is a cultural institution.

Its organisers are:

The Capital City of Warsaw

The Polish Minister of Science and Higher Education

The Polish Minister of Education

Legal basis

Agreement from 1.06.2005 on establishing a joint cultural institution named the Copernicus Science Centre, with annexes dated 21.06.2006 and 26.07.2010

Granted the status of a cultural institution on 1.06.2005, with amendments dated 21.06.2006 and 26.07.2010

The Polish Act of 25.10.1991 on organizing and implementing cultural activities.

Within the first year after its opening, more than 1 million people visited the Copernicus Science Centre and took advantage of everything we have to offer. Families, school pupils and teachers, young adults, and older adults all flocked here from throughout Poland. By and large they left here satisfied, inspired, and motivated to continue their own curiosity-driven inquiry and learning. The Copernicus Science Museum grew out of a conviction that as the virtual world becomes an increasing part of our lives, our need for contact with the real world in fact increases. Bombarded by more and more electronic stimuli, we can sense a shortage of real experiences. We get fewer and fewer chances to be awed by the beauty of nature, to ponder the natural phenomena around us.

Copernicus has created a space where everyone can make their own discoveries, after first searching and testing, sometimes making mistakes. Often visitors discovering and comprehending a certain phenomenon also discover something about themselves – a talent or an interest. Hands-on experimentation engages the visitors emotionally and cognitively, enriching their personal experience. Like every discovery, it pushes them outside the rut of their daily routine and forces them to think for themselves, stimulating creativity and innovation. What is really at the centre of attention at Copernicus is not our exhibitions or planetarium shows, but the visitors themselves. How can you teach a child to swim without going near water? That's the kind of dilemma increasingly faced by today's overly theoretical school education. Without experiencing the real world, education will remain incomplete, or essentially impossible. At Copernicus, pupils get thrown straight into the deep end and fend for

themselves very well. Teachers, in turn, can take part in numerous programs to promote engaging, hands-on teaching methods.

The Copernicus Science Centre represents a new type of cultural institution. Through its exhibitions, planetarium, labs, and many other types of activity that straddle the boundary between science and art, it gives visitors a chance to participate in culture, rather than passively consuming it. It forms a platform for public debate. It is building up a network of Young Explorers' Clubs and other Polish centres for interactive education, so as to more effectively communicate with society and achieve its mission. It is actively involved in the international community.

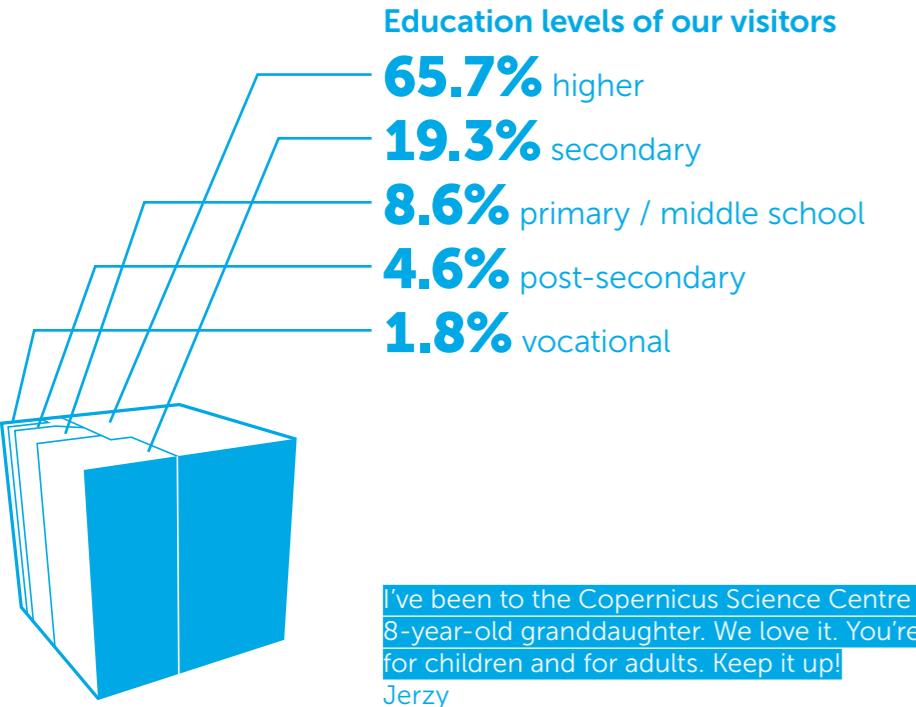
A million visitors in the first year of activity represents a huge success for Copernicus and it gives us, the people creating the institution, great personal satisfaction. It also encourages us to pose a question: What does the success of the Copernicus Science Centre say about the developmental aspirations of the Poles? I encourage you to answer that yourself.

– Robert Firmhofer, Director

Line in front of Copernicus Science Centre.



When we started working on the project, we did not dream it would be quite so popular. And yet we have had over a million visitors before the Copernicus Science Centre's first birthday.

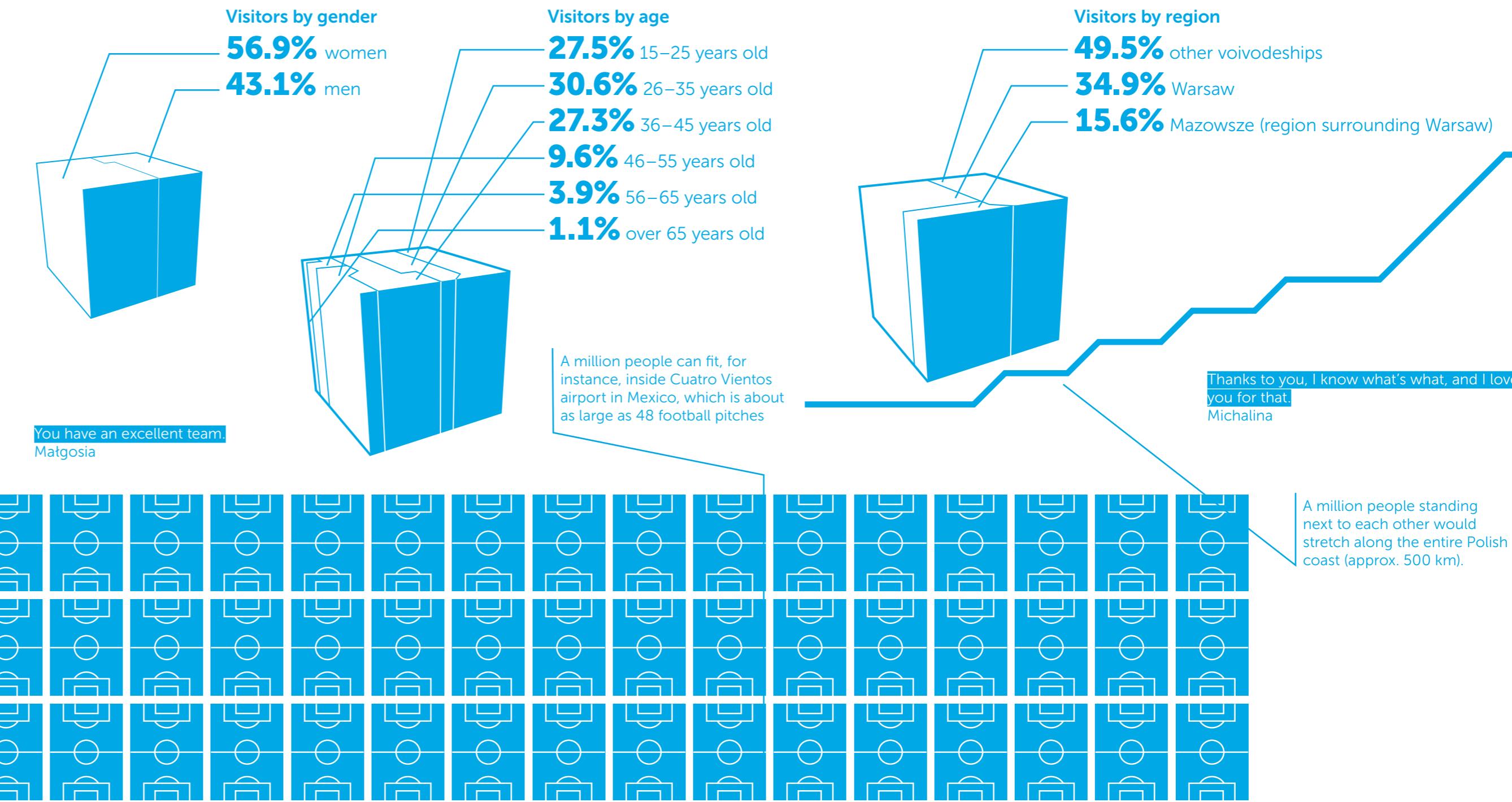


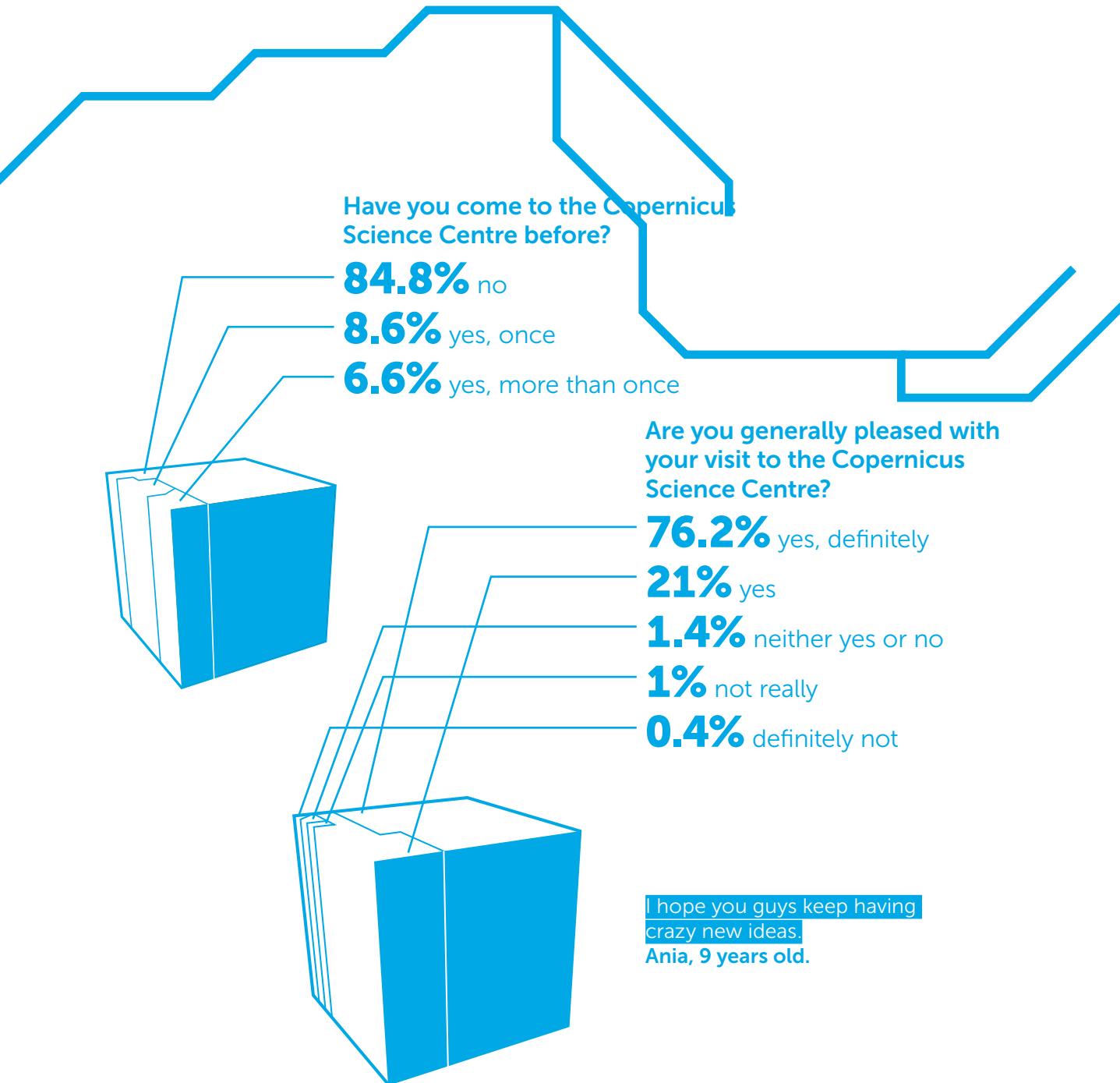
1,043,630 visitors
(making Copernicus the second most-visited science centre in Europe, after the significantly larger Universcience in Paris)

310 working days

2250–3150 visitors daily

The top-attending visitor came **42** times in 2011





Five initial exhibition galleries, with a sixth opened in 2011. We have a special team working on renovating and improving the existing exhibits, plus engineers constantly designing and creating new ones.

