The National Gallery Art & Science of Nature Challenge:
An Immersive Experience for Children

StoryFutures and The National Gallery have come together in a truly ground-breaking partnership to offer UK creative companies a unique opportunity to create an immersive Minimum Viable Product (MVP) that allows children to explore the art and science of nature in the Gallery's collection. The aim of the MVP is to not only play out both in the Gallery and at home for family visitors in the UK, but also provide support to the winning company to export the experience to Shanghai, where partners in technology, museums and universities are building a collaborative exchange programme.

Creatively the immersive experience will encourage children aged 7-11 years old to explore the relationship between art and science in paintings across the Gallery's collection. Culturally, the immersive MVP will be designed to appeal to UK audiences, Chinese tourists and a Chinese export market.

On offer is a £170,000 Research & Development (R&D) production award, along with substantial in-kind contributions from both The National Gallery and StoryFutures totalling over £140,000. The project will enable one successful company to create an immersive MVP that can help explore the opportunities and challenges of cultural and economic export and exchange between the UK and China.

This is an innovation and research project funded by the Arts and Humanities Research Council (AHRC) and The National Gallery. Companies will be supported in taking creative and technical risks as well as in building relationships and understandings with partners in Shanghai, including Foremost Media Group, Tongji University and Shanghai Science and Technology Museum Journal.

We invite creative companies in the *'Gateway Cluster'* and Greater London region, with experience of one of the following areas, to take part in an exciting new R&D collaboration:

- · Use of immersive technologies in museums, galleries and visitor attractions
- · Use of gaming in educational contexts
- · Creative use of Artificial Intelligence (AI)

The initiative adopts a child-led approach to innovation in order to develop an immersive experience that will increase the Gallery's appeal to family visitors as well as to Chinese tourists and nationals. At the heart of the approach will be a learning journey that enables children to explore nature across the Gallery's collection, enhancing their understanding and passion for art, how it is created, who it is for and the role of the Gallery in global art curation.

This challenge is rooted in two of the most significant AHRC programmes:

· [The Creative Industries Clusters Programme](#)

· [The UK-China Creative Industries Partnership Programme](#)

As such, the collaboration is aimed at supporting company growth through R&D. It will provide a support runway for UK companies to export to China, grow their international visibility and reach thousands of audiences in both the UK and China.

Shortlisted companies will be invited to take part in an open innovation process called *'StoryLab'* which, over 3 days, will provide companies with access to key stakeholders at The National Gallery, user testing groups, Shanghai partners and StoryFutures' world-leading researchers in psychology, business modelling, storytelling and social history. Companies are expected to actively develop against the brief in collaboration with these stakeholders during the StoryLab event.

StoryLab will take place on Friday 19th March, Monday 22nd March and Tuesday 23rd March 2021. A short development period will then culminate in final pitches being delivered on half-day on Tuesday 30th March 2021**.** Companies selected will receive a £1,500 R&D grant for participating in StoryLab and developing and pitching their ideas in the pitch session pitches on Tuesday 30th March.

One successful company will then be selected to create an R&D prototype to be delivered no later than Monday 28th February 2022 to be showcased firstly at The National Gallery and then, subject to approval, at a museum or cultural institution in Shanghai.

Read more below and **apply here**.

About: The National Gallery

The National Gallery is one of the greatest art galleries in the world. Founded by Parliament in 1824, the Gallery houses the nation's collection of paintings in the Western European tradition from the late 13th to the early 20th century. The collection includes works by Bellini, Cézanne, Degas, Leonardo, Monet, Raphael, Rembrandt, Renoir, Rubens, Titian, Turner, Van Dyck, Van Gogh and Velázquez. The Gallery's key objectives are to enhance the collection, care for the collection and provide the best possible access to visitors.

The Gallery is aware that that digital disruption quickens the pace of change as we continually look to meaningfully engage audiences.Working with StoryFutures in this way continues our commitment to approaches that increase our ability to understand our audience needs, adapt appropriately and respond to digital opportunities.

