SCIENCE MUSEUM GROUP

INSPIRING FUTURES

STRATEGIC PRIORITIES 2017–2030: REISSUED 2020

Note on 2020 reissue
This long-term strategy was first published in 2017 as the culmination of a rigorous process that began in 2015. It is a living document and the need for review and adaptation before 2030 was acknowledged from the start. A formal commitment to review the strategic priorities after no less than five years is built in (p12) and will fall in 2022. But the progress we have already made in realising our mission to inspire futures, and the fast pace of change within the Group and the external environment, have led us to this interim review and refresh of the original document.

Inspiring Futures was always conceived as an overarching framework, not a straitjacket. It continues to be a touchstone for our planning and activities, with a focus on the seven strategic priorities. In refreshing the document for this edition, we have kept changes to a minimum. Mostly, changes are updating, as follows:

- Changes to titles of people, organisations and initiatives
- Revision of numbers and data, where more recent data was available, including the information boxes containing charts, tables and lists in each strategic priority section
- Addition of some recent activity and plans

In addition, we are addressing other significant areas that have moved up the Group's agenda since 2017 and that we anticipate will be more comprehensively articulated in the next phase of *Inspiring Futures* from 2022. These include a vigorously renewed focus on sustainability and a raft of issues around people; these rising priorities are outlined in a new section to supplement the existing strategic priorities (p12).

The revised text was approved by the Board of Trustees in February 2020.

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An Explainer leads a live science demonstration at the Chemistry Bar in *Wonderlab*, the Science Museum's interactive gallery

INSPIRING FUTURES

Dame Mary Archer, Chairman of the Science Museum Group, and Sir Ian Blatchford, Director

The five museums of the Science Museum Group are a key national resource. With our unparalleled collections in the fields of science, technology, engineering, mathematics and medicine, we are uniquely placed to draw people of all ages to engage with science in an inspirational and informal way. Over 600,000 of the Group's 5 million-plus visitors each year come in education groups, so we have an extraordinary capacity to open people's minds to the creativity and wonder of science.

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Each of the museums within the Group has international stature, as well as a fierce sense of pride in its regional heritage. As a result, we have immense potential for increasing 'science capital' across large and diverse audiences. Investment in our museums across the UK has long been part of our plan to move the Group's centre of gravity northwards.

The strategic priorities identified in *Inspiring Futures* will not only encourage and empower the Group to aim higher but will also enable us to sustain our role as a world leader in both the science and museum sectors, and to deliver world-class and inspirational experiences. As a Group, we will continue to push boundaries and in turn grow in confidence, energy and ambition. Over the next decade and beyond, we will sustain the impact and breadth of our science, technology, engineering and mathematics (STEM) offer; develop, grow and increase access to our extraordinary world-class collection; extend our international reach; transform our estate; become digital world leaders; and increase our self-generated income – all the while exceeding our audience's expectations.

We are a key player in the national science ecosystem. We work with a range of partners at home and abroad, joining forces with distinguished partners such as the Royal Society, the Royal Academy of Engineering and the Wellcome Trust. On the international scene we are making strides as a leader in soft power, from the recent ground-breaking *Cosmonauts* exhibition at the Science Museum, and then in Moscow, to the signing of partnership agreements with museums in Brazil, China and South Korea; and we will build on this. Our sponsor department, the Department for Digital, Culture, Media & Sport (DCMS), launched its culture white paper in March 2016, and it has been pleasing to see how well our own ambitions map onto government priorities.

The Science Museum Group is restless, ambitious and innovative in pursuit of these objectives, and much has changed since our previous strategy was formulated – not least the addition of the Science and Industry Museum in Manchester to the Group. We therefore took the opportunity of the impending mid-term review of our previous strategy document, *Strategic Ambitions 2012–2022,* to create the new and holistic approach for the whole of the Group set out in this document.

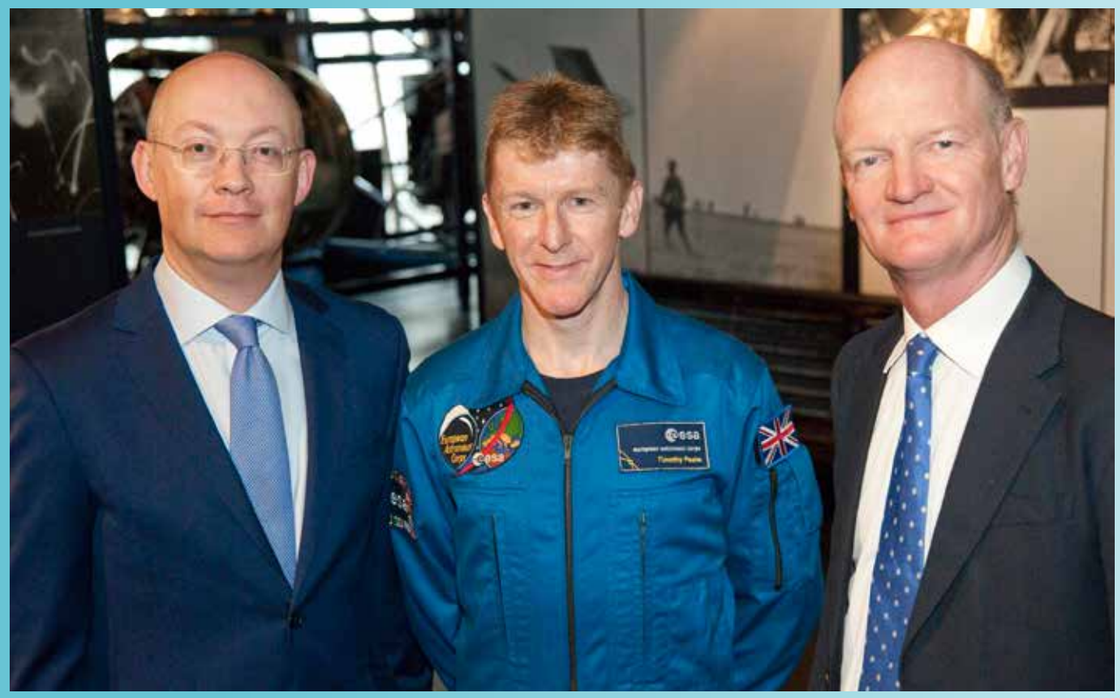
We succeed through our people. *Inspiring Futures* touches every part of the organisation and is the responsibility of all our teams. Running throughout this document is appreciation of what we have achieved together so far, and confidence that we will continue to adapt and develop in future. In order to deliver on our aspirations, we do need to increase capacity, not merely in numbers, but in skills and behaviours such as digital and entrepreneurship. We also need to be able to share skills and people appropriately across the organisation. The Group will also increase the sum of its human resources and create more routes to participation through a broader range of opportunities, including volunteering and new apprenticeships.

We extend our warm thanks to Science Museum Group Trustee and former Science Minister Lord Willetts, who chaired the strategy review group, and to all Trustees and external experts who advised, guided and challenged us throughout the review process. We embark on the implementation of *Inspiring Futures* with confidence and optimism, encouraged by the continuing support of our Trustees and external advisers, colleagues, key stakeholders and the visiting public.

Dame Mary Archer, Chairman

Sir Ian Blatchford, Director

SCIENCE IN SOCIETY



Opposite: Tim Peake, the first British astronaut in space for more than 20 years, is pictured with Ian Blatchford (left) and Lord Willetts (right) at the press conference for his Principia mission, which was held at the Science Museum

FOREWORD BY THE RIGHT HONOURABLE LORD WILLETTS OF HAVANT

Our collections in Manchester, Bradford, York, Shildon and London tell the story of the making of the modern world. The origins of the Industrial Revolution can be seen in one of Richard Arkwright's machines using water power to drive a belt which turns four spindles making cotton into yarn. We have Stephenson's *Rocket* and the first jet engine, the first synthetic dye, the earliest surviving photographic negative and many other 'firsts'.

From the post-war era we have Baby, a working replica of the earliest stored-program computer, Watson and Crick's model of the structure of DNA, and one of the Apollo capsules that took men to the Moon and back. These are objects of profound significance for all of us – they tell a global story, not just a British one, and one that continues to influence our future.

The deliberations for *Inspiring Futures* have reminded us of the obligations that follow from holding this extraordinary collection – curating and explaining it, continuing to add to it at a pace which matches the speed of technological and industrial change, and making the collection easy to access online. Over the next 15 years we will be investing in new galleries and buildings across the whole Group on a scale greater than ever before to discharge those obligations even better. Our objects are imbued with meaning and significance and we will do more to explain this. These are the classic obligations of a world-class museum. But there is more.

The objects in our great historic collections are not necessarily beautiful (though it is striking how many of our objects *are* things of beauty): they were made to do something, and the things they did fundamentally changed people's lives. The museums were founded to do something as well – to place science at the heart of our culture. The Science Museum was founded in the early 20th century during one of those periodic British scares that we were falling behind in scientific research and technological innovation. Too many of us reach adulthood and realise that our education has left us shockingly ignorant of these disciplines – and what better way for us to educate ourselves than by going to the Science Museum? It is a great way to learn and to ignite curiosity about science. There is a barely suppressed sense of excitement about our objects and events – the past 12 months have seen the first journey of the restored *Flying Scotsman* and the real-time link to the launch of Tim Peake's flight to the International Space Station. Educating and enthusing people of every age about science and technology is a crucial part of our mission.