We are changing, improving, always in motion.



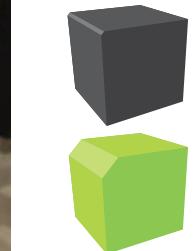
The most fascinating things often happen at the boundaries between the traditionally defined sciences. This exhibition, the only one of its kind in Europe, combines hard science with the humanities. It traces humanity's history from the invention of the wheel to the present day and the Internet.

How has our culture developed, and what can we expect from the future? Here music stands hand in hand with biology, and architecture with mathematics. It is a place where we can examine the achievements of civilization such as writing, art and technology, and study the history of philosophy and religion. Visitors can build a bridge following Leonardo da Vinci's design, become



In the exhibit **Be Still My Beating Heart**, visitors can listen to their own pulse tapped out on a drum. They can also become virtuosos of an extraordinary instrument: the **Laser Harp** using millimeter-thick laser beams instead of strings.

archaeologists using robots in their excavation work, and discover various sources of energy used now and in the past. The exhibition



M₃ **I**₁ **L**₁ **L**₁ **I**₁ **O**₁ **N**₁

The word "million" is worth at least 9 points in Scrabble.

86 exhibits

including **10** designed and made at the Copernicus Science Centre

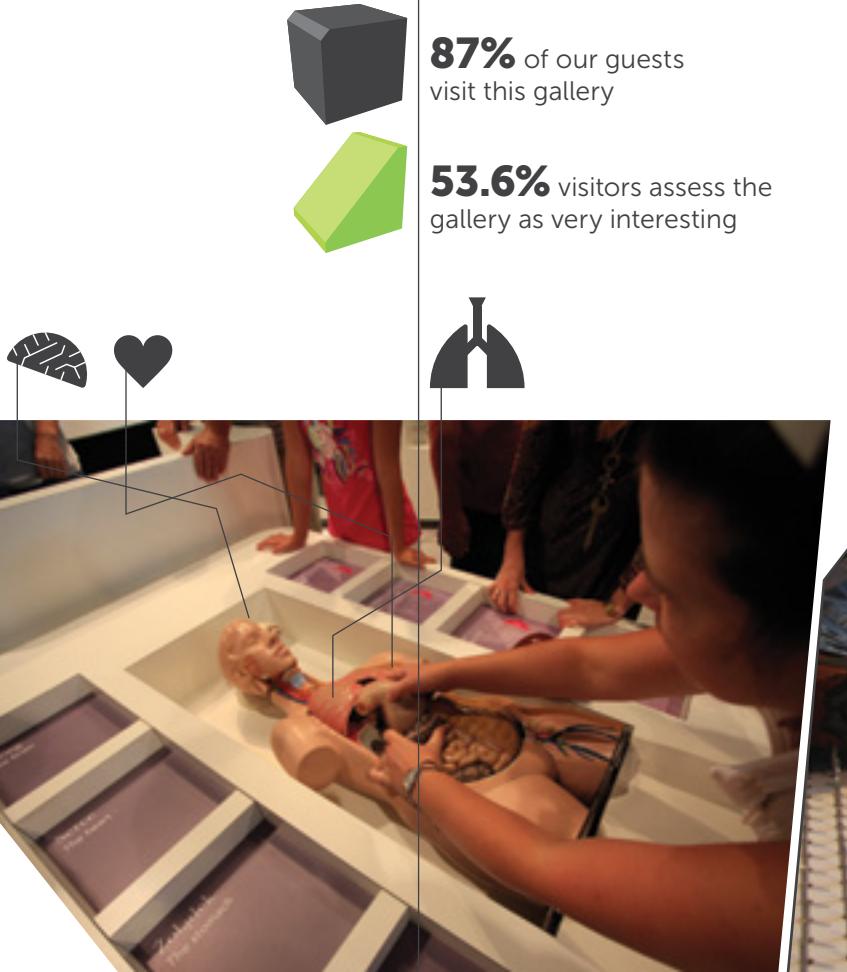
We have held **8** workshops for teachers using the exhibition space

93.1% of our guests visit this gallery

80.2% visitors assess the gallery as interesting and very interesting

In this gallery, it is the visitors themselves who are essentially on exhibit: their bodies and their abilities are the subject of experiments and observation.

Every minute, 300 million cells in our bodies die. We blink around 84 million times every year, and not even the fastest car could keep up with the nerve impulses racing to and from our brains. Blood completes a full circuit around our bodies in 23 seconds, and, on average, our feet cover a distance equal to that between Warsaw and Venice every year. In the Humans and the Environment gallery, we unravel the mysteries of the human body. Visitors are able to discover the secrets of our senses, our perception of time, and how we function in our environment.



97 exhibits

including **10** designed and made at the Copernicus Science Centre

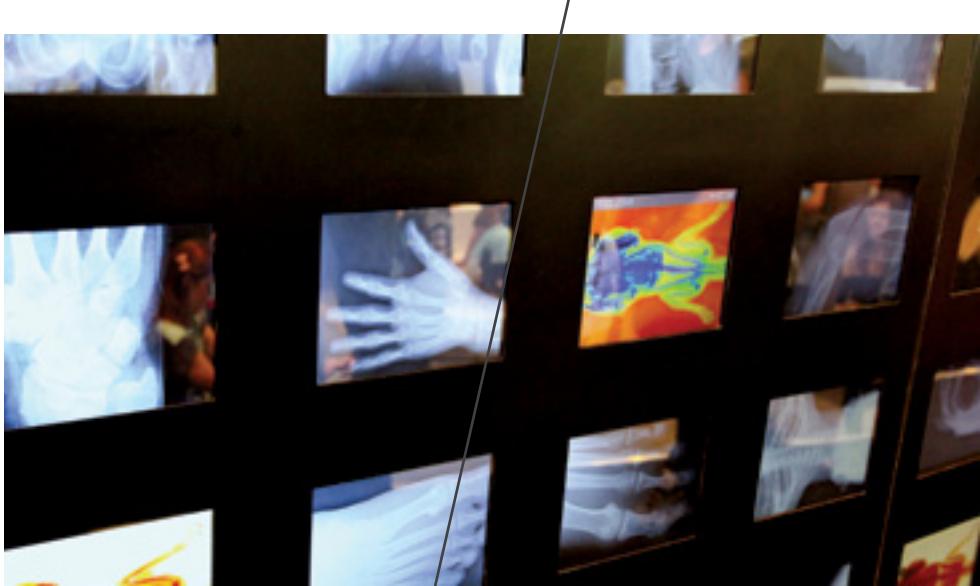
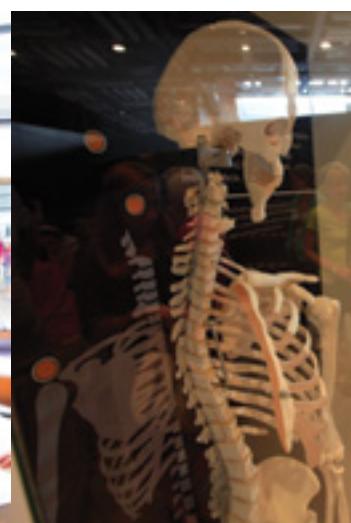
We have held **9** workshops for teachers using the exhibition space

87% of our guests visit this gallery

53.6% visitors assess the gallery as very interesting



One of the most popular exhibits is the **Human Jigsaw**, where it's not easy to fit internal organs into a model of the human body. Resting on a **Fakir's Bed** of nails turns out to be less uncomfortable than lying on a mattress covered with wooden balls. In **Make me pretty**, visitors superimpose a photo of their face with different anatomical features (such as freckles, differently colored eyes or hair, facial hair) to contemplate our self perception and self acceptance.

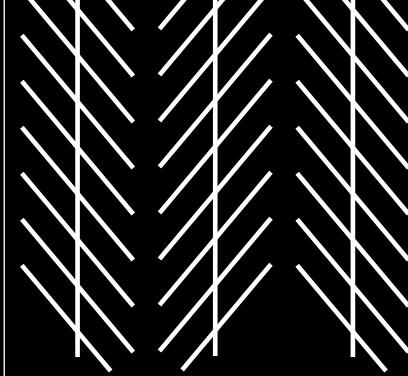


Light Zone

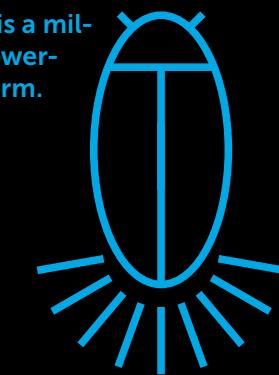
Light Zone is a narrative exhibition where the visitors are drawn into an intriguing crime story. They work with a detective – an outstanding physicist – to try to solve a mysterious series of events.

Immersed in shadows, the exhibition is a perfect opportunity to discover the properties of light and experience various optical illusions. Light is not just a physical phenomenon; it also provides us with sensual experiences. This is why the exhibits include many references to physics, psychology and the history of art; there is even a gallery of paintings under infrared light. As the detective tale unfolds, visitors learn about various forms of electromagnetic

radiation and their applications: in arts and sciences, and used by spies, detectives and policemen.



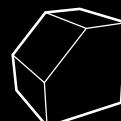
A single light bulb is a million times more powerful than a glow-worm.



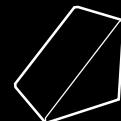
38 exhibits

including **17** designed and built at the CNK

8 workshops using the exhibition space, aimed at teachers



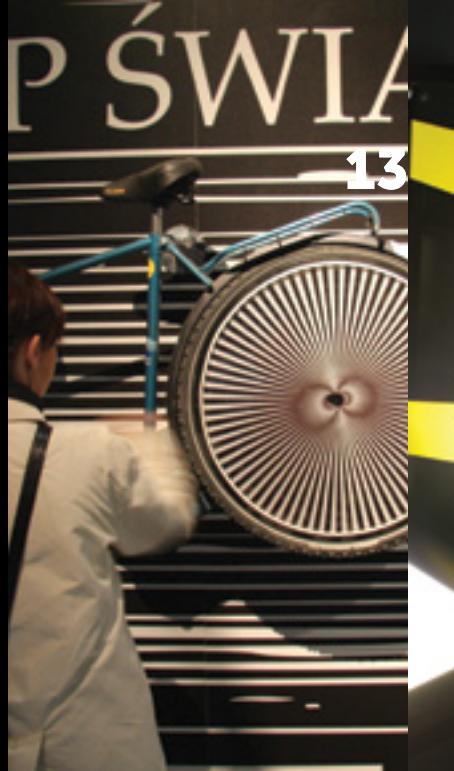
68.2% of our guests visit this gallery



51.6% of visitors assess the gallery as very interesting

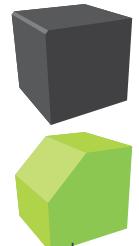


The exhibition is rather demanding. Visitors need to concentrate to keep up with the noir-style crime story, which provides the Zone with its underlying narrative thread. The exhibits are captivating, but viewers need to pause to appreciate them. The gallery is the least frequently visited, although it does have a group of dedicated fans who come back time and time again. Some of the most popular exhibits are **Hidden Perspective** and **Criminal's Hideaway**. They show how, when interpreting images, our brains can make mistakes in their perception of the environment, and how easily our vision can be fooled.