About: StoryFutures

StoryFutures works with businesses in the Gateway Cluster and Greater London to support and fund innovation in next-generation storytelling formats and technologies. The *'Gateway Cluster'* lies immediately to the west of London.

We exist to fuel innovation and growth in immersive storytelling by sharing cutting-edge research with SMEs. We also foster collaborations between world-leading institutions, creative industries and sources of funding.

With joint commissioning partners like the National Gallery, Discovery, Roald Dahl Marvellous Children's Charity and Heathrow Airport, we aim to innovate in story-form, evolve business models, develop data management processes, enhance audience experiences and help SMEs secure funding for growth.

The Challenge: The Art and Science of Nature

Families with children make up approximately 9% of The National Gallery's 6 million visitors each year, whilst Chinese tourists comprise 1% of this total. More widely, Asian visitors make up 7% of all visits (these include Japan, Korea, Hong Kong, Singapore, etc).

The National Gallery is excited to grow that audience share by enhancing its offering to these key demographics and find ways of increasing engagement with family visitors, improving children's experience of the Gallery. This ambition sits alongside The National Gallery's road map for exploring the role that immersive storytelling can play in visitor experiences at The Gallery, building on previous works such as [Leonardo: Experience a Masterpiece](), [Virtual Veronese]() and [Gossaert: Sensing the Unseen]().

StoryFuture's audience insight demonstrates that *'presence'* is the most reliable indicator of users' perceiving the value that immersive technologies add to experiences. This is not something achieved by technology alone but best experienced via great storytelling fused with innovative use of AR, MR, VR and AI technologies. Immersive storytelling approaches should enable the user to feel part of the virtual world or that the virtual world enters our physical world. The stronger the presence, the more likely visitors are to enjoy and learn through the experience. In such an approach we are less interested in factual recall and more concerned with the extent to which the experience prompts and promotes passion for art, the role of the National Gallery in world art and children's understanding of different artistic approaches to the environment around us. The aim is therefore to promote creative learning journeys across and beyond the collection.

The opportunity is to test and trial approaches that use immersive technologies and experiences to promote learning and engagement about the art and science of nature. The experience should allow children to explore paintings and lead their family on a trip across the Gallery that helps them explore and connect to the natural environments and animals featured in paintings by some of the world's leading artists. It should provide a storytelling approach to explore connections between selected paintings, thematically or stylistically.

Examples could include a journey across the 4 seasons in paintings across the collection, enabling children to explore how to create different seasonal effects and/or the science of the seasons; or a treasure hunt of animals across the collection which rewards children finding them with fun interactions around their artistic depiction and scientific facts; or information that brings to life the landscapes and animals hidden in the paintings' physical materiality e.g. pigments, hardwood, canvas, etc; or a journey across the collection that allows children to look at changes in the environment, prompting questions and conversations about sustainability; or navigation of nature-inspired paintings in the collection in a way that children have responded to them emotionally and then letting users navigate by emotion, e.g. *"show me happy paintings"*.

Selected companies will be provided with an updated user-research prior to the StoryLab which will further refine the possible approaches to this challenge.

To enable the project to deal with the uncertainties of COVID-19 social distancing restrictions, additional funding has been supplied by our funder (the AHRC) to enable this experience to be developed for a world in which the primary site of engagement might be at home or in the classroom.

A total budget of £170,000 is therefore available to create a minimum viable product that must:

· Work remotely; for children accessing the Gallery at home or in the classroom
· Work on site; providing an enhancement to the journey of physical visitors
· Work as an export opportunity; to play out in a partner Shanghai cultural institution

We do not expect or require that each of those sites be treated equally in your creative response to this brief. For example, you may wish to prioritise an experience that starts at home and encourages on site visits to further reward the experience; or you may wish to prioritise on-site learning, but with the opportunity to *'take away'* a digital souvenir or a chance for extended learning at home. The StoryFutures and The National Gallery teams will work with you over the StoryLab to develop your creative ideas against these requirements.