We also place science and technology at the heart of the history of our nation – and the world. One of the planned new galleries in the Science Museum shows that the rise of London in the 17th and 18th centuries was intimately linked to its becoming a centre of science, which depended on the instrument-makers who made much of the science possible. This in turn was driven by a mixture of royal patronage, independent-minded scientific curiosity and plain commercial cunning. The world's oldest passenger railway station was at Liverpool Road, Manchester, and the Science and Industry Museum's plans for its site will once more put that station at the heart of Manchester's civic life.

The bold plans for transformation of York around the National Railway Museum will make it far more accessible than ever before. The National Science and Media Museum has refocused its mission on the science and technology of sound and image, and on connecting more to local communities. Henry Wellcome's medical collection, which will be at the heart of the Science Museum's new *Medicine* galleries, shows the extraordinarily diverse ways in which people have hoped to be cured of disease.

Technology is science put to use, and for every object in our collection there has been a person who designed it or used it. So these museums full of scientific objects also tell us about our humanity. They place science at the heart of society – where it belongs. And that means we must do more to illuminate today's controversies. We will invest more in exhibitions which are vivid and contemporary, following on from our recent successes. How does fracking work and does it pose any environmental threats? What is climate change? What are GM crops? How does the brain work?

In the following pages we set out the mission for the Science Museum Group and how we will fulfil this through our museums in the period up to 2030. Our priorities will obviously adjust and adapt in the light of changing circumstances, but we hope this gives you a sense of the high ambitions which everyone working in the Science Museum Group has for the future.

April 2017

David Willetts was Minister for Science from 2010 to 2014 and, as a Trustee of the Science Museum Group (2015–19), chaired the strategy review in 2015/16.

INTRODUCTION

Structure
The Science Museum Group comprises:
- The Science Museum, London
- The Science and Industry Museum, Manchester
- The National Railway Museum, York
- Locomotion, Shildon
- The National Science and Media Museum, Bradford
- The National Collections Centre, Wroughton

This document sets out our priorities for the period 2017–30 (reissued 2020). It concentrates on areas of change, identifying where we want to be by 2030, and what it will take to get there. It is not a comprehensive list of everything that we will do. Indeed, it could never be because we intend to do a lot – more than could ever be contained within such a document. Also, it covers a long period and the later years cannot be anticipated with certainty. Our annual business plans will sit within this overarching framework, with each year coming into sharper focus as it approaches. This framework is further supported by a number of strategies and plans that cover specific areas of activity (eg audience development or digital) and typically span periods of two to five years. *Inspiring Futures* reflects our intention to make more of the power of the Group while retaining the distinctive remit and character of our individual museums. We have a venerable history originating – like so many of our great cultural and educational institutions – in the Great Exhibition of 1851. But we have always been a dynamic organisation, responding to change and opportunities. Over more than a century we have innovated and developed into the world's most significant museum group for science, technology and engineering, and the most national of the UK's national museums, with five of our six sites outside London. We know that the world will look different by 2030, and so will our Group; this document will probably be superseded by then, but it captures our aspirations *now* and provides a road map for our future.

Clockwise from top left: The Science Museum; the National Science and Media Museum; the National Railway Museum; Locomotion; the Science and Industry Museum

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Vision, mission and values
The long-term strategic priorities that will drive our activity in this period are founded upon a vision, mission and values that are shared across the organisation.

Our mission, *Inspiring Futures*, acts as our 'North Star' to ensure consistency in all our discussions and decisions. Each museum also has a distinctive focus that reflects its own remit.

Group vision
A society that celebrates science, technology and engineering and their impact on our lives, now and in the future.

Group mission
We inspire futures by:
- Creative exploration of science, technical innovation and industry, and how they made and sustain modern society
- Building a scientifically literate society, using the history, present and future of science, technology, medicine, transport and media to grow science capital
- Inspiring the next generations of scientists, inventors and engineers

Group values
We will:
- Think big
- Reveal wonder
- Share authentic stories
- Ignite curiosity
- Be open for all

Focus of each museum
- The Science Museum explores the science, technology, engineering, mathematics and medicine that shape our lives
- The Science and Industry Museum explores how ideas can change the world, from the Industrial Revolution to today
- The National Railway Museum and Locomotion explore the huge impact of railways on Britain and the wider world
- The National Science and Media Museum explores the transformative impact of image and sound technologies on our lives

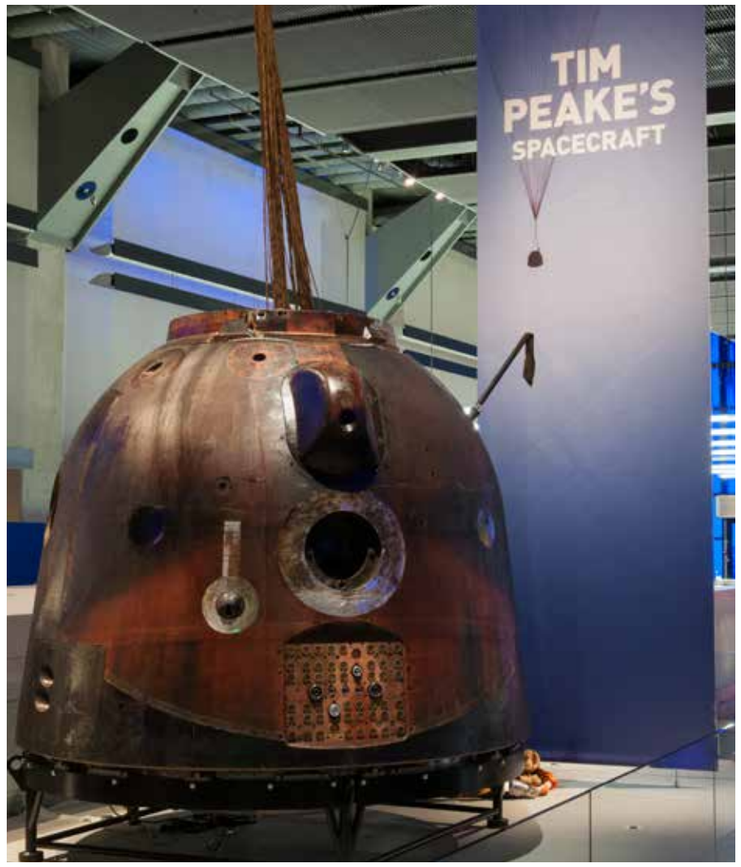
Strategic priorities
Seven key priorities will drive our activity in this period:

Core priorities
1. Grow science capital in individuals and society
2. Grow our audiences and exceed their expectations
3. Sustain and grow our world-class collection

Supporting priorities
4. Extend our international reach
5. Transform our estate
6. Harness the potential of digital
7. Increase income

The first three – science capital, audiences and collections – are designated core priorities, fundamental to our statutory responsibilities and all we do. The other four – international, estate, digital and income – may be considered as supporting priorities: that is, areas in which a need for significant growth or change has been identified for the period covered by this document, even where the activity might otherwise be seen as 'business as usual'. This may arise from a need to make a step change in order to address previous underinvestment (eg in digital infrastructure), from a change in external circumstances (eg declining Grant in Aid or the vote to leave the EU), or from the scale and significance of the activity itself (eg maintaining and developing our estate).

The main part of this document is structured around these seven priorities. Under each one our aspirations for where we want to be by 2030 are articulated, followed by a short rationale that includes the current position and key challenges, and a summary of what we will do in this strategy period. The document concludes with a note on accountability and monitoring progress.



Soyuz TMA-19M descent module, acquired for the Science Museum Group collection in 2016

Curatorial approach
Alongside these core and supporting priorities, our museums share three core principles that guide our approach to curation and display and capitalise on the unique opportunities we have as collections-based museums that include both sciences and arts. A common approach fosters cooperation across the Science Museum Group and will be used to deliver a consistent mission and standards.

Core principles

- Connecting the past, the present and the future: we illuminate the history of science, technology and engineering through our unparalleled collections, but we also provide contemporary context and look to the future.

- A broad definition of science: we showcase and explain science as a method for securing a deeper, systematic understanding of our world, and we demonstrate the fertile relationships between different scientific disciplines.

- Science as culture: we explore science, technology and engineering as creative and entrepreneurial pursuits, and reflect science as a facet of broader culture.

Science and technology themes
A number of important scientific and technological themes will also inform our curation, research and programming across the Group in this period. They will act as a backbone, while retaining flexibility to develop creative and nimble responses to change and acknowledging the distinct appeal and remits of our individual museums.