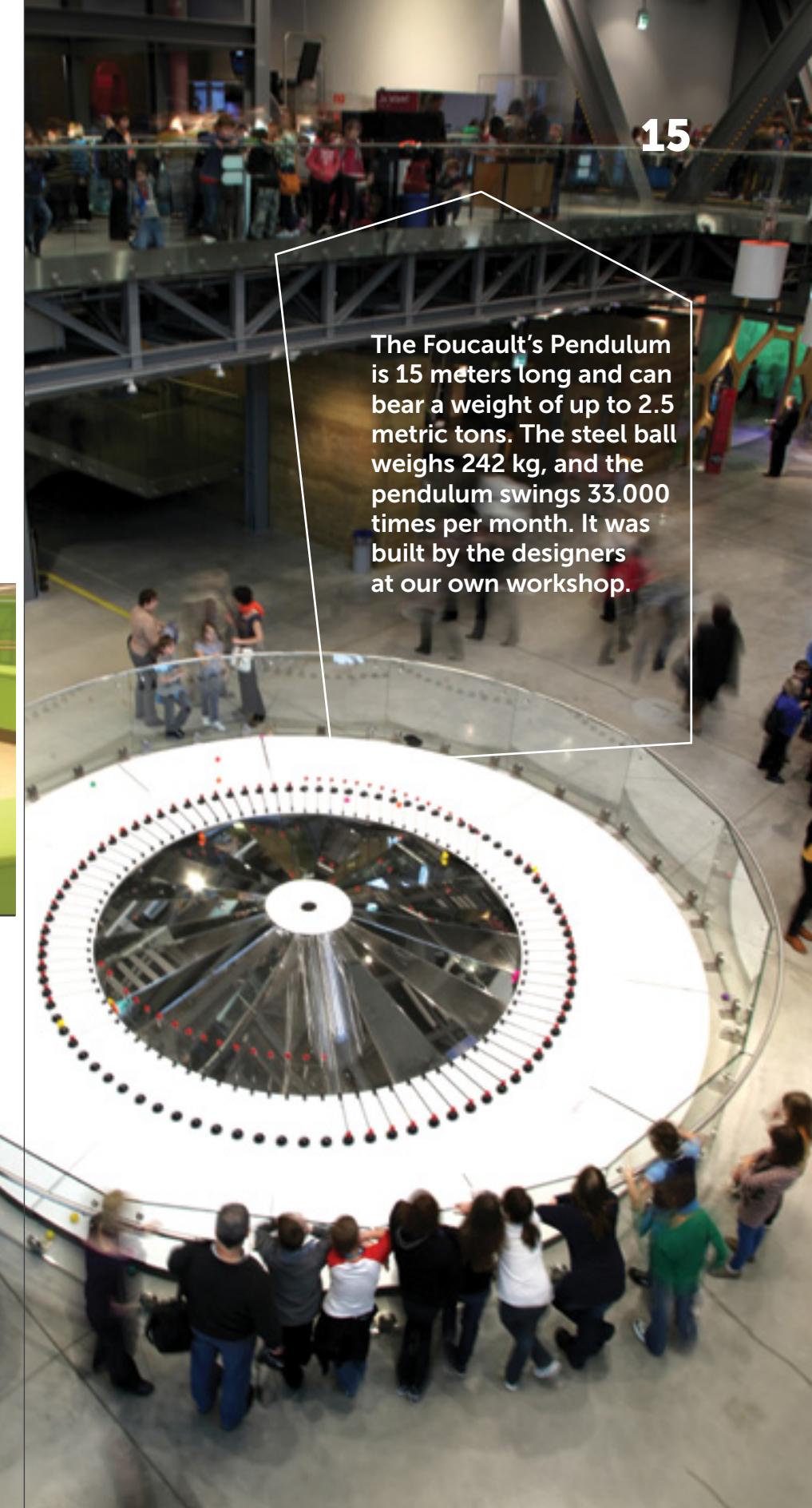


The Universe around us knows no such a thing as a state of rest – in fact there is nothing but motion on all levels, and moreover it never stops. This gallery, focused on motion, is the most dynamic place in the entire Copernicus Science Centre.

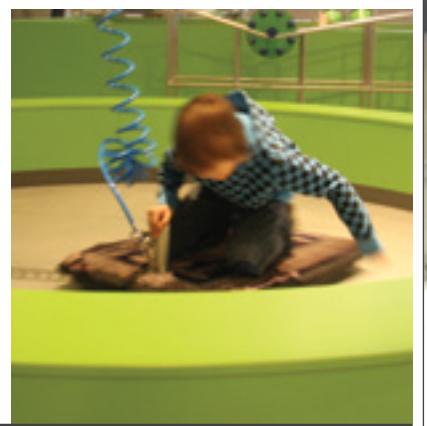
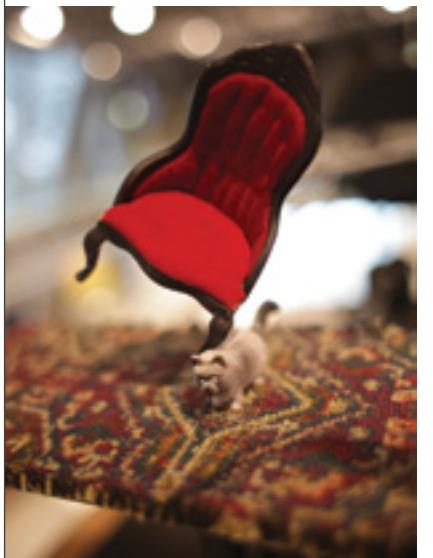
Our planet orbits the Sun once for every 366.256 times it rotates around its own axis. The Earth itself has been orbited by its faithful Moon for around 4.53 billion years. The centre of the Earth is also in motion, agitated by the constant convection movement of liquid rock, while plate tectonics and ocean flow constantly alter the planet's surface.



Our immediate environment also never stays still. The molecules of the air we breathe are constantly rushing around, and there is movement within our own bodies: blood flows through our veins and arteries at speeds up to a meter per second, while bits of information rush around our brains at speeds reaching 400 km per hour. The On the Move gallery explains this constant bustle, demonstrating the rules governing it on many levels: from the human body, through light, seismic and sound waves, to the motion of electrons.



The Foucault's Pendulum is 15 meters long and can bear a weight of up to 2.5 metric tons. The steel ball weighs 242 kg, and the pendulum swings 33.000 times per month. It was built by the designers at our own workshop.



One of the most popular exhibits is the **Coriolis Carousel**, showing how difficult it is to play football when the floor is spinning. The **Earthquake** simulator, capable of creating shocks measuring 5.5 on the Richter scale, shows you what it's like to lose the ground beneath your feet. But to really take off, our visitors enjoy using the **Flying Carpet** – a miniature hovercraft floating a few centimeters above the floor.



Buzzz!

The gallery, described by visitors as the most interesting, is an enticing yet mysterious place unlike any other: Buzzz! is a kingdom for children under six years old.

- What does the world look like to a snake?
- What's inside a kaleidoscope?
- Where does honey come from?
- What do foxes smell like?

The joy of discovering the unknown is natural for us all, and that's precisely what drives small children to learn about the world around them. They touch, listen, smell, and taste. The process is aided by an unlimited freedom of exploration and self expression.

On average, the human brain contains around a hundred billion neurons, a number 16

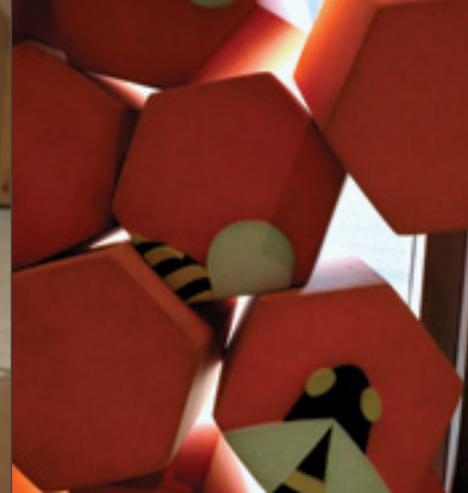
40 exhibits

We held **6** workshops for teachers of preschool and young primary school children using the exhibition space

13.4% of our guests visit this gallery

82.2% of visitors assess the gallery as very interesting

times greater than the number of people on our planet. The brain allows us to process volumes of information so great as to still remain unmatched by any supercomputer. A three-year-old's brain already weighs around 70% that of an adult's, and a six-year-old's 90%. In the Buzzz! gallery, we have created a space that stimulates and supports children's natural curiosity.



17



In Elizabethan times, women were not allowed to act; instead, their roles were played by men. Here in our theatre, both men and women are replaced by actors 175 cm tall, set into motion by compressed air, and instead of hearts they have 40 Watt speakers beating inside their chests. They are our RoboThespians – three actors of the world's first Robotic Theatre. Each individual android artist took six months to program. Their voices are provided by numerous Polish theatre and film actors.

2011 repertoire:

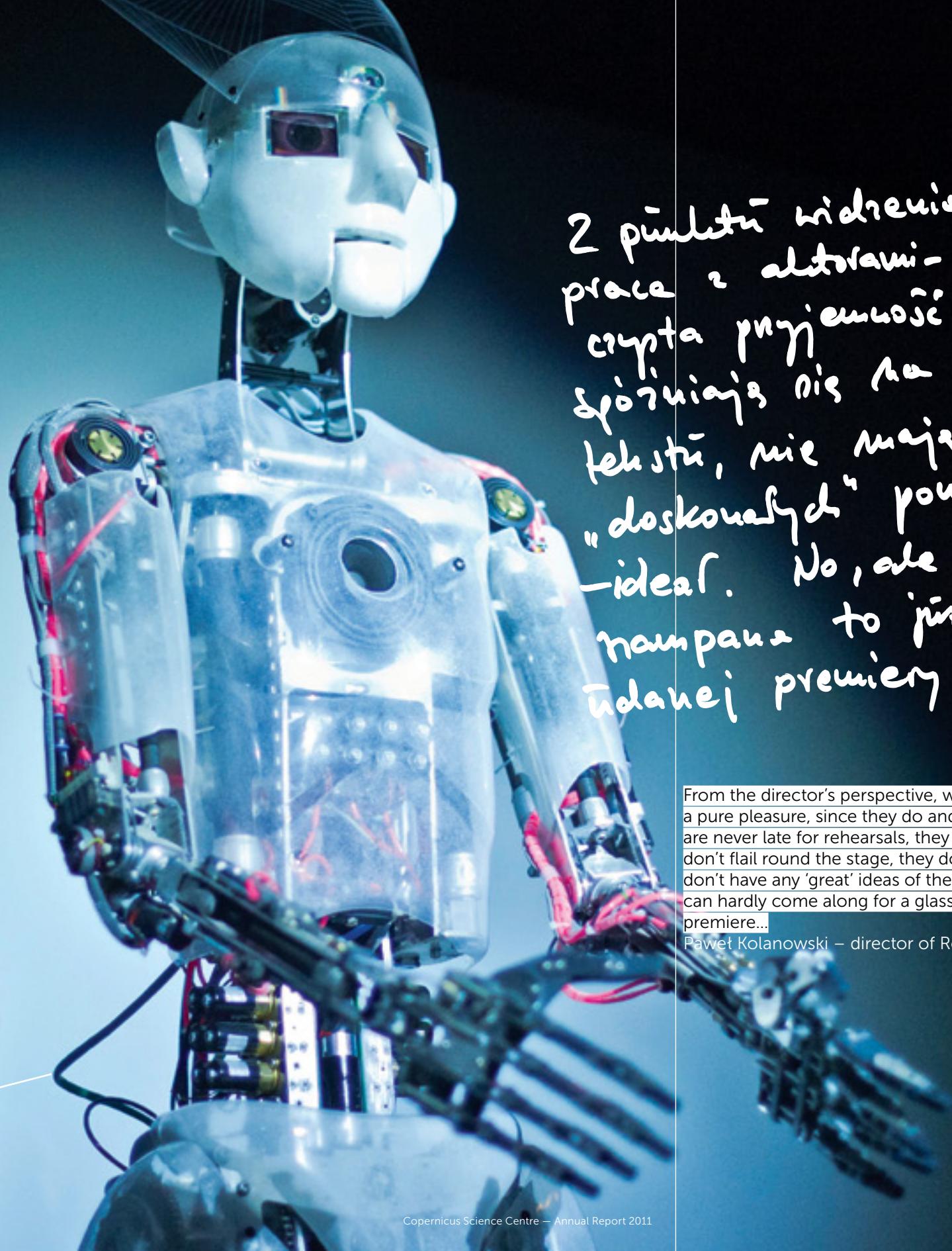
- "Prince Ferrix and the Princess Crystal" based on a short story by world-famous Polish science-fiction writer Stanisław Lem;
- "Secrets of an Empty Wardrobe, or Ghosts from the Fourth Dimension", based on Edwin A. Abbott's 19th-century novel "Flatland: A Romance of Many Dimensions". The premiere took place on 10 October.