Technology:
We are open to different immersive technologies – including AR, VR and AI based approaches. Ideally the solution will work on a Bring Your Own Device (BYOD) basis but we are open to creative solutions that enable sufficient visitor through-put. Any technology solution should be mindful of the ambition to export the experience to partner cultural institutions in Shanghai where any technical servicing may have to be conducted remotely.

Audience:
● Primary Audience: UK children (aged 7-11) visiting the Gallery with their family or carer
● Secondary Audience: Chinese child visitors to the Gallery aged 7-11
● Tertiary Audience: Visitors to the partner Shanghai institution

Approach:
Fundamentally the solution will be a child-led, family experience. Child-led, in this context, means either co-creation with children to develop the experience AND that the final immersive experience puts the child in control, mindful that the child will be part of a family group with the solution therefore needing to engage adults as well as children.

Whilst this should be an educational experience, it should primarily be playful. Interactivity and gamification should enable learning through exploration and allow children to articulate what they are seeing and what they are understanding, rather than their ability to process and recall information. Game mechanics that might allow for this include puzzle solving or clue hunting enabled by augmenting the physical environment with the digital. Any use of interactivity or

game mechanics should support a learning journey aimed at developing children's enjoyment and excitement about art and collections at the Gallery.

The Goals

The key strategic aim of the overall programme is to enable cultural and economic exchange between the UK and China. This has informed the focus on children, who will be a common audience between The National Gallery and the Shanghai partner. Based on knowledge of this audience and previous immersive productions, including *Virtual Veronese*, *Sensing the Unseen: Step into Gossaert's Adoration* and *Leonardo: Experience a Masterpiece*, the Gallery wishes to use this opportunity to explore how to use immersive storytelling to connect different paintings across the collection, allowing children to explore a learning journey throughout the Gallery.

This context informs the R&D objectives of this collaborative prototype:

- Measurable increases in family visitor metrics of the Gallery
- An ability to attract and improve visitors' experience from China, particularly tourists
- Increased visibility of the Gallery in China
- The ability to use immersive storytelling to connect different paintings across the collection
- A better understanding of what children value and enjoy about art in the Gallery
- Ability to invoke specific emotional reactions from children, e.g. happiness, inquisitiveness
- The ability for the experience to be successfully showcased in both the Gallery and in Shanghai
- An increased understanding of the benefits and challenges in scoping and producing digital experiences between the UK and China
- Learnings for the NG about what is involved in exporting and showcasing immersive experiences to overseas territories

Measurable KPIs will be agreed with the winning company based on the above.

How to Apply

Complete the Application Form **here.**

4-6 companies will be shortlisted to participate in the StoryLab - an open innovation event online from the **19th - 23rd March 2021**.

Over the course of the StoryLab event companies will experience a variety of creative and user-experience workshops including access to key charity stakeholders, audience insight researchers, and storytelling experts as well as the business modelling team.

On offer is a budget of cash, R&D support and facilities to pilot a new experience for The National Gallery by Q1 2022. The total collaboration reward is approx. £340,000 including £170,000 cash production budget (excl. VAT).

You can read more about StoryLab here, or access our FAQs here.

To be eligible to apply:

- You must be a Small to Medium Enterprise (SME), with less than 250 staff

- You must be a UK-owned, or majority-owned, company
- You must confirm your understanding that StoryLab is an R&D commission, which requires in-kind investment from the winning SME to undertake the challenge A production budget will enable the development of an audience-facing Minimum Viable Product (MVP) developed in collaboration with the StoryFutures' research team, but does not allow for overheads or margins to be charged
- The SME must be based in the local region – defined as the Gateway Cluster or Greater London; those based in Greater London will be assessed on their cluster engagement plans as part of the selection
- You must confirm that, if selected, your company is able to deliver by **Monday 28th February 2022** for showcasing in The National Gallery and then in a Shanghai partner cultural institution in Q2 2022, with final project wrap up in Q3 2022
- You must agree to the reporting terms of our funder, the Arts and Humanities Research Council, and that non-commercially sensitive insights will be published in industry and academic reports as part of the research collaboration
- You must confirm that you will adhere to the Safeguarding and Research Ethics policies of StoryFutures, including undertaking a Disclosure and Barring Service (DBS) check to enable working with children if successful