- **Understanding the universe: capturing, analysing and interpreting the physical world**
  In addressing fundamental science (matter, materials, forces, maths), we will tell enthralling stories around light and sound, space and the cosmos, and measurement. We show how humankind has sought – and continues to seek – to understand and visualise the world around us.

- **Technology, engineering and innovation: how ideas become reality and impact on people's lives**
  We show how science, technology and engineering have changed the world and how they are addressing today's – and tomorrow's – big societal challenges and opportunities. These include energy, sustainability and adaptation to climate change; artificial intelligence and robotics; power and locomotion; data and informatics; computing and telecommunication; materials and manufacturing. Such a list may look different several years from now, but our Group will be the nexus for public interaction with research and innovation.

- **Biosciences: the history and future of life sciences and medicine**
  We explore how humans perceive and interact with their world, and how we can lead better lives through medicine, technology and design. We will foster discussion of the controversies and ethical questions these technologies create. We will present the issues arising from dramatic advances in biomedical sciences, including neuroscience, agrisciences, synthetic biology, genetics and genomics.

Opposite: Visitors get up close to the *Mallard* locomotive in the Great Hall at the National Railway Museum

RISING PRIORITIES AT 2020

Sustainability
Climate change is one of the most serious threats facing our world. The Science Museum Group is clear that evidence shows that climate change is being driven by human activity and that we must act urgently to reduce greenhouse gas emissions if we are to avoid increasingly dangerous impacts in the future. The Intergovernmental Panel on Climate Change's Special Report (October 2018) on the impact of a 1.5˚C global warming is clear that, if we are to avoid such impacts, profound and unprecedented transformation of our energy, land, urban and industrial systems across all sectors including energy, transport, business and government is called for – an enormous challenge at local and global scales.

As a prominent voice in the science field, we take our influence on an environmentally resilient future seriously. Public awareness of human-induced climate change and sustainability issues – and calls for action – have increased significantly in recent years and we have opportunities to help inform the debate through our actions and our programming. For the Science Museum Group, sustainability is not a project or a programme but has become our culture and part of everything we do. We will lead the field in public engagement with the science of climate change, mitigation and adaptation as well as exploring the opportunities around energy transition. Our actions and aspirations will be expressed in a sustainability strategy to be approved and published in 2020 and more extensively covered in the next iteration of the long-term *Inspiring Futures* strategy.

There are two main pillars for the Science Museum Group's sustainability actions: our public offer and our own operation and practice. In both cases we have achieved a lot in recent years, but our visitors, our stakeholders and our colleagues deserve a stronger narrative and more transparent delivery plan.

We have a great story to tell about what we have already achieved, including: a 25% decrease in energy use and a 69% drop in carbon emissions since 2011/12 (despite a 24% increase in floor area of our estate); creating a ground-breaking gallery on climate science, *Atmosphere*, in 2010 that has already inspired over 5 million visitors; purchasing all our electricity from renewable sources (except at Blythe House store); hosting one of the UK's biggest solar farms at our National Collections Centre site at Wroughton; and planting 43,000 trees on our estate.

In 2018 we appointed a Sustainability Partner to improve momentum on sustainability and establish an environmental approach in line with our colleagues' and our audiences' expectations. This initiative is supported by a new Sustainability

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Sir David Attenborough, Sir Ian Blatchford and Darren Moorcroft, CEO of the Woodland Trust, plant trees with schoolchildren at the Science Museum to mark the Science Museum Group's climate-focused public programme as part of the UK Year of Climate Action

Advisory Board that includes external advisers from industry and academia, and a Sustainability Guiding Team of around 40 colleagues from across the Group. We are on a journey to embed environmental decision-making by empowering colleagues and visitors to choose personal actions that build towards an emissions reduction target that is bold, robust and informed by science.

We are even more ambitious for the future and we have already started the work. In the short term we have identified ways to shift our operations towards greater sustainability, with emphasis on reducing energy use and greenhouse gas emissions, and greater sustainability in our procurement. Among other things we will:

- Significantly reduce business travel (eg by installing video conferencing facilities throughout the Group)
- Build on the sustainability principles embedded in Masterplan projects through our whole-life approach to design, procurement and performance; Building One at the National Collections Centre, due for completion in 2023, will be an exemplar in the heritage sector for low energy use and design
- Extend our tree-planting programme, aiming to plant 1,000 new native, locally sourced trees each year and introducing wildlife- and biodiversity-friendly elements into developments across our estate, especially at the National Collections Centre at Wroughton
- Enable colleagues to contribute to our sustainability agenda through dedicated consultation and training

Our public programme and enormous reach provide a unique platform to explore, explain and promote sustainability issues. This is especially true in 2020, the year in which the UK hosts the UN International Conference of Parties (COP26) in Glasgow – bringing nations together to encourage greater pledges in greenhouse gas emission reductions – and in which the renewed vigour of our approach to sustainability programming starts to be manifested. Significant projects already in the pipeline (but subject to confirmation) include:

- An exhibition on carbon capture in the *Tomorrow's World* gallery at the Science Museum from November 2020, potentially with a satellite exhibition at the COP26 venue itself
- An exhibition on future battery technology in the *Tomorrow's World* gallery from November 2021
- Manchester Science Festival in October 2020 will focus on climate change and sustainability
- Bradford Science Festival 2020 will explore ways to reduce the environmental impact of city-wide events
- Science Museum Masterplan Phase 2, 2020–2030 – sustainability narratives may be woven into many capital development projects as we continue to update and renew our museum, but those with specific sustainability content at their core include:
  - *Feed the World* (working title) – a new gallery on food sustainability and contemporary agriculture; in advance of this a discrete research project will be undertaken in the UK, Brazil and India in 2020 to understand public attitudes to food and food security around the world
  - *Global Challenges* (working title) – a new synoptic gallery
  - A new outdoor garden to be created at the Science Museum in partnership with the Woodland Trust
  - *Atmosphere* gallery Phase 2 – the current gallery focuses on the carbon cycle and has successfully raised awareness of climate science among our audience; the second edition will focus on positive solutions to greenhouse gas removal and global stories
- Our transformational Vision 2025 plans for the National Railway Museum in York and Locomotion in Shildon include improving the environment for both wildlife and visitors through the creation of a large area of parkland in York and raised beds at Locomotion
- At the Science and Industry Museum in Manchester our redeveloped outdoor spaces will include extensive new box planting across the 3-hectare historic city-centre site.

Visitors at the opening of artist Joshua Sofaer's *The Rubbish Collection* at the Science Museum. Sofaer used 30 days' worth of rubbish from the museum to create a display that exposed the materials, the beauty, the value and the volume behind our 'rubbish'

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Science Museum Explainers and volunteers interacting with our young audiences at the *Top Secret: From Ciphers to Cyber Security* exhibition

People

At the Science Museum Group we recognise the critical importance of our people to achieving our mission. We directly employ around 1,200 people, and many more colleagues are involved as part of our wider community, including volunteers, contractors, Trustees and advisers. Guided by our core values, we aspire to be an organisation of high-performing, empowered and engaged people who are passionate about our mission and can inspire and deliver change through a common sense of purpose. We are actively exploring how to better understand, support and engage our people across the whole employee life cycle to make the Science Museum Group a great place to work.

As part of our commitment to enhancing employee engagement, we regularly create opportunities to listen to feedback from colleagues at both organisational and local or topic-specific level and using a variety of formats such as pulse surveys, drop-in open sessions, working groups and targeted consultations. An example is the strengthened sustainability agenda, as outlined above: three-quarters of our colleagues said that sustainability was extremely important to them, and we aim to harness their knowledge and enthusiasm through the Sustainability Guiding Team.

A workplace improvement and engagement plan that seeks to address key issues raised from our employees while creating more opportunities for employee voice is being implemented, monitored at senior level. It ranges from small 'quick wins' to bigger, more complex activities, and seeks to extend examples of good practice across the Group. Improving internal communications is a key focus of this plan and we will strive to make a genuine step change here. Other broad areas that are currently in our sights include:

- A proactive approach to wellbeing, including the introduction of Mental Health First Aiders across all our sites, along with wider wellbeing training
- A volunteering strategy that is more closely aligned to our science capital priority and better reflects our social objectives
- A diversity and inclusion strategy that aspires to achieve a workforce that better reflects communities we serve
- An impactful and inclusive learning and development offer that supports the organisation's ability to deliver its strategic objectives, supports career development and progression, and has positive cultural impact across the Group
- Investment in accommodation and workplace facilities
- Using the five-year review of this *Inspiring Futures* long-term strategy itself as an opportunity for increased staff engagement between 2020 and 2022

GROW SCIENCE CAPITAL IN INDIVIDUALS AND SOCIETY

Our offer and reputation for lifelong informal STEM learning and engagement will be the best in the world.

By 2030:

- We will be recognised as being of strategic importance to the UK STEM agenda and sought out by policymakers, funders, peers and partners.
- We will reach many more people beyond our walls through outreach and new programmes, including through national and international partnerships, compared with the 2014/15 baseline.
- The Science Museum will remain the number-one UK museum destination for school groups.
- Our online learning resources will be highly regarded for quality and widely used throughout the UK and around the world.
- Our museums will be key destinations for adult audiences.