Robotic Theatre receives an average of **500** visitors every day

170 430 visitors over the course of the year

21.6 % of our visitors watch the performances

62.7 % of the viewers assess them as very interesting



2 pünktū widzenie reprezente
prace z aktorami - robotami to
crypta przyjemność. Nie
spóźniają się na próby, nie mylgą
tekstów, nie mają gądrych
"dokonanych" pomysłów... No
-ideal. No, ale lampki
na pantu to już nie z nimi
zalanej premiery nie będzie...
P.Kolanowski

From the director's perspective, working with robotic actors is a pure pleasure, since they do and say exactly as they're told. They are never late for rehearsals, they don't get their lines wrong, they don't flail round the stage, they don't argue, change the text, they don't have any 'great' ideas of their own. Pure perfection. Still, they can hardly come along for a glass of champagne after a successful premiere...

Paweł Kolanowski – director of Robotic Theatre



2011. Over the course of the year we opened a new exhibition and four science laboratories. We launched a park filled with exhibits, and inaugurated Europe's most modern planetarium. Looks like we got plenty done in a year!

This exhibition probes the depths of the mind by exploring the boundaries between science and emotion. It is designed to attract young people aged between 17 and 25, who are known to be the hardest for science centres to draw in.

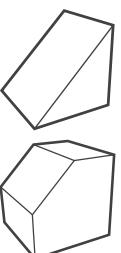
Our sixth permanent exhibition, opened on 3 March 2011. The opening event featured a special lecture by the British cyberneticist Prof. Kevin Warwick. The media declared him "Professor Cyborg" after he rose to fame for having a chip implanted into his nervous

system. The opening of RE: generation was hosted by DJ Carlos Lopez from the Spanish ensemble ReacTable Sound Systems. A "ReacTable" is an instrument based on a translucent and luminous round table. By moving and turning various objects on the surface, the different

shapes and interactions produce different types of sounds. A ReacTable also makes it possible for several people to create music at the same time.



80 exhibits



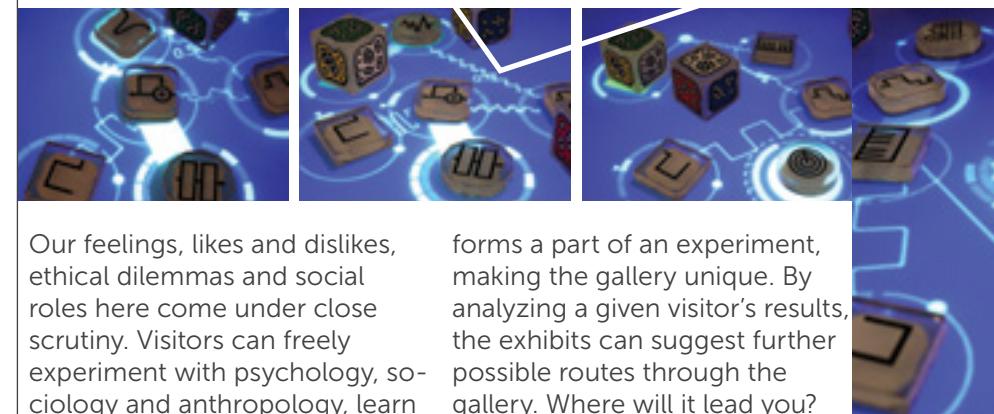
10 workshops using the exhibition space, aimed at teachers

47.7% of our guests visit this gallery

68.1% visitors assess the gallery as very interesting



Rolling Stone magazine described "ReacTable" as the hottest instrument of 2007. It was used by Björk during one of her concert tours, and it is now one of the favorite instruments of visitors to the Re: generation gallery.



Our feelings, likes and dislikes, ethical dilemmas and social roles here come under close scrutiny. Visitors can freely experiment with psychology, sociology and anthropology, learn about the mechanisms governing mass culture, advertising, the media and politics, and discover future trends in society and civilization, such as state-of-the-art robotics technologies and threats to the environment. Many of the exhibits allow visitors to participate in a game that

forms a part of an experiment, making the gallery unique. By analyzing a given visitor's results, the exhibits can suggest further possible routes through the gallery. Where will it lead you?

This exhibition is a double experiment. Everything we do within the exhibition is an experiment, as is the entire concept of the exhibition itself.

– Robert Firmhofer, director of the Copernicus Science Centre, during the opening.



Laboratories

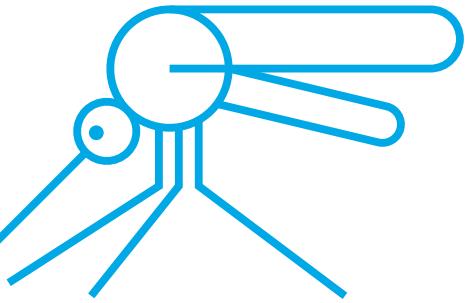
We have opened four laboratories, focusing on physics, chemistry, biology, and robotics. Our guests can familiarize themselves with how researchers work and learn about state-of-the-art equipment used in labs across the globe. They can have a go at constructing a robot scout, establish a person's age on the basis of how long their bones are, make soap in a test tube, and try to work out how to weigh an astronaut in space.

Everyone can feel like a real scientist at the Copernicus Science Centre, clad in a lab coat and goggles, poring over test tubes and Petri dishes under fluorescent lights, surrounded by measuring

equipment, titration columns, magnetic mixers, spectrometers, and pneumatics and electropneumatics kits.



We have built a giant chromosome, raced in dog sleds, created explosions, built a robot town, and danced at Roentgen's disco. The opening of each laboratory was a big celebration. We have held a Day of Chemistry (18 October), Day of Biology (15 November), Day of Robotics (6 December), and Day of Physics (20 December).

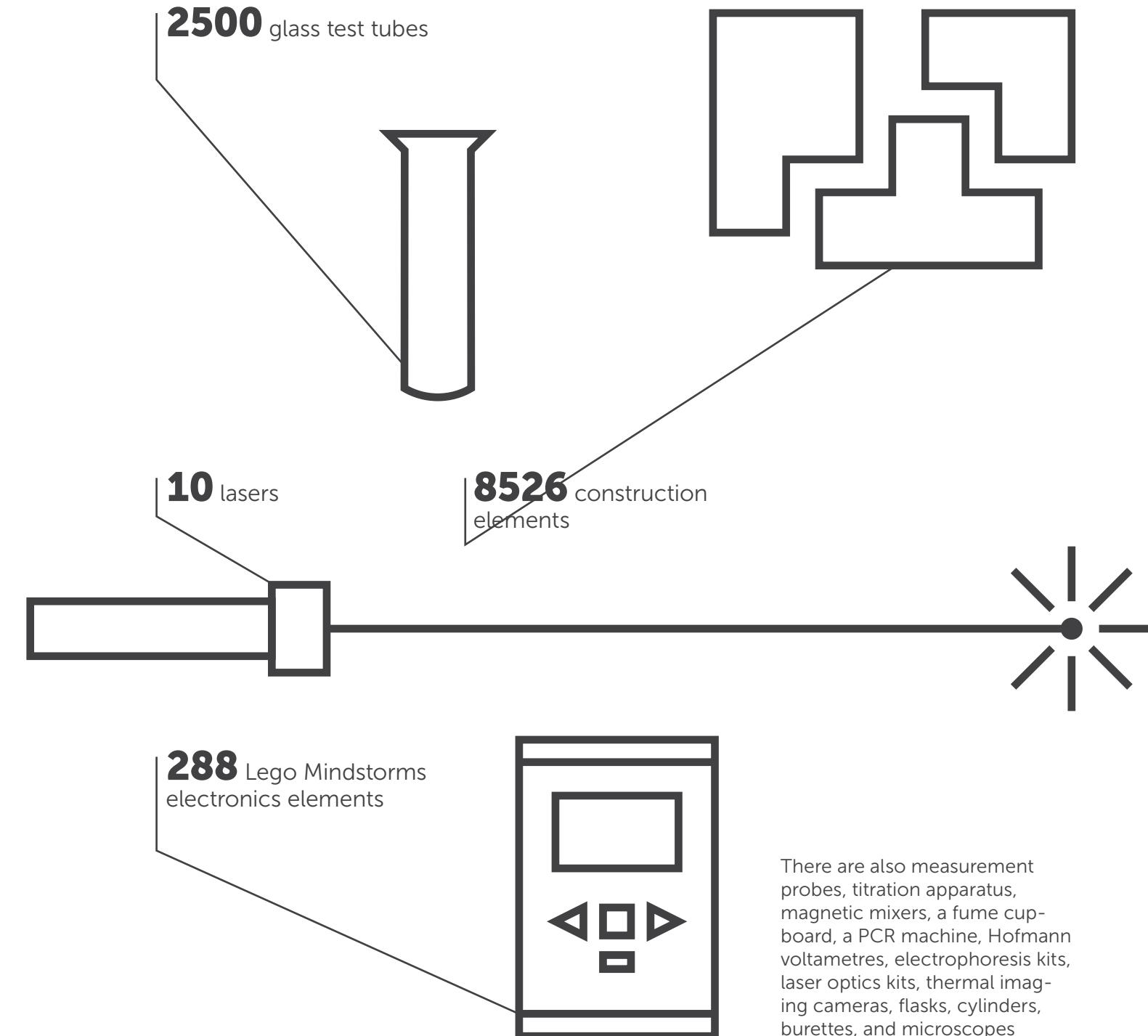
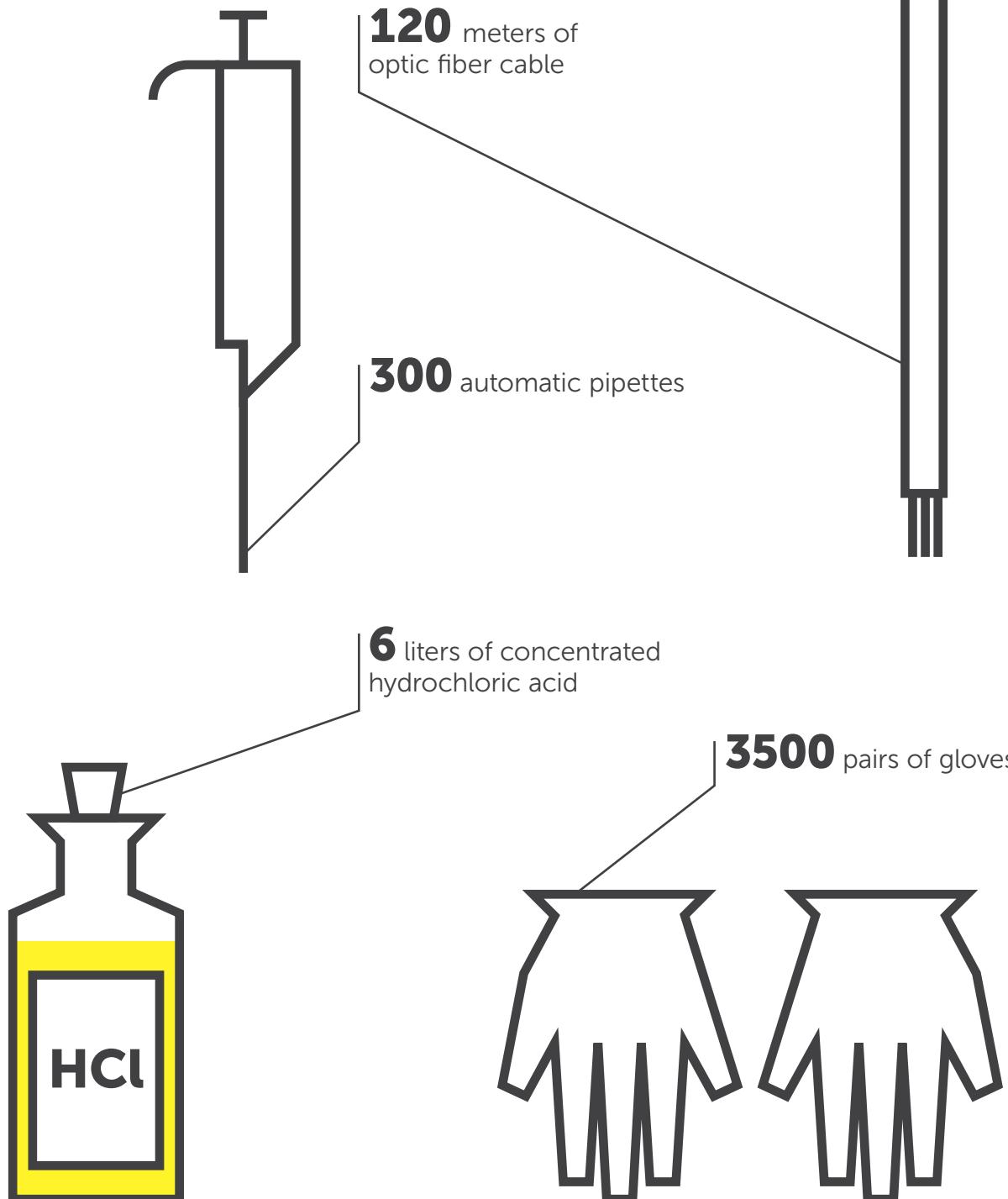


