

A National Children's Science Centre

The plans for a new landmark in Ireland's educational infrastructure

Ireland is the only country in the OECD and one of the few countries in the developed world without a National Children's Science Centre. Even countries with less developed economies, such as Brazil, Kazakhstan, and Mongolia, have recognised the role that such centres play in encouraging and supporting interest in and enthusiasm for science among young people. Happily, this gap in Ireland's infrastructure is about to be addressed, with the development of a national interactive science centre for children in the National Concert Hall building in Dublin.

For 25 years, discussions have been ongoing between the government and a charitable organisation, the National Children's Science Centre (NCSC), to set up such a centre. In 2013 an agreement was reached between the Office of Public Works (OPW) and the NCSC to locate the centre on Earlsfort Terrace. The unused north wing of the National Concert Hall will be restored and renovated by OPW, and the NCSC will equip, manage, and run the centre. After many delays, planning permission was finally granted in March 2024, and it is planned to open the centre by 2028.

Cutting-edge facilities in a historical location

Totalling almost 10,000 sq. m, the development will include a state-of-the-art planetarium at the west end of the site, and the restoration and conversion of the Real Tennis Court on its northern boundary into Exhibit 15, an outreach programme of exhibits that will also travel throughout Ireland. Within the centre there will be exhibit rooms, a large lecture theatre, a specially designed science laboratory, activity rooms, and spaces for continuing professional development courses for teachers.



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Ireland is the only country in the OECD without a National Children's Science Centre. That will soon change, with a new centre planned for completion by 2028. This article describes the proposed centre's structure, purposes, activities, and ethos.



National Children's Science Centre (NCSC) Artist Impression

It is particularly appropriate that the building on Earlsfort Terrace, which was constructed in the second half of the 19th century to house the International Exhibition for the Arts and Manufactures, is now being restored as a centre where STEAM (Science, Technology, Engineering, Mathematics, and the Arts) will be celebrated.

Key role in Ireland's STEM education

The proposed new NCSC will play a crucial role in helping to achieve the Irish government's vision for STEM education, that:

Ireland will be internationally recognised as providing the highest quality STEM education experience for learners that nurtures curiosity, inquiry, problem-solving, creativity, ethical behaviour, confidence, and persistence, along with the excitement of collaborative innovation. (Government of Ireland, 2023a)

In its STEM Education Implementation Plan to 2026, the Minister for Children, Roderic O'Gorman, said:

The STEM Education Policy statement acknowledges that there is a need to enhance STEM learning for learners of all backgrounds, abilities and gender, from early learning and care through to post-primary. The focus on STEM in early learning and care settings highlights how important that first engagement with education is for young children. (ibid.)

The plan to set up the centre has been widely welcomed in the world of education. In 2023, the Joint Oireachtas Committee on Education recommended that the centre, 'in gestation for many years, should be opened as a matter of urgent national priority' and that 'it will send out a message that Ireland is very serious about science education for primary and post primary students'.

Exhibits and educational programmes

The centre will include interactive science-based exhibits and activities for children and young people. It will provide issues-based immersive and interactive exhibitions and events for adults ('the curious of all ages'), and will also focus on visitor participation through debates, discussions, blogs, and so on.

The planetarium will enable visitors to become virtual space travellers, exploring the solar system and the stars. Events and programmes will be provided for students, teachers, and the general public – in person and online. Talks and programmes will be provided for preschool children, and for primary and second-level classrooms based on the school curriculum and the STEM Education Implementation Plan.

Given the limited science education available in pre-service training for preschool and primary school teachers, the NCSC will be an invaluable source of teacher training and education, at both pre-service and in-service level, including summer courses. Residencies and internships will also be available for third-level students, and special arrangements will be made to engage Transition Year students.

To achieve its vision and mission, the NCSC will combine elements of third- and fourth-generation science museums (Pedretti & Iannini, 2020). As well as presenting scientific ideas and topics through interactive, immersive, and hands-on exhibits and activities (the aim of third-generation museums), the NCSC will also include issues-based exhibitions and events (characteristic of fourth-generation museums), focusing on visitor participation through talk, interaction, and the potential for decision-making about significant science-related issues.

Commitment to equality and inclusivity

The NCSC will have a policy of equality, diversity, and inclusion in terms of access and engagement. It will have a particular focus on ensuring access for people from disadvantaged backgrounds and with different abilities and disabilities. This is in keeping with the Department of Education's (2023)

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Recommendations on STEM and the Arts in Education: 'the provision of equitable access for all learners to experiences of STEM and the Arts within formal and informal settings is necessary to promote the development of critical and creative thinking skills'.

As well as ensuring that all parts of the centre are wheelchair accessible, every effort will be made to ensure there are no barriers to access or engagement by those with visual or hearing impairment or with neurodiverse needs. The exhibits and events will be planned and delivered in accordance with universal design for learning – a set of principles that give all people equal opportunities to learn.

Because the NCSC will be the national science centre for Ireland, it will include exhibits and events based on discoveries by Irish scientists. It will highlight female scientists such as Ellen Hutchins, Mary Ward, Kathleen Lonsdale, and Jocelyn Bell-Burnell, as well as male scientists and discoverers such as William Rowan Hamilton, George Boole, John Tyndall, and Ernest Walton.

The exhibits will be informed by the UN Sustainable Development Goals 2030 and will be aligned with the major transformations that science tells us are urgently needed to build a fairer and more sustainable world. These transformations will help to address challenges such as the digital revolution, human capacity and demography, consumption and production, decarbonisation, food, biosphere and water, and smart cities. A focus on these themes will not preclude the inclusion of other themes and topics, now and in the future.

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The success of the National Children's Science Centre and its continuing ability to attract visitors will depend on its flexibility and creativity and its innovative approach to embracing and discussing new and emerging issues. By constantly evolving to reflect advances in science and technology, the NCSC will remain a relevant and engaging resource for children, educators, and the wider public.

REFERENCES

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Paschal Naylor Joins the Board of the National Children's Science Centre



Dublin, Ireland — 16 October 2024 — The National Children's Science Centre (NCSC) is pleased to announce the appointment of Paschal Naylor to its board of directors. With planning permission now secured for Ireland's first national science centre for children, Paschal's extensive experience will be invaluable in helping the NCSC achieve its mission of inspiring and educating the next generation of scientists, engineers and innovators.

Paschal brings an impressive background in the technology sector to the NCSC. He is currently an Advisor to Presidio Europe and the co-founder of Arkphire, a leading Irish IT consulting and managed-services company. Under Naylor's leadership, Arkphire grew to become a €160m business and was acquired by the US tech firm Presidio in 2021. Paschal brings to the board many useful qualifications, including FCCA, MII Grad., a BA in Psychology and an IOD Diploma in Company Direction.

Paschal, an accomplished business leader and advisor, is excited to join such an inspiring initiative. "I am honoured to be part of the National Children's Science Centre," said Naylor. "This science centre will spark curiosity and foster a love for science and technology in young people across Ireland and beyond. I look forward to working with the board and our partners in government to fulfil our ambition to deliver this exciting and innovative project."

Paul Duffy, Chair of the National Children's Science Centre, commented on the appointment, saying, "We are delighted to have Paschal Naylor join our board. His deep expertise in business, combined with his commitment to science and innovation, make him an invaluable addition to our board. As we move closer to the opening of Ireland's first children's science centre, Paschal's insights and leadership will be hugely valuable in realising our vision of inspiring a new generation of STEM enthusiasts."