Igniting curiosity in science

The Science Museum Group plays a central and irreplaceable role in deepening and expanding science literacy in the UK. The breadth of resources in the Group, the diversity of the audiences and communities we serve, and the expertise embedded in our teams, collections and exhibitions are world-class resources for public engagement in STEM. Our organising principle is to build science capital to enrich people's lives and enhance their contributions to society.

Science capital is a concept that encompasses the myriad factors that influence people's attitudes towards science, including who they know as well as what they know, past experience and exposure, and education. From 2013 we worked in partnership with King's College London, University College London and BP on the Enterprising Science project. This used the concept of science capital to understand how people from all backgrounds engage with science and how their engagement can be increased through different science-related experiences. We led the development of practical applications of the science capital concept for the informal science learning sector and are pioneering this approach through organisational change across our museums.

Noise Orchestra take over as Artists in Residence at the National Science and Media Museum

Our concern is for the whole of society. Progress here may be indicated by large-scale, long-term national projects such as the regular Public Attitudes to Science surveys conducted by the Department for Business, Energy & Industrial Strategy.

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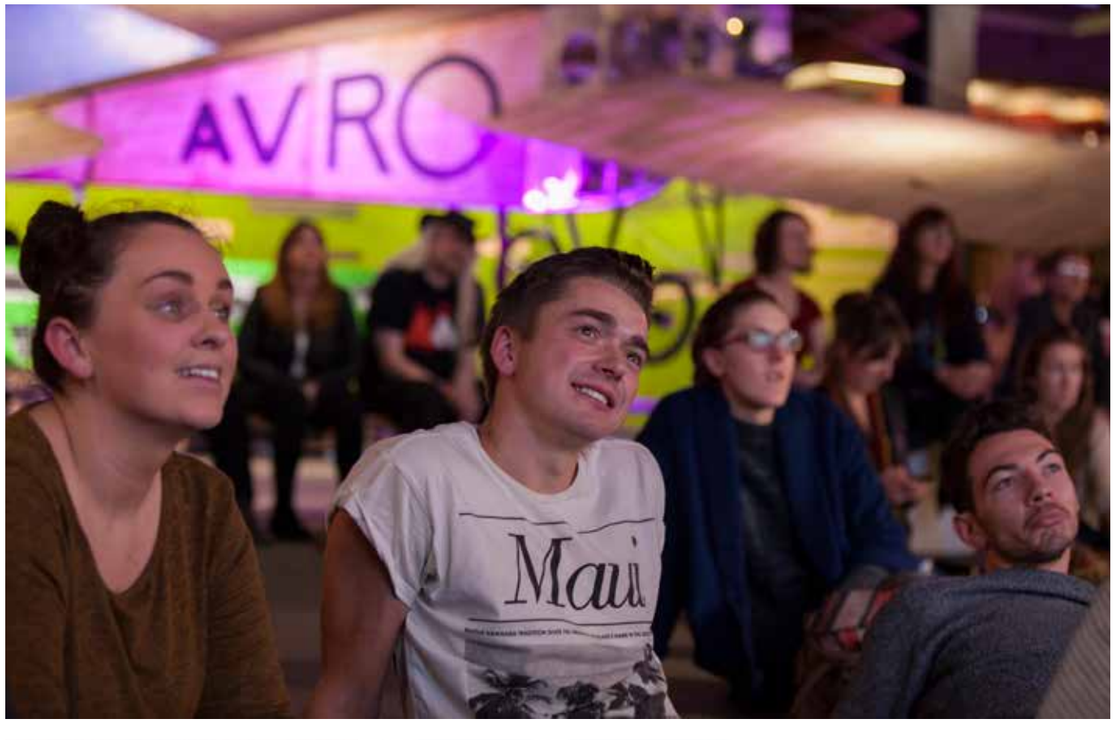
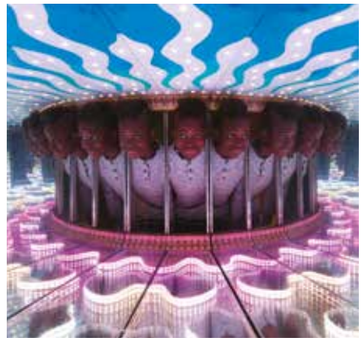




Clockwise from top: Young adult visitors at a Lates event at the Science and Industry Museum as part of Manchester Science Festival; a young visitor to the new *Wonderlab* interactive gallery at the Science Museum; the Locos in a Different Light event at the National Railway Museum

Research confirms that informal STEM experiences have a deep and sustained effect on people. Our impact as the most visited set of museums by education groups, combined with strengths in teacher professional development and millions of public visitors, affords us a unique position within the UK's STEM learning ecosystem.

From 2020 we will implement a new Group-wide learning strategy that builds on our strengths while being newly ambitious in terms of reach, reputation and innovation.

It is founded on our core learning principles:

- We ignite curiosity in science. We do not teach or lecture our audiences about science but seek to inform and inspire.
- We play our part in an ecosystem of STEM learning where we support and encourage our audiences to extend their learning within and beyond our museums.
- We put audiences at the heart of everything we do and aspire to provide people with life-enhancing experiences.
- We use the principles of science capital to shape all science engagement experiences.

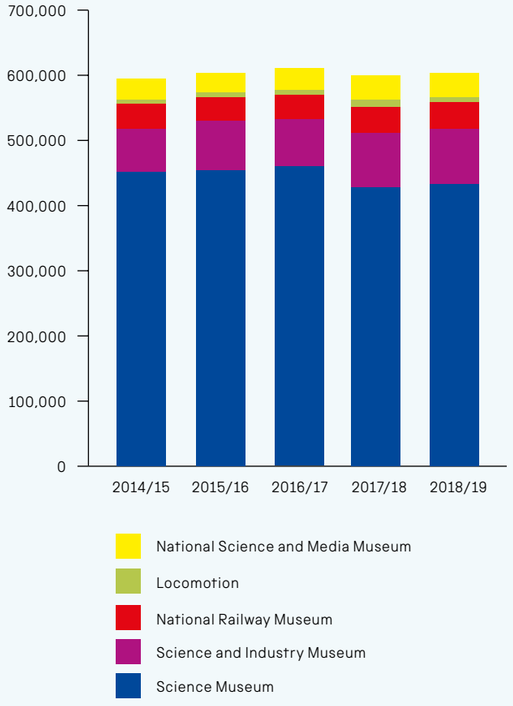
Amplifying reach and impact
Our overarching challenge is to offer even greater access across all platforms and audiences. We must reach beyond our museums with outreach activity and digital engagement, and work in local, national and international partnerships. Each of our museums brings expertise to bear on the reach and impact of our learning activity. The National Science and Media Museum focuses on working with local communities and organisations to engage underserved communities with STEM and is developing into a centre of excellence in this field. The National Railway Museum's Future Engineers events are now an established programme that engages children in school and family groups with engineering as an interest and possible career. In 2018 it was a highlight of the government's Year of Engineering and from 2019 it is taking place at multiple Science Museum Group sites. Working with STEM Learning, we run the STEM Ambassador

LEARNING VISITS

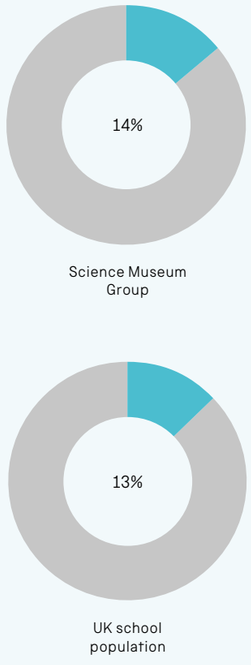
Participation
In 2018/19 there were 1.6 million instances of people taking part in organised learning activities across all our museums, and over 300,000 in off-site learning activities.

Diversity
40% of UK visits made in education groups in 2018/19 were by visitors with a black, Asian and minority ethnic (BAME) background.

Education group visit numbers



Proportion of UK school group visitors receiving free school meals in 2018/19



Hub across the trans-Pennine region; through almost 40,000 volunteering hours per year, industry professionals share their expertise and career paths with children and young people. With support from founding partner BP, in 2018 we launched the Science Museum Group Academy as the home of science engagement training and our courses reached 1,400 teachers, scientists and museum professionals in its first year. The Academy draws on our science capital approach and huge experience in engaging audiences with STEM through contemporary science, hands-on experiences and object interpretation, shaped and informed by ongoing research.

Policymakers, industrial leaders and educators agree that future generations must be informed, enthusiastic and skilled in STEM if the UK is to retain its role as a global leader. We have a distinctive role in addressing this priority as a national and international leader in STEM education. Our work will be underpinned by, and delivered through, strong academic networks and research partnerships with universities and colleges. There is more to do in communicating this role to government, funders and industry so that we are recognised as essential to achieving their respective goals.

In order to sustain the breadth of our learning activity, and in line with our supporting priority of increasing self-generated income, we need to increase the financial efficiency of our operations and be more entrepreneurial about generating income.