A mosquito magnified a million times would be 5 kilometers long.

Copernicus Science Centre — Annual Report 2011

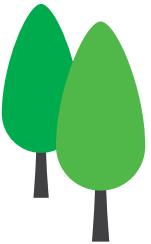


So, what do we have in our laboratories?

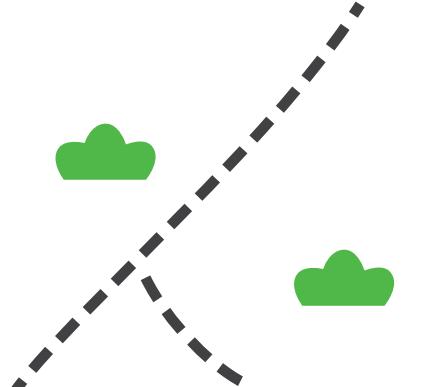


There are also measurement probes, titration apparatus, magnetic mixers, a fume cupboard, a PCR machine, Hofmann voltammetres, electrophoresis kits, laser optics kits, thermal imaging cameras, flasks, cylinders, burettes, and microscopes

Discovery Park



Since we moved into Warsaw's Powiśle neighborhood, right on the riverside, we have been helping to transform this part of the city. The Discovery Park was conceived as an open space for rest and recreation, and its plans were prepared by engineers, artists and landscape designers. It combines educational elements with urban development concepts, making it the only place of its kind.



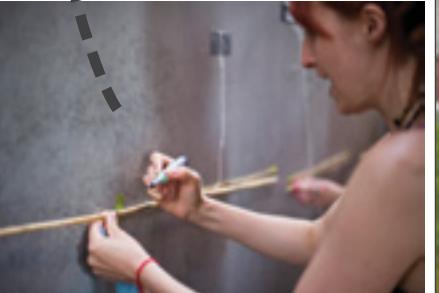
We opened the park over the weekend of 15–17 July 2011. Our guests were greeted by attractions including board games, kite-making workshops and demonstrations, tai chi and other outdoor activities, and soap bubble and fire theatre displays.

15 000 square meters

10 exhibits

57 plant species

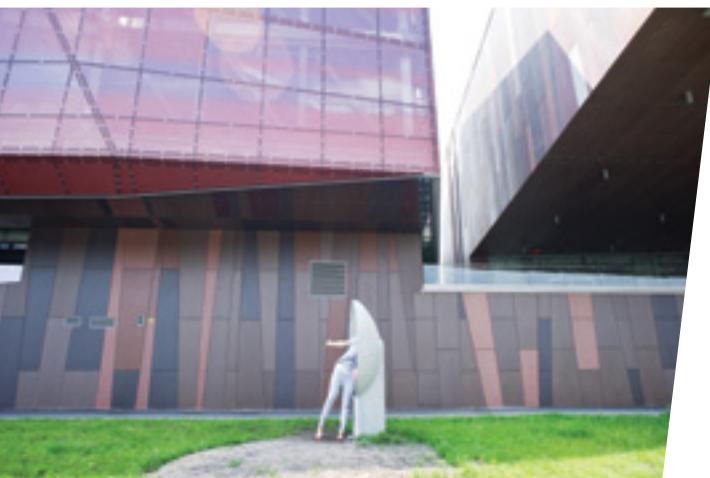
The **Whisperers** exhibit is a network of metal pipes which emit various sounds of nature when they detect a person standing nearby. Visitors can compose concertos using the "instruments" of thunder, ocean waves, wind and rain, while the **Echo and Conference** sound installations allow them to communicate over long distances.



The riverside location places the park firmly in the "Natura 2000" corridor; it is a perfect place for watching birds nesting on the Vistula.



29



The Heavens of Copernicus

Even though we are surrounded by city lights, neon signs, lamps and even smog, here in Warsaw there are still 20 million stars visible in our night sky – just as many as on a completely cloudless night in the least urbanized parts of the world. How is that possible? Thanks to an advanced Megastar stellar projector housed under the 16-meter dome of the Heavens of Copernicus – one of Europe's most modern planetariums.



The building's architecture is intended to be suggestive of the erratic, glacially-carried boulders typical of the Vistula valley. The planetarium is encased in elevations made of special glass; it is adjacent to the main building of the Copernicus Science Centre, and it is stunningly lit up at night.



Installation of the planetarium started with the assembly of the 16-meter-high, 3-ton screen and projector system. The spherical screen completely surrounds the audience, providing a sense of being completely immersed in the projected world. The impression is enhanced by the state-of-the-art sound system spaced around the dome, and the reclining chairs. The studio is equipped with high-power computers and software. The shows to be projected were translated and their Polish soundtracks were recorded.

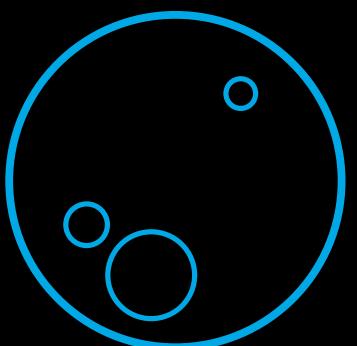
The projector itself, a Megastar II A commissioned from Ohira Tech in Japan, is a meter tall, ovoid in shape, and weighs 80 kg. It is the most modern stellar projector in Europe, and the largest produced by the company.

The opening gala of the planetarium took place on 19 June. It included multimedia astronomy presentations, a concert, and video screenings projected on to the side of the building. Prior to that, we created a living map of the sky by taking a photograph from above of people arranged into constellations, shining torches into the sky. We also announced a campaign to count the number of stars visible in various places – the data gathered was used to create a map of locations in Poland best suited to observing the night sky.

When the Heavens of Copernicus planetarium first opened, we had six shows for different age groups, from pre-school children to adults. Over the next six months, we acquired a further eight shows. Each is preceded by a display of "Warsaw Skies". The planetarium changes its repertoire every six weeks or so.

As well as classical presentations, the planetarium also serves as a venue for meetings, such as a debate with the participation of Russian cosmonauts, a meeting with Prof. Hiroaki Akiyama, director of the Institute of Education on Space at the University of Wakayama, and a live screening of the final landing of the space shuttle. The most popular presentations are the outdoor observations of the sky during events such as lunar eclipses and meteor showers.

51 shows every week
137 seats in the projection hall
148 644 guests to date
96.2% guests have given the shows and their educational value positive reviews
33.3% planetarium guests have previously visited the Copernicus Science Centre



For teacher and educators

Instilling a passion for discovery, awakening curiosity, fostering dialogue and teamwork, promoting engaging work methods, offering freedom for critical thinking and support for creativity – discover how we imagine our schools could one day be like, and meet those who share our dreams.

1 conference

268 educational kits designed and produced by the Copernicus Science Centre

88 meetings and workshops for teachers and educators

2981 participants

310 281 school group tickets sold

Young Explorers' Club

Young Explorers' Club is a national program coordinated by the Copernicus Science Centre. Supervised by teachers and educators, young explorers do their own experiments and scientific research. YEC allows everyone to become a researcher. We do not hold exams or give out grades; there are no mistakes to be made. We have fun and encourage young people to verify their own hypotheses. There are no ready solutions. Club members use their initiative to find answers to research questions, under the supervision of club leaders. Such efforts to encourage schoolchildren can bring astonishing results far beyond simply expanding their existing knowledge. One of the most effective methods is inquiry-based learning, encouraging young experimenters to think for themselves; in turn, this equips them with powerful learning tools – a creative and critical approach to tasks and an ability to solve problems. The Clubs, affiliated into a nationwide network, have access to a database of tried and tested experiments, exchange ideas, and organize joint projects.

2011: 125 clubs across Poland. 18 free on-site and 4 external training sessions for teachers and educators interested in setting up Clubs. 270 trained participants. 250

children and carers attended the Copernicus Science Centre for a meeting with the astronaut George Zamka. 3 Clubs at the Science Picnic. Formulation of a three-year strategic program for Young Explorers' Club. Formation of the first Clubs in Georgia and Belarus.



Teachers' Afternoons with Copernicus

During the school year, Thursday afternoons at the Copernicus Science Centre are devoted to teachers. These regular meetings provide an opportunity to expand our collaboration and dialogue with educational circles. We provide free entry to exhibitions; teachers can look around the Centre, and get to know the galleries and exhibitions. They are looked after by our explainers, who are on hand to answer questions about individual interactive exhibits. Many teachers regard their visit as a stepping stone prior to bringing their pupils. During the Teachers' Afternoons, we present what the Centre has to offer and important information on our plans for the future, and discuss them with the attending teachers. However, what we value most is the opportunity for direct, unhurried conversations over coffee. We value hearing about the teachers' impressions of the exhibitions, as well as their ideas on how to use individual exhibits in the context of the core curriculum. The teachers' needs and expectations are used as the source of inspiration for future projects.

2011: 38 Teachers' Afternoons with Copernicus. Over 100 participants from across Poland (working with children in kindergartens, elementary, junior high and high schools, and with young people in higher education, as well as head teachers). 91% of participants expressed an interest in taking part in future meetings, 94% said they intend to come back to the Copernicus Science Centre with their students, and nearly 85% stated that the knowledge and understanding they gained at the Centre is useful in their work.