Initial Expressions of Interest will be judged against the following criteria:

- Track Record
- R&D opportunity
- Research Collaboration
- Audience Insight
- Company Robustness

Summary of terms for Winning SME

The below provides a summary of the terms for the company wins the StoryLab competition

The company (Winning SME) that wins StoryLab will be provided with a £170,000 R&D award as well as approx. £83,000 in-kind support from The National Gallery (the Challenge Setter) and £75,000 in-kind support from StoryFutures.

The Winning SME will be asked to join the detailed contract between the Challenge Setter and StoryFutures in order to secure for that SME certain IP rights in the results of the collaborative work. The principles of that contract are as follows:

- The Winning SME will acquire IP ownership of some of the results of the prototype developed, granting both the Challenge Setter and StoryFutures licences to use at IP for the purposes of the partnership.The Challenge Setter provides the Winning SME a limited licence to use at no cost its background materials, if any, for the purposes of the StoryLab and the R&D partnership between the Challenge Setter, StoryFutures and the Winning SME.
- StoryFutures will own the audience testing data and methodology and is able to use the same to further the purposes for which it has been funded.
- The SME agrees to abide by the Funder's funding conditions and reporting requirements, which includes appropriate credit for the project, monitoring and evaluation reporting. This includes, but is not limited to, the provision of a final cost report on final delivery. The Funder is the Arts and Humanities Research Council, Polaris House, North Star Avenue, Swindon, SN2 1FL.
- The Winning SME will grant access to the IP it acquires to the StoryFutures R&D team and Challenge Setter for the purposes of the partnership.
- Subject to final agreement between The Challenge Setter and StoryFutures, the Winning SME agrees to export and/or licence the prototype for showcasing in Shanghai with the support of Tongji University, Foremost Media and Shanghai Science & Technology Museum Journal. The prototype must be designed for this purpose and an appropriate allowance in budget (minimum 10%) made for installing and servicing the prototype on site in Shanghai for a two-week showcase.
- StoryFutures will supply researcher time to support the Winning SME in their development of story concept, business model and audience testing, including a bespoke report on audience insights for the Challenge Setter and Winning SME.
- A detailed milestone agreement will be made at the point of awarding the collaborative R&D contract. Payment will be released against these milestones. The detailed milestones will include appropriate points to finalise the agreement with Shanghai partners for the showcase events and export opportunity. These points will be used to enable the Winning SME to have clarity in final audience focus and budget parameters before production begins.

- Parties to agree a timeline of testing with audiences and showcasing that is mutually beneficial to reach their constituent audiences.
- The agreement with the Winning SME will ensure there is shared attribution of the project/prototype between StoryFutures, the Challenge Setter and the Winning SME.
- At the point of delivery, the Winning SME shall provide technical instruction on how to install the prototype for future use at the Challenge Setter's location and showcasing.
- StoryFutures and the Challenge Setter will also look to provide support for the prototype to be commercialised. Should the Winning SME derive revenue over the long term, StoryFutures and the Challenge Setter's initial investment will be repaid. Repayment will only become due when the income derived is more than the combined initial cash investment made by StoryFutures and the Challenger Setter and the in-kind investment made by the Winning SME. Our fundamental measure of success is your growth as a business.
- The Winning SME must provide its own in-kind contribution to the collaboration, to the value of £50,000, over the course of the collaboration. This may be in the form of staff-time, sacrificed margin, reduced day-rates, licence to existing IP or technology, facilities or other. We will work with the winning SME to guide them in this process.
- No overhead, production fee or margin can be charged against this R&D collaboration agreement.