We will:
- Use the principle of science capital to describe and shape our learning content and programmes across all our sites.
- Deliver a successful *Wonderlab* offer at our museums in London, Bradford, Manchester and York.
- Build on the success of the Science Museum Group Academy, extending its reach in the UK and internationally.
- Develop a sector-leading offer for early-years children.
- Provide experiences for older children and teenagers which support their future career choices.
- Bring maths and computing fully into our offer for schools and families.

From top: An Explainer engages with family visitors at the National Science and Media Museum; visitors to the *Wonder Materials: Graphene and Beyond* exhibition at the Science and Industry Museum; TeachFirst seminar on STEM education held at the Science Museum

GROW OUR AUDIENCES AND EXCEED THEIR EXPECTATIONS

We will understand and consistently meet or exceed our visitors' expectations; we reach and reflect the communities we aim to serve.

By 2030:

- Total visit numbers to our sites will be sustained at more than 6 million per year.
- The quality of visitor experience will consistently exceed baseline 2014/15 levels at all museums.
- Exhibitions and programmes at all sites will be recognised for excellence in content and presentation, indicated by visit numbers, positive feedback from visitors and reviewers, and the receipt of awards.
- Visitor profiles will reflect the communities we aim to serve, for the museums in general and for targeted programmes.
- Exhibitions and other public programmes will routinely be shared and codeveloped between museums.
- We will be the leading national museum for volunteering and apprenticeships.

Who, what, why – and how many?

Since 2011/12 we have welcomed well over 5 million visits per year to our museums. Millions more experience our offer online and elsewhere, eg at touring exhibitions, schools and festivals.

Our audiences vary between our museums, for different events, at different times of year and even at different times of day. We know a lot about their demographics, why they visit, what they do when they are here and what they think about it. We also investigate why some people do not visit. We use this research in planning and evaluating our activities, and constantly add to the body of knowledge. But there is always more to do. Each of our museums has an Audience Development Plan that identifies areas for improvement and potential growth.

Opposite: Young visitors go wild watching Tim Peake's launch into space during a day-long TV broadcast from the Science Museum

We aim to do science and technology exhibitions better than anywhere else. Temporary exhibitions and programmes provide reasons to visit and revisit. The Science Museum has had some notable successes, such as *Collider: Step Inside the World's Greatest Experiment*, *Cosmonauts: Birth of the Space Age* and *Robots*, demonstrating our ability to use rigorous scholarship, authentic objects and excellent design in popular exhibitions.

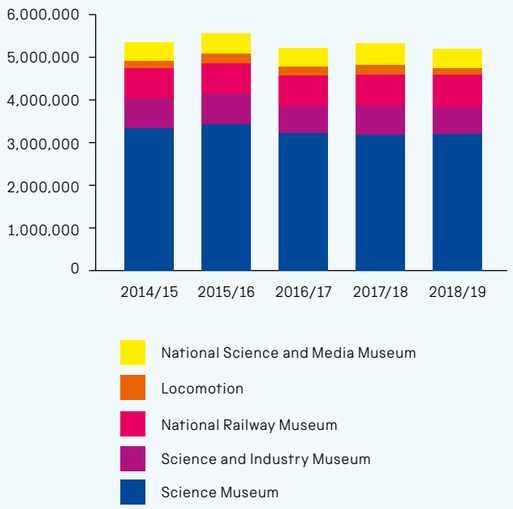
Starting from successful transfer of exhibitions between London and Manchester, we now share exhibitions and programme planning more systematically across the Group. For example, the tour of Tim Peake's Soyuz spacecraft, Sokol spacesuit and VR experience went to all five museums in 2018/19 and the National Railway Museum's *One Billion Journeys: Wang Fuchun's Chinese on the Train* will follow suit between 2019 and 2022.

The Science and Industry Museum is investing in a new dedicated space for special exhibitions and has a partnership with the Wellcome Collection. The National Railway Museum's major successes through events, such as the *Mallard 75* and *Flying Scotsman* seasons, and productive collaboration with York Theatre Royal have been mirrored in exhibitions such as *Testing* and *One Billion Journeys*. The National Science and Media Museum has changed its focus to meet the needs of local audiences and the broader STEM agenda. This is manifested in projects such as the burgeoning annual Bradford Science Festival and Bradford's National Museum, the research project behind the exhibition *Above the Noise*.

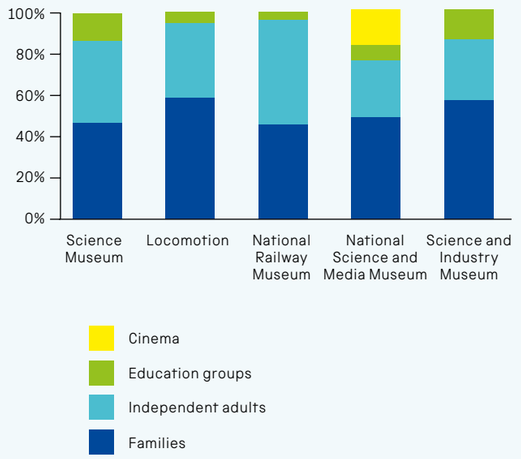
While visit numbers are important, and there is scope for increases at all our sites, we also focus on the quality of the museum experience. We want people to be entertained, but also to leave thinking that they have learned something and see the world differently.

AUDIENCES

Total visits

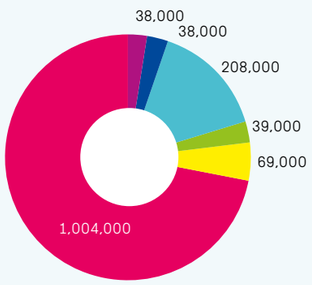


Proportions of visitor types in 2018/19



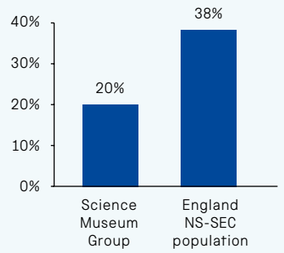
Award-winning adult ball pool installation at the Science and Industry Museum as part of the Manchester Science Festival

Off-site reach
In 2018/19 there were 1.4 million additional visits to Science Museum Group activity outside our museums.

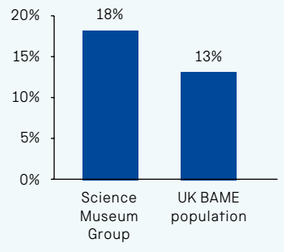


- *Flying Scotsman* heritage railway events
- *Flying Scotsman* passengers
- Off-site Bradford Science Festival events
- Off-site Manchester Science Festival events
- Off-site learning activities
- Visits to touring exhibitions

Diversity
Proportion of all UK-based visits by lower socioeconomic groups in 2018/19 (excluding education groups)



Proportion of all UK-based visits by BAME visitors in 2018/19



The world's most famous locomotive, *Flying Scotsman*, making its inaugural run from London to the National Railway Museum in York

INSPIRING FUTURES: STRATEGIC PRIORITIES 2017–2030: REISSUED 2020

Sector-leading audience research informs the development of our exhibitions and programmes from the start and throughout major projects, and evaluates outcomes after opening. We know that visitors want clear explanations of the science, technology and engineering on display, and why the selected issues and artefacts are important. Visitors want different levels of interpretation, and artefacts embody multiple stories. Digital is a means of providing multilayered information, by which users can go as wide or deep as they wish and may make their own contributions.

We are committed to diversity and inclusion. We seek to eliminate or minimise barriers to engagement and participation everywhere. We also offer dedicated programmes for a range of audience groups where the numbers hardly impact on our overall figures, but where the experience is immensely valued by the participants. Examples include Early Birds early-morning openings for families with members who have an autistic spectrum condition, the Science and Industry Museum's targeted offer for low-income families, and the National Science and Media Museum's increased engagement with local communities that previously have been underrepresented.

The Science Museum receives over 3 million visits per year. Here the emphasis has been on countering the common perception that the museum is 'just for kids' and attracting more adults – *in addition* to those who come with children in family and school groups. By, for example, tailoring the content of the public programme and the commercial offer, opening at different times and improving our facilities, we doubled the number of adults visiting without children: 1.26 million in 2014/15 compared with 0.63 million in 2004/05.

We are now working to the Science Museum Visitor Plan 2019–2025 that describes how we will realise our goal of exceeding 3.5 million visits per year by 2025, while improving the overall visitor experience.

Deepening understanding, meeting needs, exceeding expectations
Notwithstanding growth in online visits and social media engagement, our primary means of engaging and serving our audiences are our five museums. Our museums in the North offer the greatest opportunities for increasing visit numbers. This is especially true in York, where a set of major capital developments – collectively known as Vision 2025 – has the potential to deliver 1.2 million visits per year by positioning the museum as the cultural heart of one of Europe's most ambitious city-centre regeneration projects.