Workshops using the educational potential of exhibitions and individual exhibits

One of the Centre's strategic goals is to use our exhibits in formal and informal education, improving knowledge and understanding, and stimulating teachers' and educators' creativity. In February, we started a series of workshops using our gallery space. We work with teacher training centres and with methodology advisers. Each workshop followed a different scenario and program, and was tailored to meet its participants' expectations.

2011: 12 workshops for teachers of physics and natural sciences (2 workshops), biology (1), preschool (3), early education (3), vocational courses (2), and physical education (1). 340 trained teachers. Each workshop received between 85–96% combined good and very good scores from the participants.



For teacher and educators

Workshops on "Climate Box" educational kits prepared by the Copernicus Science Centre

"Climate Box" these kits contain materials and instructions for ten experiments on the subjects of climate, climate change, and the effects on those changes on the environment and the human population. The project was created at the Copernicus Science Centre on commission from the Ministry of the Environment as part of the "Partnership for Climate" initiative. In September and October, the Centre held a cycle of workshops for middle and high school teachers, including leaders of Young Explorers' Clubs.

2011: 8 workshops for 78 teachers. The events were very well received, with 80% participants assessing them as very good and the remaining 20% as good.

"Marie Skłodowska-Curie Lessons" are educational kits prepared on commission from the Bureau of Education of the Capital City of Warsaw. 2011 was the "Year of Marie Skłodowska-Curie". Back in 1907, the Nobel Prize winner set up a group known as the Cooperative. For two years, she and a group of scientist friends conducted an educational experiment at their homes using very simple materials. Their children of various ages studied natural sciences using observations, experiments,

and field studies. The structure of our workshops was inspired by the notes kept by one of Skłodowska's students. The participants (natural sciences teachers from Warsaw's primary schools) practiced numerous techniques of interactive working with their students, and learned simple, interesting experiments explaining basic natural laws.

2011: 8 workshops for 133 teachers. The workshops were rated very highly (77% participants rated them as very good and 21% as good). The educational kits and their usefulness as teaching aids also scored very highly (61% rated them as very good and 35% as good).

Show and Tell Conference
Although this was the 5th time the conference was held, it was the first time that we were able to welcome the participants to visit the entire building. As part of the action-packed program, the 2011 participants took part in Young Explorers' Club workshops, discovered opportunities provided by the Centre's laboratories, and took part in a science happening. They were also introduced to two learning aid kits allowing students to conduct a range of experiments, and found out how to use Skłodowska-Curie's methods to weigh air and demonstrate the Archimedes principle. During lectures, guest researchers shared their experiences of working in interdisciplinary sciences with the participants. The teachers also visited all permanent exhibitions and viewed a projection at the Heavens of Copernicus planetarium.

2011: 3-day-long conference (26–28 August). 194 participants from across Poland, as well as guest teachers from Georgia and Belarus. The conference was extremely successful, with 88% participants giving it the highest score of "definitely enjoyed". The workshops and the wide-ranging, interdisciplinary conference program proved to be the most popular.

Events

Popularizing science – making the unfamiliar familiar and stimulating people's inherent curiosity – lies at the very core of the Copernicus Science Centre's activities

Unleash Your Mind. Meetings between scholars in humanities and naturalists.

The most fascinating research happens at the boundaries between the traditional sciences, leading us to expect an increasingly comprehensive and multidimensional description of the world around us. Recognizing this need, we continued our cycle of debates started in 2010, "Unleash Your Mind. Meetings between scholars in the humanities and naturalists", implemented jointly with the Centre for the Thought of John Paul II. In 2011, we held three debates: "Mind Inside Brain or Brain Inside Mind? Science Tries to Pin Down Consciousness", "What Do We Need Gender For?", and "Does Suffering Enoble Us?". We have taken on issues important in modern society, inviting specialists in both the humanities and social and natural sciences.

2011: 3 debates, 540 participants, and 2200 people following the meetings online. 95% of the participants assessed the debates positively.

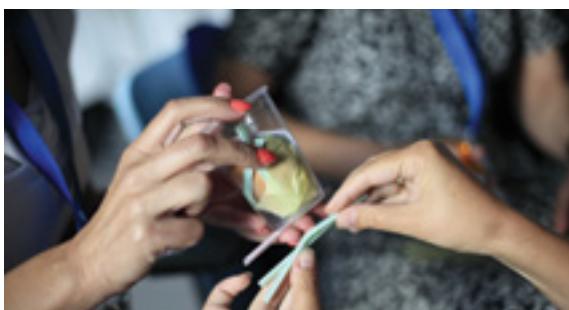
Suspicious Minds, or Summer Cinema.

A cinematic journey through the human mind? Why not? Between July and September, we held weekly film screenings. The Discovery Park provided the outdoor projection space, with the repertoire ranging from "The Matrix" to "The Diving Bell and the Butterfly". Prior to each screening, viewers took part in a discussion with invited specialists in neurology, psychiatry and neurosurgery. Attendance was free. The project was curated by the Generator Foundation, popularizing cinema therapy in Poland and studying the influence of cinema on culture and our perception of the world.

2011: 8 films, over 2000 viewers

15th Science Festival

During the 15th Science Festival, we worked with the Bureau of Education of the Capital City of Warsaw, Warsaw's Critical Mass organization, and School Complex No. 21 to organize the Chemistry Picnic at the Discovery Park on 18 September. The program included scientific experiments and chemistry demonstrations. We also held workshops for children, Lessons with M. Skłodowska-Curie, and psychology events for young people and adults, as well as workshops associated with the RE: generation gallery.



However, the most colorful event was the Critical Mass Bicycle Ride through Warsaw in the footsteps of Skłodowska-Curie, who herself was well known for her love of cycling.

2011: workshops, over 2500 participants, 17 kilometers covered by over 1000 cyclists

YouTube SpaceLab

A global competition for students aged between 14–18, whose task it is to devise a scientific experiment that can be conducted in space. The competition has been created together with NASA, the European Space Agency (ESA), and the Japan Aerospace Exploration Agency (JAXA). The Copernicus Science Centre is the project's Polish partner, and the patron of the event is the Minister of Education. Poland's high school students submitted six experiments which could be conducted in space. The only countries to submit more concepts were the US and India. In 2012, an international jury will decide whether one of Poland's entrants will attend the semi-finals in Washington.

FameLab

A global competition for students aged between 14–18, whose task it is to devise a scientific experiment that can be conducted in space. The



competition has been created together with NASA, the European Space Agency (ESA), and the Japan Aerospace Exploration Agency (JAXA). The Copernicus Science Centre is the project's Polish partner, and the patron of the event is the Minister of Education. Poland's high school students submitted six experiments which could be conducted in space. The only countries to submit more concepts were the US and India. In 2012, an international jury will decide whether one of Poland's entrants will attend the semi-finals in Washington.



We have participated in the following events:

Powiśleńia Festival,
24 September: scientific demonstrations and workshops for the public

Winter in the City and Summer in the City events, 15–25 February and 1 July – 31 August: scientific workshops and experimental stations; 3300 free entry passes for children

Museum Night, 14 May: the exhibitions were free to over 2500 visitors

Family Workshops

Working with children since 2007, we have been seeking answers to many burning questions concerning the world around them. This year we pondered issues including: Where does the electricity in our power sockets come from? What happens to our trash? The workshops are aimed for children between five and eight years old, together with their carers. They are an excellent way of spending time as a family, stimulating creativity and children's scientific curiosity. At the end of each workshop, participants take home materials supplementing information presented during the event and giving ideas for experiments that can be conducted at home.

2011: 80 workshops, 2083 participants (1013 children and 1070 carers). We have also published "Family Booklets": 12 brochures covering a range of topics, providing inspiration for further experimentation and study.



Why? What for? How?

Why does the Moon change shape? Where do rainbows come from? Why do animals have tails? Since 2009, we have been working with Polish Television on preparing episodes of the children's popular science program "Dlaczego? Po co? Jak?". We encourage kids to conduct experiments that help explain natural world phenomena. The program was aired on Channel 1 of Polish TV; individual episodes can be watched online

Christmas present workshop

Workshops for children aged between 7–12 and their carers. We made toys while learning many fascinating facts about shifting centres of gravity. All participants made three wooden puppets with moving parts; they work by carefully balancing their centre of gravity.

2011: 3 types of toys, 4 workshops, 260 participants (140 children and 120 carers); 96% participants assessed the workshops as very interesting, and all were happy with the quality of their toys.

Experiment!

Long before the construction of our building was finalized, the Copernicus Science Centre held a travelling exhibition. Since 2006 it has visited hundreds of cities at home and abroad, and it has been presented at schools, museums of technology, and science festivals. The Experiment! exhibition has already travelled a total of 103.074 km, or ten times the distance between Warsaw and Guatemala. The exhibition consists of 22 exhibits constructed entirely at the Centre's workshop

2011: as of this year, the Experiment! exhibition has become part of our commercial, fee-charging activity, although it still makes 5 free trips per year. The exhibition took 24 trips, and was seen by 70.000 visitors.

111 workshops

approx **8500** in workshops, debates and festivals

5800 free entry passes

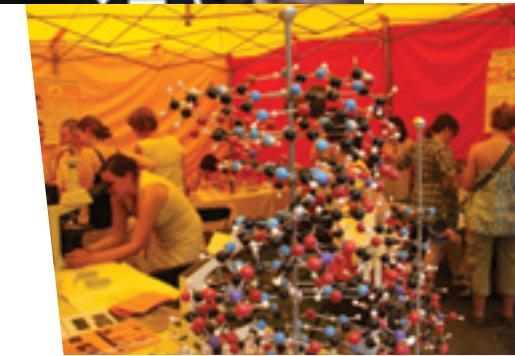
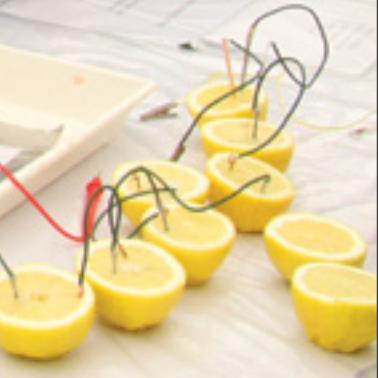
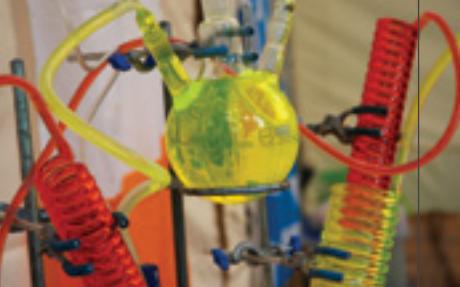


Science Picnic

The “Science Picnic” event holds a special place in our hearts – this annual gathering, now into its 15th year, was the source of inspiration that ultimately led to the creation of the Copernicus Science Centre in Warsaw.

The 15th Science Picnic of the Polish Radio and Copernicus Science Centre, on 28 May 2011, was held at the Marshal Edward Rydz-Śmigły Park in Warsaw for the second time. The special guest of this year's event was Italy.

Fifteen years ago, we started out with 17 tents and presentations from 13 institutions. Today, the Science Picnic is the largest European event presenting science and new technologies, contributing to creating a knowledge-based society. The passion of hundreds of scientists, huge interest from the public and support from the media make us proud of our achievements. In 2005, the Picnic was commended by the European Commission as one of ten model European “Science and Society” projects. This year, the Commission took over the honorary patronage over the Picnic.



Freedom is a challenge. It gives us power to discover and change the world, although it also brings certain risks.

Freedom of science and education means freedom of access to sources of knowledge, freedom of learning, and freedom to choose what we study. It also means freedom to conduct scientific research and publish results, and freedom to build communication between scientists and society. It also means taking responsibility for research results, both by scientists and society. FREEDOM was the main theme of the most recent

Science Picnic, corresponding with the leading message of the ECSITE conference. The Picnic was the crowning event of the conference, and was enjoyed by our foreign guests.