Temporary exhibitions afford opportunities to focus on particular topics or issues, to look at our collection in different ways, and to bring in artefacts and expertise from elsewhere. Over time a broad range of audience segments may be targeted. No single gallery or exhibition can be all things to all people, and we need to ensure that our entire offer is integrated and consistently high in quality, both free and paid-for, and from basic facilities to specialist content. We need to explain the choices we make about acquisitions and display: what is significant about the objects and ideas on display and what stories can they tell?

The Science Museum is working towards a regular pattern for programming major exhibitions that attract big audiences, alongside a suite of other content streams of varying scale to keep the offer fresh. The Science and Industry Museum will do the same with its Special Exhibitions Gallery. Across the Group we want to share the development and presentation of exhibitions to a much greater degree; the challenge is to reflect the individual remit and character of each museum and its audiences. This requires continued support for colleagues to enable more sharing of ideas, expertise and resources among our teams.

As well as developing our employees, we know that our users have a lot to offer. The contribution of volunteers to our public programmes has been much appreciated by visitors and colleagues. We plan to extend this programme so that every major exhibition and certain behind-the-scenes projects (eg collections digitisation) are enhanced by volunteers, who themselves have a rewarding experience.

Audiences are increasingly sophisticated in the technology they use, the places they go and the service they expect. There is more and more competition for their time and attention, and their money. We need to be similarly sophisticated in our understanding of what people – all types of people – want and, where appropriate, what they might pay for. Technology can help in this. A new customer relationship management (CRM) system introduced at the Science Museum in 2016 and subsequently extended to all museums has been a huge step in this direction. Coupled with bold communications and a new visual identity, this fresh approach to CRM is enabling us to connect better with visitors to build awareness and loyalty. We should also surprise audiences sometimes, providing things they did not know they wanted and taking risks from time to time.

We will:
- Consistently deliver exhibitions and programmes at all sites that are critically acclaimed and popular.
- Deliver the objectives and targets for visitor numbers, demographics and quality of experience set out in each museum's Audience Development Plan, and review and refresh Audience Development Plans every three years.
- Apply the experience and data from the CRM system and *Wonderlab: The Equinor Gallery* to develop new subscription/membership services.
- Share public programme content, skills and expertise across our sites.
- Expand the volunteering programme to support every major exhibition.
- Deliver an efficient and successful apprenticeship programme.

SUSTAIN AND GROW OUR WORLD-CLASS COLLECTION

Our collection will be the best in the world for our fields: well understood, well housed and accessible (physically and digitally), and used effectively by us and others for research, display, learning and pleasure.

By 2030:

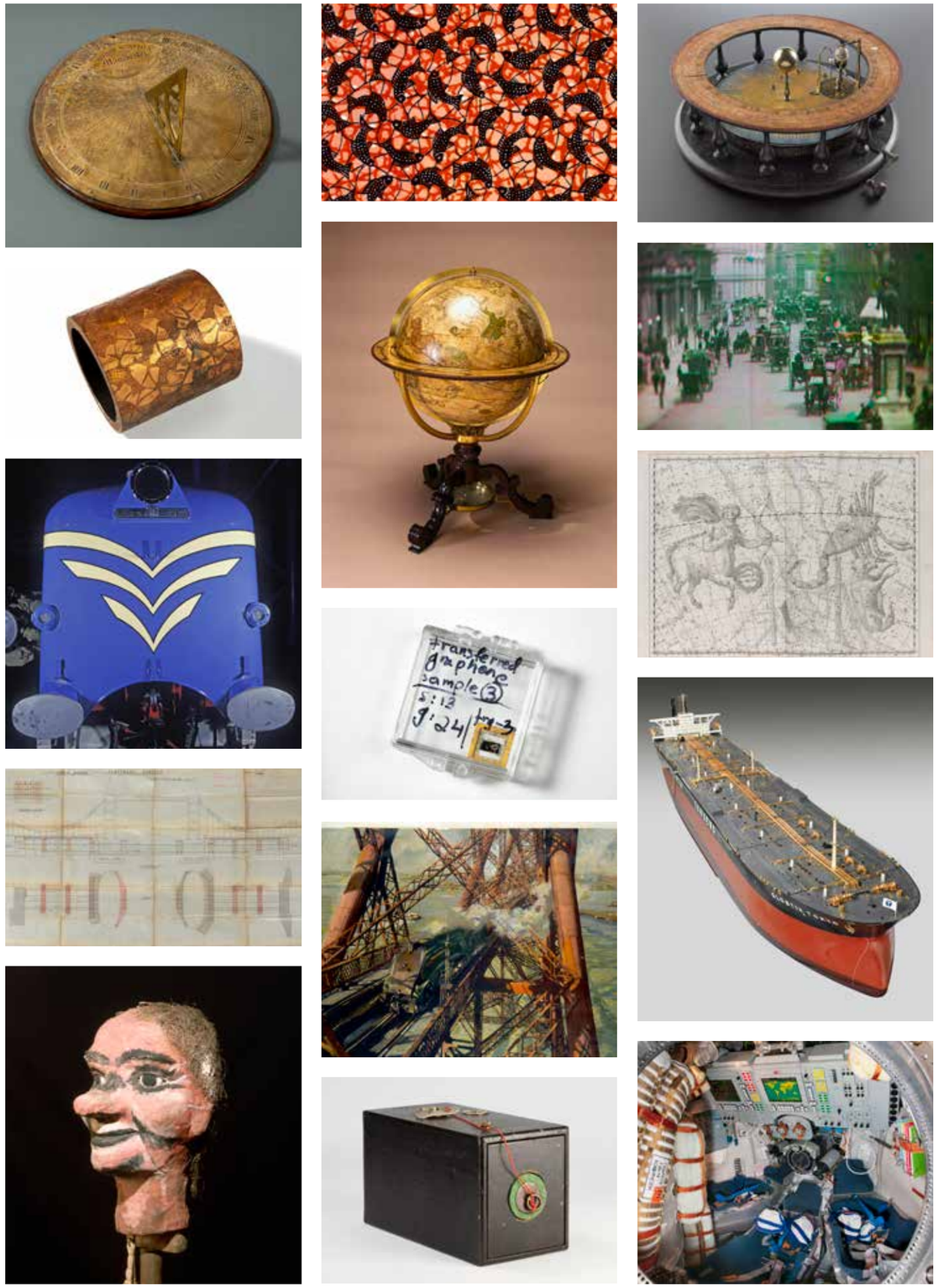
- New collection facilities at the National Collections Centre in Wroughton will provide improved accommodation by 2023: safe, secure and with appropriate environmental conditions and physical access.
- Almost all (about 425,000) of our artefacts collection will be digitised, so that more of our collection is accessed and used online.
- Our collection will be well documented and understood, not only through professional research and scholarship, but also through the contributions of diverse users.
- The Group's collection will retain its pre-eminent status through active acquisition and disposals.

One collection, one approach

Custodianship of our collection on behalf of the nation is our *raison d'être*. In recent years we have made big strides in collections-based scholarship and research, creating a new Dana Research Centre and Library, establishing the online *Science Museum Group Journal* and building a strong network of partnerships with universities. We share our expertise and enthusiasm through our new galleries and exhibitions. In addition, in this period we aim to improve service for our users by addressing three areas of historic underinvestment in collections: preservation, acquisition and digitisation.

In the past our collection was treated as a set of separate collections 'belonging' to our individual museums. In 2015 we adopted a single-collection approach, establishing a new department for collections services and shifting towards common processes and practices. In 2016 the One Collection project began, one of the biggest programmes of change we have undertaken in recent times, and one that will reinforce and make manifest our pan-museums approach. This will deliver a new purpose-built collection facility at Wroughton, the National Collections Centre, that will apply the latest in collections management thinking to help us to use our collection better. It will provide improved and appropriate physical

INSPIRING FUTURES: STRATEGIC PRIORITIES 2017–2030: REISSUED 2020



Objects from the Science Museum Group collection

conditions for our collection, including some 320,000 items currently held at Blythe House in west London, and enhanced access for the public. Moving the collection creates opportunities to review our holdings and improve our records and digitisation. Better organisation of the collection will support its more effective use for research and display throughout the Group and beyond, via digitisation, loans, touring exhibitions and visiting researchers. Mostly funded by the Treasury, and delivered in partnership with DCMS, the project will be completed by 2023.

Effective collections management for better access and use

The challenge of constructing a new building to house a large and diverse museum collection, and of moving hundreds of thousands of objects and records, hardly needs to be stated. Moreover, a significant amount of funding remains to be raised.

We continually improve our holdings through acquisition and ethical transfer. We have resolved to be more ambitious in collecting, especially in contemporary science and for gallery developments and exhibitions. This will often require funding, which we will attract from a range of sources. Researchers in universities and the private sector rarely have posterity in mind when disposing of their equipment and records, so important parts of our science heritage are at risk. Through pre-emptive communications in identified areas we will encourage the deposit of relevant items at our museums. In reactive collecting, we need to be persistent and imaginative when important acquisition opportunities arise.

Responsible collections management requires a dynamic approach. In 2018 we embarked on a review of the collection to provide a greater understanding of the items in our care in light of curatorial research. New insights into the collection are published online. Where items are better suited to display or research elsewhere, or duplicate items we already hold in the collection, we will look to transfer them to other museums and public collections. In rare circumstances, if attempts to find an alternative public home via a transfer are unsuccessful, we may sell an item (reinvesting the proceeds in the collection) or remove an item from the collection, recycling the item whenever possible.

Collection digitisation provides the fundamental building blocks of digital access and interpretation. We have not been sufficiently active in this area and in 2015 determined to step up the scope and rate of digitisation, and other work that enables use of our assets.

Across our collection, a new category of born-digital objects has emerged – those items that originate in a digital format and have no analogue equivalent, eg software, digital photographs, digital records and some artworks. To ensure that these born-digital objects are available for future generations, we need to establish a programme of digital preservation for their collection and corporate records. The digital preservation programme is also a necessary part of ensuring that we achieve the national Archive Service Accreditation standard for each of our museums.

We will:

- Complete the One Collection project by 2023.
- Prioritise our holdings through a rigorous programme of collections review and ethical transfer and removal.
- Significantly increase the scope and pace of collections digitisation, using collections moves for gallery developments, exhibitions and research as prompts to populate the Collection Online launched in 2016.
- Seek out opportunities for significant acquisitions, with particular emphasis on contemporary science and technology.
- Commence a programme of digital preservation in 2020 and from 2021 put in place the means to secure our born-digital collection for the future.

Opposite: Electronic ocean model developed by Shizuo Ishiguro, 1960–83, on display in *Mathematics: The Winton Gallery* at the Science Museum

COLLECTION HIGHLIGHTS

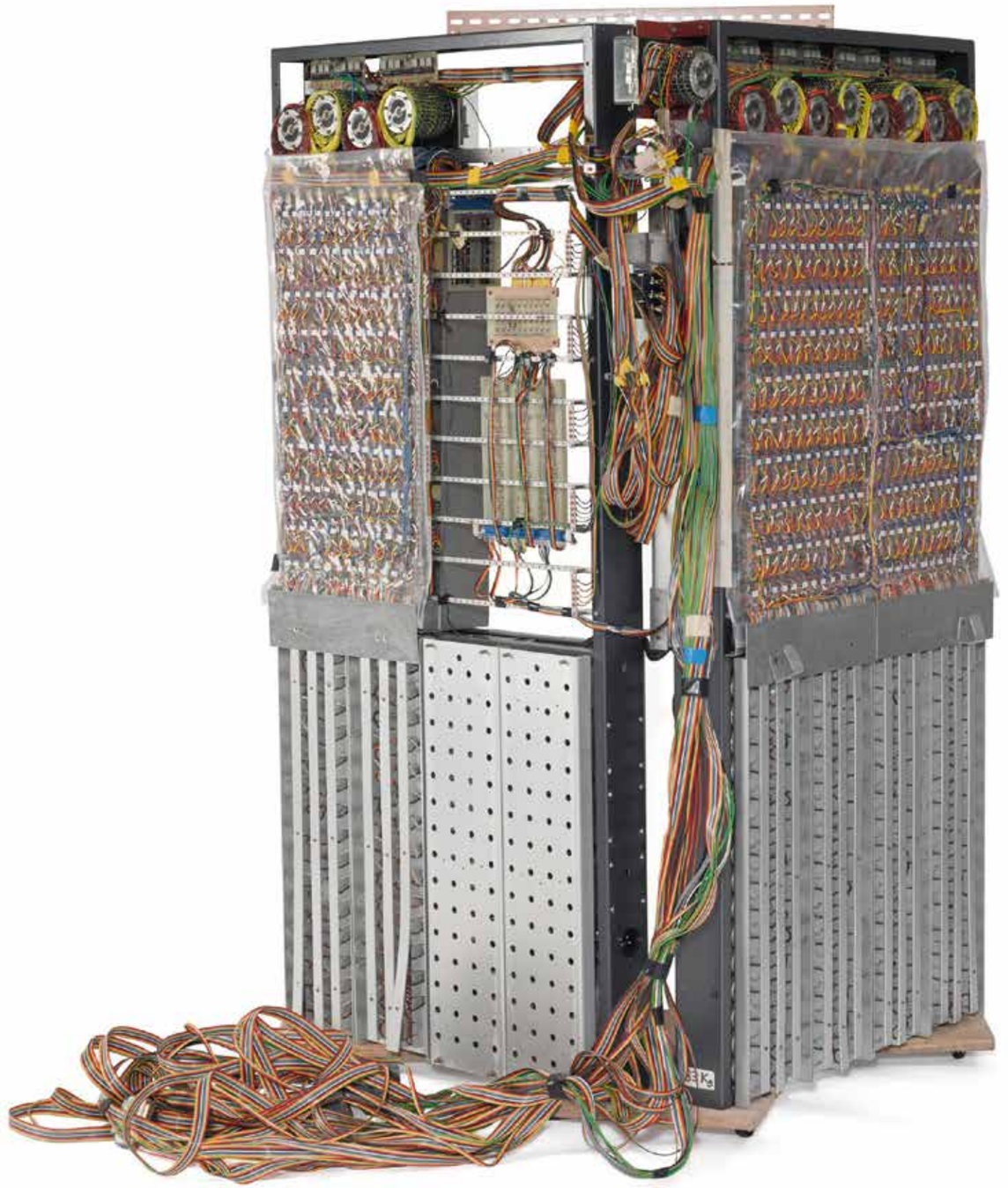
The Science Museum Group holds the nation's pre-eminent collections in the fields of science, technology, engineering, medicine, transport and media.

Our collection comprises 7.3 million items. These include:

- **7 million** items of photographic, archive and library material
- **140,000** medical items, including the long-term loan of the Wellcome Collection of 114,000 items
- **49,000** items relating to commerce and industry
- **26,000** scientific instruments
- **20,000** items relating to railway locomotives and technology
- **18,000** items relating to railway life and work
- **17,000** items of photographic, cinematographic and televisual technology
- **7,000** artworks

Among the standout items are Stephenson's *Rocket*, Alan Turing's Pilot Ace computer, Crick and Watson's 1953 DNA molecular model, Charles Babbage's drawings and models, William and Lawrence Bragg's X-ray machine, the apparatus with which J J Thomson discovered the electron, Amy Johnson's Gipsy Moth aircraft, the record-breaking locomotives *Mallard* and *Flying Scotsman*, the world's earliest known surviving photographic negative (William Henry Fox Talbot's 'Latticed Window at Laycock Abbey'), the earliest recording of British television (the Baird Phonovision disc), Richard Arkwright's textile machinery and John Dalton's surviving apparatus.

INSPIRING FUTURES: STRATEGIC PRIORITIES 2017–2030: REISSUED 2020



EXTEND OUR INTERNATIONAL REACH

We will have a very strong international profile and reputation for excellence that enhances our offer, promotes the UK and generates income.

Valentina Tereshkova, Russian cosmonaut and the first woman to have flown in space, opens the *Cosmonauts* exhibition at the Science Museum

By 2030:

- We will have a small number of strong, sustained, mutually beneficial partnerships in different regions of the world, including China.
- The core partnerships will be supported by a wider network of cooperative relationships that support and deliver our vision.
- We will be sought out by international agencies for our content, expertise and influence.
- We will be recognised as a vital means of promoting the UK, both directly and through soft power.
- Income from international working will increase compared with the 2014/15 baseline and deliver profit.