Asimo: The 15th Science Picnic featured the Polish launch of the robot Asimo. It is a small humanoid, speaking with a child's voice, nimbly moving and even running at speeds up to 6 km/h.

Zirkus Meer: This is an ensemble of scientists (led by Dr. Herbert Walter Moshammer), who decided to change careers on a whim and become circus performers. They use circus tricks to draw their audiences in, then go on to explain that there is no magic behind them – just pure physics.

Dr. Bunhead: For the first time we were visited by Tom Pringle from the UK, known as Dr. Bunhead, associated with popular science TV programs such as Brainiac. To celebrate the International Year of Chemistry, he attempted to answer the age-old question “What is fire?”. The show featured exploding hot water bottles, banana stuntmen, and suddenly appearing great clouds.



Fifteen years ago, a group of journalists from Polish Radio took a great risk by deciding to back something known as the Science Picnic, run by a modest team of scientists. There also proved to be a group of other people supporting freedom of thought, love of science and a desire to act for the public good, who stepped up to the challenge. Over the next few years, the team managed to gather together a formidable social circle of hundreds of thousands of participants, gaining strength and significance, and ultimately leading to the creation of a real, permanent institution in Warsaw, which had been their dream for decades. This is a place where the concept of public access to knowledge and respect for those wishing to gain and improve this knowledge could blossom and spread throughout the Polish education system. In November 2010, the circles involved with the Picnic celebrated a great triumph with the opening of the Copernicus Science Centre.

– Prof. Łukasz Turski, originator of the Science Picnic and the Copernicus Science Centre, Chairman of the Programme Council

237 institutions

from **21** countries (for the first time: Israel and Norway)

the tent stands covered **4** ha

more than **55%** of visitors were school and university students

83.3% of the surveyed viewers wish to come back next year



The Przemyany Festival (meaning "Transformations") was launched by Poland's capital city in 2009. The aim of the event is to encourage Varsovians to reclaim their river by rediscovering its beauty and potential. In 2011, the Copernicus Science Centre asked to organize the festival. We accepted the challenge, and decided to transform the very festival itself. How? On one hand, by harnessing the experience of previous such events in Warsaw; on the other, by drawing on the very best new ideas from other European science centres and festivals. The program included artistic, scientific and documentary events, as well as workshops. And so, between 1–4 September, Warsaw witnessed a contemporary, open celebration of the city, with festival events taking place on both sides of the Vistula. Participants had the chance to listen to concerts, watch films, take part in environmental and cycling workshops, and visit the planetarium free of charge. There was also a "Breakfast on the Grass", workshops on molecular gastronomy, and classes on contemporary urban basketry called "Wicker Partisans".

Locals were also able to take part in an intriguing project studying the Vistula riverbanks in Warsaw, entitled "Sociology of the Vistula". Its results were included in a report gauging the public perception and utilization of Warsaw's riverbanks, published on the festival's website and handed over to city authorities. Participation in the festival was free.

2011: 17 workshops, 4 film screenings, 4 concerts, 9 outdoor games, 1 urban game, 7000 participants, 4 days, 1 river in the starring role



On the international stage

Between 24–29 May, the **Copernicus Science Centre** hosted a prestigious international conference of the European Network of Science Centres and Museums (Ecsite). The theme of this year's conference was "Freedom". Participants could see myriad fascinating, state-of-the-art exhibits, find out about new exhibition concepts, and exchange experiences and ideas with one another. They also had a chance to listen to the Japanese astronaut Mamoru Mohri, director of the National Museum of Emerging Science and Innovation in Tokyo. Another important speaker was Derrick de Kerckhove, assistant and successor to Marshall McLuhan, the renowned communication theorist and media theory expert. As ever, the focal point of the conference was provided by lectures, with topics spanning the most important issues faced by science centres, such as their activities, aims and missions. On the final day, delegates took part in the 15th Science Picnic.

The Copernicus Science Centre is an active participant in the global science centre movement, and is a signatory of the declaration signed during the 6th Science Centre World Congress in Cape Town in 2011, positing a vision for the development of science centres and their place and significance in the modern world.

In 2011, Robert Firmhofer, Director of the Copernicus Centre, was elected President of the Board of ECSITE. He is also a member of the International Committee of the Science Centre World Summit to be held in Belgium in 2014. Irena Cieślńska, Deputy Director of the Copernicus Centre, is a member of the ECSITE Annual Conference Programme Committee.

22nd ECSITE conference

44 countries

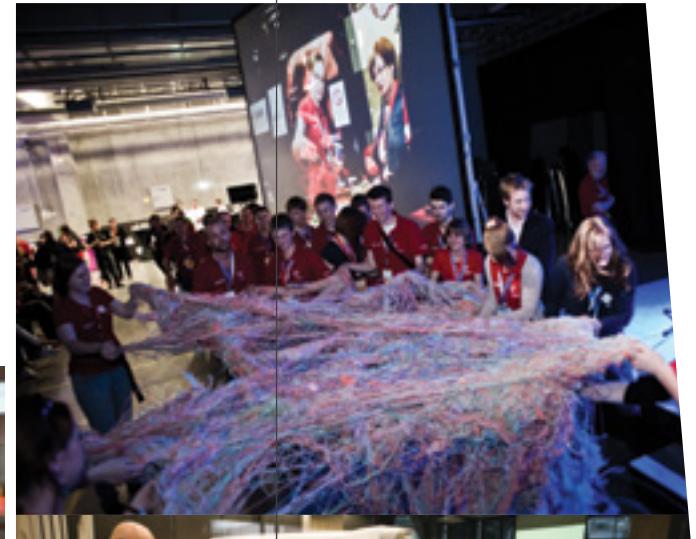
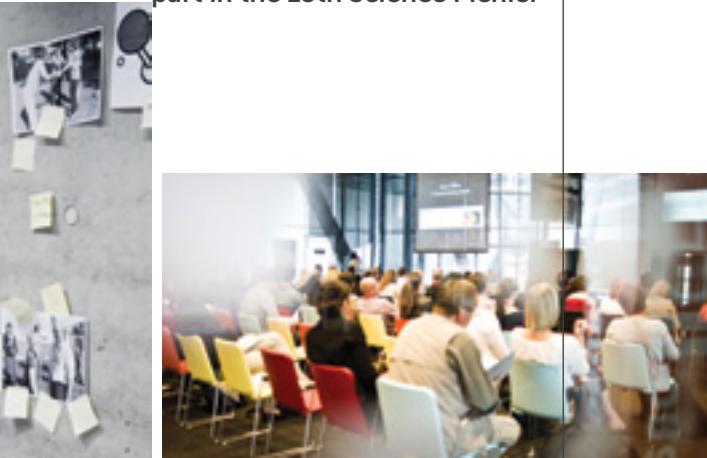
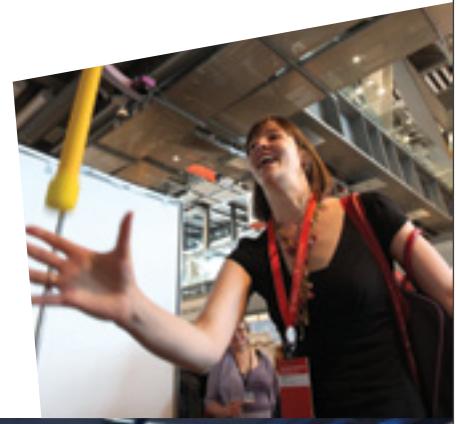
843 participants

75 sessions and workshops

11.2 of yarn used during the night sightseeing of Copernicus

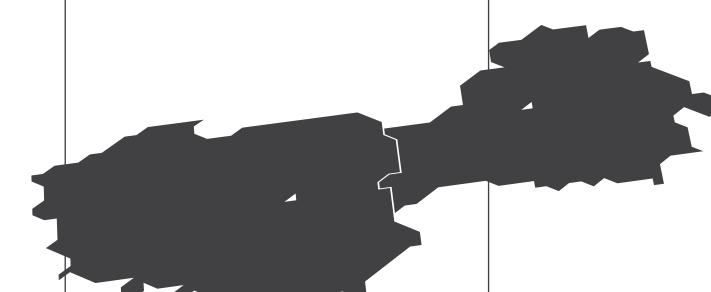
Xplore Health is a European project coordinated by the Science Park in Barcelona, striving to improve the public understanding of current scientific research in healthcare and its ethical, legal and social implications. As part of the project, the Centre will hold two "open laboratory" sessions allowing visitors to conduct biological and medical experiments.

The Copernicus Science Centre is also a member of the European Science Events Association (**EUSEA**). The association includes organizers of festivals, science picnics and other events focusing on science communication. The Heavens of Copernicus is a member of the International Planetarium Society (**IPS**).



Copernicus Looks to the East

One of our key strategic aims is to inspire and support local and regional initiatives, building up a network of partners. We strive to develop closer, more institutionally structured ties with our existing partners, and to pave the way for reaching new audiences (such as our closest neighbors in Russia, Ukraine and Belarus). We are currently developing a comprehensive concept of Eastern networks for 2012–2015.



Work on our first Eastern projects (in former Soviet republics) started in 2008, long before the opening of the Copernicus Science Centre building in Warsaw. Our partner in this was the Partners Poland Foundation. The initial basis for collaboration was a lesson-plan competition, aimed at science teachers at middle and high school level. In time, this evolved into a comprehensive system of training courses, workshops, educational suites, and publications for teachers from Georgia, Azerbaijan, Tajikistan and Belarus. Our work with partners in Georgia has now gone beyond working with teachers. The Centre has been invited to participate in governmental programs, and to work closely with Georgian scientific and research circles.



Total:

7 projects

4 countries (Georgia, Azerbaijan, Tajikistan, Belarus)

62 skilled teacher trainers

1560 teachers (ultimate beneficiaries of the project)

48 935 students (ultimate beneficiaries of the project)

4 methodological publications in 3 languages

2011:

3 projects

3 partner countries (Georgia, Azerbaijan, Belarus)

11 training days in Gori, Baku and Warsaw

4 Young Explorers' Clubs established in Belarus and Georgia

36 skilled teacher trainers

758 teachers (ultimate beneficiaries of the project)

19 535 students (ultimate beneficiaries of the project)

Preparation of Russian and Georgian versions of "Guide for Young Explorers' Club Leaders" and the Azerbaijani version of the "FaSInating Lesson" project.

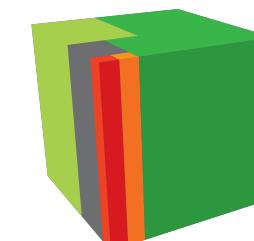
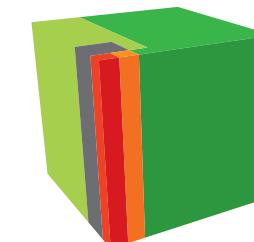
Participation and presentations by teachers from Georgia and Belarus during the 5th Show and Tell Conference

From the evaluation report "Equal opportunities – Supporting the developmental potential of the Kvemo Kartli, Shida Kartli and Samtskhe Javakheti rural

areas", implemented in Georgia between 10 March and 31 December 2011 by the Partners Poland Foundation and the Copernicus Science Centre.

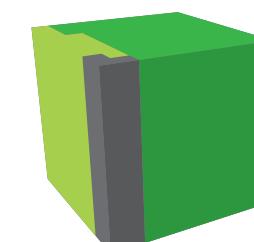
I gained new skills during the training.

- 71% agree completely
- 23% agree
- 1% disagree completely
- 1% disagree
- 4% don't know



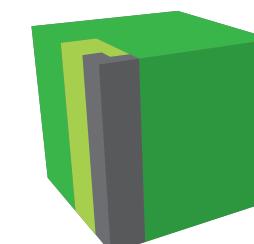
I gained new knowledge during the training.

- 68% agree completely
- 24% agree
- 1% disagree completely
- 1% disagree
- 6% don't know



How do you rate the training?

- 83% very highly
- 14% highly
- 3% no opinion



How do you rate the organization of the training?

- 90% very highly
- 7% highly
- 3% no opinion



Sponsors

The Copernicus Science Centre is able to operate largely thanks to the support from the Capital City of Warsaw, the Polish Ministry of Science and Higher Education, and the Polish Ministry of Education. However, their funding, combined with ticket sales and our commercial activities, covers just part of our annual expenses, which include maintaining our exhibitions and pursuing various educational and artistic projects. Our mission would be impossible without the support from our sponsors – companies which also place a high value on science promotion and an innovative approach to education.

In 2011, our strategic partner was Samsung Electronics Polska, which also sponsored our robotics projects: the Robotics Workshop and Robotic Theatre. The company provided us with technological and financial support throughout the year.

The Centre would like to extend its thanks to its sponsors for 2011:

Strategic Partner: Samsung Electronics Polska

Supporting Partners: Plus, Vattenfall

Exclusive Partner of the Chemistry Laboratory: BASF Poland

Exhibition Partners: Polpharma, Ivona Software, Fido Intelligence

Supporting the Copernicus Science Centre is a very natural choice for Samsung. We are one of the most innovative companies in the world, and the Centre gathers some of mankind's greatest discoveries under one roof. We are proud that our partnership with the Centre allows us to highlight discoveries made centuries ago, and to show a vision of the future through the Robotics Workshop. Visitor numbers demonstrate how many people want to explore and delight in discovering the mysteries of science. I'm proud that we are partnered with the Centre, and as a result can be a part of it. –Daniel (Hyunsuk) Chung, President of Samsung Electronics Polska.



As well as displaying our sponsors' branding, we also strive to hold additional educational activities in collaboration with them:

- our collaboration with Samsung has resulted in the creation of new exhibits: the "Roentgen Gallery" in the Anatomical Theatre, and an information board on Polish astronomy in the Planetarium
- the mobile phone company Plus designed a mobile app for the Centre: an exhibition guide
- BASF donated water testing kits, which were given out to participants of the Science Picnic and the Young Explorers' Club.
- During National Heart Day and National Lungs Day, Polpharma held fascinating workshops for visitors

Sponsors w 2011

- 9 companies supported the Centre's activities
- we jointly implemented 6 additional projects



PKO Bank Polski is the Exclusive Partner of the Heavens of Copernicus Planetarium; the bank has recently signed a sponsorship agreement for a further three years.

During the grand opening of the Heavens of Copernicus Planetarium, visitors to the spherical PKO Bank Polski tent could try their hand at light painting, graffiti, and have their photo taken in an astronaut's suit.

The combination of science, new technologies, and business brings astounding results. One of Europe's most modern and most original planetariums not only makes a huge impression, it above all teaches and develops its visitors. It is hard to overestimate the importance of investing in the youngest generation. We know this very well, and enjoyable learning experiences are also something dear to us as well. For more than 75 years now, we have been successfully engaged in the oldest program of financial education in Poland – SKO – for children at primary and middle schools, which is where the real Internet revolution is occurring.

— Zbigniew Jagiełło, President of PKO Bank Polski



Exclusive Partner of the Planetarium: PKO Bank Polski



This year the Copernicus Conference Centre came into operation. It already enjoys great popularity and has found a permanent place for itself on the business map of Warsaw. Although the Conference Centre is situated within the Copernicus building, it is accessed via a separate entrance and is completely separate from the exhibition space. It boasts an impressive 250-seat auditorium that is perfect for lectures, presentations, film screenings, and shows. The auditorium is equipped with facilities

I wish to sincerely thank the staff for its commitment and assistance during preparations for the dinner of Heads of State and Government held at the Copernicus Science Centre during the Eastern Partnership Summit. Your professional approach helped ensure that the entire event came off well. I know that all the delegations who came to the Centre left it very much impressed.

– Agnieszka Wielowieyska, Director of the Foreign Relations Department, Polish Prime Minister's Office

for a sound engineer and projector operators, three translator cabins, and top-class audiovisual gear. Upstairs is a complex of 6 conference rooms – movable walls enable them to be configured from 50 m² up to 440 m². Each conference room has its own audiovisual gear. The facilities offer a great location for small gatherings, larger conferences and workshops, as well as a multitude of other types of events – our experience shows that dozens of possible configurations work well

The conference rooms are utilized for Copernicus's own activities as well as rented out on a commercial basis to other institutions and companies. Because this is a conference centre intimately linked to an institution of culture, we try to ensure that the events organized here are in conformity with our mission and values

2011: The Copernicus Conference Centre served as the venue for 84 commercial events, bringing in a total of approx. 25.000 visitors



The Science: Passion, Mission, Responsibilities symposium organized in Warsaw during the Polish Presidency of the EU for winners of grants from the Marie Curie Actions (the largest European research stipend program) made a huge impression both on the young researchers and on the representatives of the European Commission. (...) The Copernicus Science Centre proved to be a terrific venue for organizing conferences of this sort. The young researchers were impressed by the exhibits – especially, as they said, to see how one can explain in such a simple way the laws of nature and the kinds of research they themselves do. Individuals familiar with similar centres in Europe (such as in Paris) concluded that the Copernicus Science Centre is distinct in terms of the passion and mission that pervade this place.

– Anna Wiśniewska, Deputy Director of the National Contact Point for EU Research Programmes, Institute of Fundamental Technological Research, Polish Academy of Sciences

Well-known guests who have visited the Conference Centre:

French Prime Minister François Fillon

Poland's Prime Minister, President, and Ministers

Presidents: Viktor Yanukovych (Ukraine), Daria Grybauskaitė (Lithuania), Mikheil Saakashvili (Georgia), Ilham Aliyev (Azerbaijan), and Serge Sargsyan (Armenia)

The King of Sweden

European Commission President José Manuel Barroso

Spanish Prime Minister Jose Zapatero

EU High Representative Catherine Ashton

Hungarian Prime Minister Viktor Orban

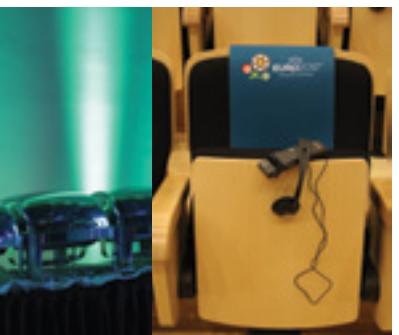
European Parliament President Jerzy Buzek

Moldovan Prime Minister Vlad Filat

European Council President Herman Van Rompuy

British Deputy Prime Minister Nick Clegg

German Chancellor Angela Merkel



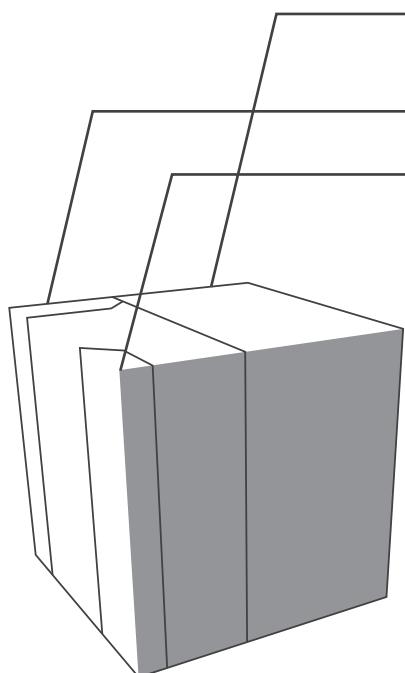
3200 publications in the media (coverage during main news broadcasts, radio and TV interviews with experts, articles published via numerous outlets)

20 press conferences

1 655 904 000 hits at www.kopernik.org.pl

168 394 000 hits at www.niebokopernika.org.pl

33 212 hits at www.przemianyfestiwal.pl



Wdechy publiczności cultural prizes for best event and location of 2010, awarded by the journalists and readers of the "Co Jest Grane" supplement to major daily Gazeta Wyborcza;

MocArt prize awarded by RMF Classic radio in the "event of the year" category;

Quadrans Qultury 2010 award from the cultural program on TVP INFO in the "most interesting cultural events" category;

Polska Przedsiębiorcza entrepreneurship foundation award in the "event of the year" and "initiative of the year" categories;

main prize at the 4th national competition **Poland Grows More Beautiful: 7 Wonders of European Funds** in the "tourist facility" category;

award for the Centre's main building in the **Polish Architecture XXL** public vote competition, in the "culture and science" category;

Friendly Place Certificate for "creating a welcoming atmosphere and acting against the exclusion of people who use wheelchairs," awarded by the Towarzystwo Przyjaciół Szalonego Wózkowicza wheelchair activist society;

best tourist attraction diploma: prize of the **Polish Tourfilm Academy** as part of the Film & Tourism Festival 2011;

award in the **Polish Association of Construction Engineers and Technicians** competition: Building of the Year 2010;

Idol prize in the Company Friendly to the Blind 2011 category, awarded by the Chance for the Blind Foundation;

Positivist of the Year 2010 competition: distinction in the Science and Education category;

two Red Dot Awards (one Polish and one international): Communication Design 2011 in the Information Design / Public Space category, and the main prize in the design category in the Ad Creators' Competition for the designer of the visual information system in the building.



Our team

Our greatest asset is the Copernicus Science Centre staff, who exhibit energy, creativity and wide range of passions.

Let's just say that we get on just as well after work as we do during working hours, and that's probably the key to our success.

This year we created several initiatives. Striving to improve our health, we take aerobics classes together. In the "Hobby players from science centres" category, we have declared ourselves the world's best badminton team. Future thespians and virtuosos gather at the weekly choir and theatre group rehearsals. Fans of board games meet and play regularly. We also host regular

informal meetings over tea and cakes, during which explainers and gallery hosts share information on the subjects presented in the exhibits. There are also collections of popular science books and films in the reading room.

2011: We added 48.1 new full-time staff positions, reaching 195.5 full-time staffers, plus 212 annually renewed contracts with explainers



Copernicus Science Centre's Management Team

Robert Firmhofer – Director

Jolanta Brzywczycy – Deputy Director, Chief Accountant

Irena Cieślińska – Deputy Director

Przemysław Wielowiejski – Deputy Director

Program Council

The Programme Council is an advisory arm of the Director of the Copernicus Science Centre; its main task is overseeing the implementation of the Centre's main strategic aims and activities. The Council includes representatives of cultural, artistic, scientific and teaching institutions, and is elected every six years.

Prof. Łukasz Turski – chairman

Prof. Aleksander Bursche – vice-chairman

Prof. Jerzy Axer

Dr. Konrad Bajer

Irena Cieślińska

Prof. Magdalena Fikus

Prof. Maciej Geller

Dr. Dariusz Jemielniak

Prof. Krzysztof Konarzewski

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Hanna Wróblewska

First Birthday

**8760 hours. 12 months.
One year.**

Despite being the youngest in the European science centre family, we've already had over a million visitors, making us the second most frequently visited centre in Europe. We have the most fans on Facebook, and we have gathered rave reviews from by the participants of Europe's largest meeting of experts – the international European Network of Science Centres and Museums (ECSITE) conference, held at the Copernicus Science Centre in May. Robert Firmhofer, Director of the Copernicus Centre, was also elected President of the Board of ECSITE. Our reputation extends far beyond our home continent, and we are regarded as one of the most

important and innovative science centres in the world. We are constantly learning, growing, changing; we continue to seek new solutions and keep redefining our role in society. We had plenty to be thankful for when blew out the candles on our birthday cake.

Hundreds of roses broken for good luck, a 120 kg cake, a map of the sky lit with congratulations from our visitors, crazy science demonstrations, a thermodynamic cake bake-off, and sightseeing of the Centre's kitchens. On 5 November, several thousand people joined us to celebrate our first birthday.



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