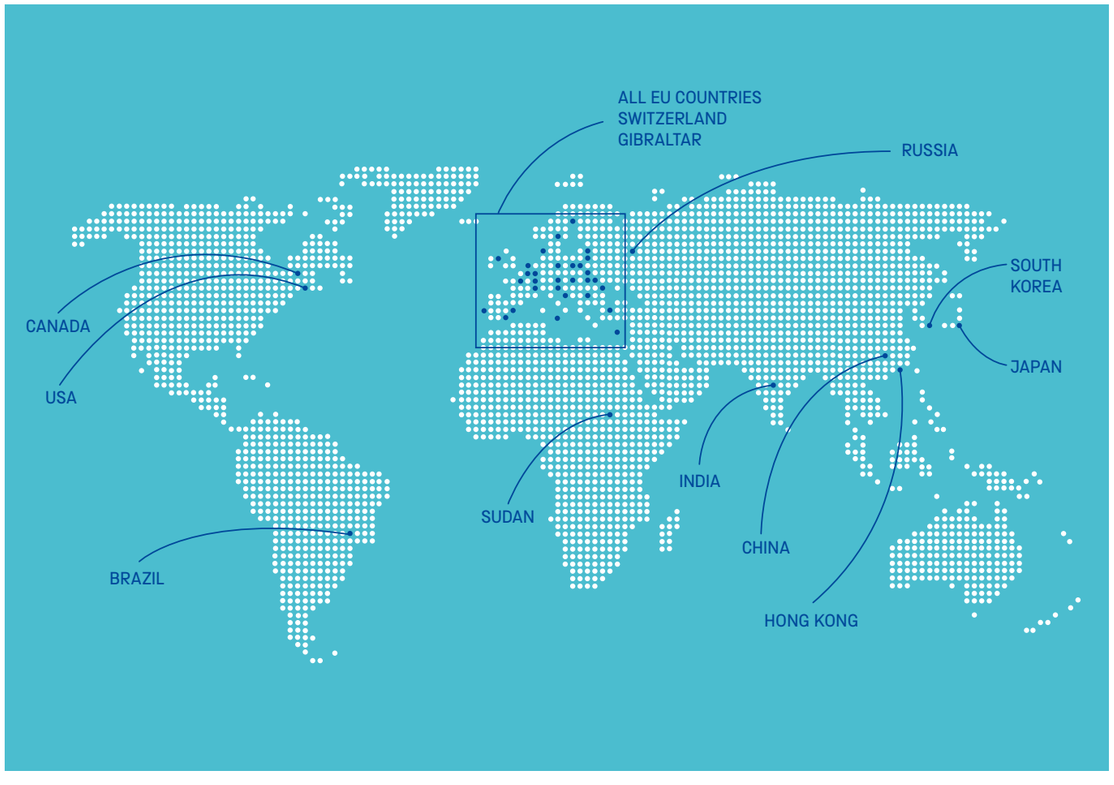
An international organisation

As well as being a group of national museums, in both name and action, we aspire to be an international organisation. This is important for enhancing our museums' offer through international cooperation on research and lending; building capacity and improving standards in the sector globally; growing and strengthening our spheres of influence at home and abroad; developing our own people and organisation; and generating income. Presenting ourselves as an international, inclusive organisation supports audience diversity and can be attractive to funders. Working internationally promotes not only our organisation, but also the cities and regions in which we operate, and the UK as a whole.

Since 2013 we have transitioned from an organisation that undertook pockets of international work, usually centred on a discrete project or on individuals, to one with a global outlook and presence that is widely recognised and whose expertise and services are sought out.

Touring exhibitions are the most visible manifestation of our re-entry into the international arena. From a standing start and a single exhibition (*Collider*) on offer, we have developed a diverse repertoire on the road and in development. In 2015/16 there were nearly 300,000 visits to our exhibitions overseas. The new touring capability also enabled sharing of exhibitions within the Group and further afield in the UK.

In addition, we have established a number of partnerships in Russia, Brazil, China, India and Europe and forged supporting links with government departments and agencies, both in the UK and in the countries where we are active. UK public bodies with whom we engage regularly via formal committees, specific projects and general liaison include, in addition to DCMS, the Foreign & Commonwealth Office and embassies (especially the Science and Innovation Network), the Department for International Trade, the Department for Business, Energy & Industrial Strategy, the British Council and the UK National Commission for UNESCO.



Locations of recent international activity by the Science Museum Group

Launch of the *Cosmonauts: Birth of the Space Age* exhibition at the Science Museum

International collaboration enriches our programmes in the UK by bringing in new artefacts and insights. In the wider context, it promotes understanding and cooperation between nations. Such cultural diplomacy was demonstrated by the exhibition *Cosmonauts: Birth of the Space Age* in 2015/16. This was the most complex and ambitious exhibition project ever undertaken by the Science Museum, and at a time of great political sensitivity. Not only was it a popular and critical triumph, it enabled valuable lines of top-level communication between the UK and Russia to be kept open.

Digital is a key means of reaching people throughout the world, including many who will never make a physical visit. Online engagement is already strongly international, with 39% of the 10.3 million visits to Science Museum Group websites in 2018/19 originating overseas, and players from 208 countries taking part in the Science and Industry Museum's citizen science project *Hooked on Music*.

Sustaining the UK's leading position for soft power through international working is one of the four key planks of the DCMS culture white paper (2016). We were credited with adding the 'Science is GREAT' strand to the government's GREAT campaign and we expect to continue our support for this initiative and other activity that promotes the UK and our museums' localities. We are enthusiastic participants in bilateral national celebrations such as the Cultural Olympiad between London 2012 and Rio 2016. For the 2017 UK–India Year of Culture we presented a season of exhibitions and events focused on India.

An international future

International collaboration will become more and more important, to the Group and to the UK. The challenges for the future of our international working can be characterised as factors that we cannot control, and those that we can.

Externally, the UK's relationships with the EU and other parts of the world remain unclear following the European Union membership referendum vote in 2016. The impacts of this decision within the timeframe of the *Inspiring*

Director Ian Blatchford at the Science Museum Group's partner institution the Museum of Tomorrow in Rio de Janeiro

Collider on display in Hong Kong as part of its hugely successful international tour

Futures period are still being worked through. International relations are also influenced by major geopolitical events, natural events, global economics and so on. We need to develop even stronger, wider networks that will help to anticipate such events so that we can mitigate negative impacts and exploit opportunities.

Within the Science Museum Group we have reached a pivotal point in our international ambitions. Recent success has raised expectations, internally and externally, and we need to determine our appetite for further investment and expansion. For example, our success in touring exhibitions so far has been through exhibitions primarily developed for our sites; in future we may develop exhibitions solely for touring, with content tailored for particular regions and emphasis on income generation. We also believe that our Group can take an even more prominent role in promoting British innovation and manufacturing abroad, and dedicated travelling displays could be an effective means of doing this. Another example of a potential growth area is in provision of professional training and advice, where we know that there is a greater demand for our services than we can currently meet.

International working has been bolstered by the establishment in 2019 of a new business unit for Cultural and Commercial Partnerships. Based in Enterprises, this team has a remit to work with colleagues across the Group to research, develop, sell and promote commercial opportunities, focused on (but not restricted to) touring exhibitions, consultancy and the Science Museum Group Academy.

In extending our reach we will work with other bodies, such as the British Council and the Foreign & Commonwealth Office, to explore opportunities in new territories: opportunities for interesting partners with whom we can work and from whom we can learn; opportunities where the local need is greatest and where our inputs can add the most value; and opportunities to grow income. The Middle East is emerging as a potential region of interest.

China remains a clear priority and we have made great strides with a number of exhibition and research projects coming to fruition in both the UK and China by 2020, and significant growth in our professional networks. We will continue to consolidate and extend fruitful partnerships, including new areas such as commercial activity.

We must be clear about the purpose and value of international working and where it sits within our other priorities. We believe that there will be opportunities to increase income from existing and new activities (eg touring exhibitions and consultancy respectively) and will proceed where there is a strong business case. But we will also undertake international cooperation where it enhances our profile and reputation, and where it enriches our offer for UK audiences.

We will:

- Undertake market analysis for designated regions and activities, and initiate new collaborations accordingly; China will be the first priority.
- Grow our touring exhibitions programme according to a sustainable business model.
- Strengthen networks for communication and advocacy of our international working.
- Work closely with UK public sector agencies to add value to each other's work and help maintain the UK's soft power ranking.
- Devise specific programmes to promote UK innovation and manufacturing.

Opposite: *Mathematics: The Winton Gallery* at the Science Museum

TRANSFORM OUR ESTATE

Our buildings, public spaces and facilities will be welcoming and inspiring places to visit, effective and accessible housing for the collection, and great places to work.

Young visitors at the National Science and Media Museum in Bradford

By 2030:

- Our high standards of architecture and design will be reflected in the quality of responses to our briefs, positive critical reviews and high visitor satisfaction.
- We will have the capacity and capability to consistently deliver capital projects at all our sites that are sustainable, effective, good value and beautiful.
- Our capital projects will be supported and facilitated by a strong network of stakeholders (including funders, planners, politicians, developers and communities).
- Our estate will be consistently well maintained and efficiently run, and will deliver excellent customer experience.

Integrated long-term planning

At every site a long-term framework for capital development is in place, described in an overarching Masterplan. These plans encompass some back-of-house functions and essential services as well as galleries, public facilities (eg lifts, lavatories and circulation spaces) and exterior spaces. Across the Group we aim to combine strong visitor focus with high standards of design and finish, as embodied in the Dana Research Centre and Library, *Mathematics: The Winton Gallery*, designed by the late Dame Zaha Hadid, and *Medicine: The Wellcome Galleries*, designed by Wilkinson Eyre Architects with Holmes Wood, which opened at the Science Museum in 2019. *Wonderlab: The Equinor Gallery* at the Science Museum, launched in 2016, and the National Science and Media Museum *Wonderlab*, which opened in 2017, further demonstrate this approach and mark a step change in children's interactive galleries that will be extended to each of our museums.

Masterplans drive development and change across the entire organisation, from new academic research to improved infrastructure, and from increased efficiency to increased inclusivity.

For people and place

Each site and each project presents its own masterplanning challenges, including areas of historic underinvestment in estate maintenance. Wherever possible, improvements to buildings, facilities and services (eg lifts) are incorporated into capital projects. We are also investing in a strategic, prioritised programme of repair and maintenance and in significant improvements to staff accommodation.

Sustainability is an important consideration and we seek to follow – sometimes to lead – best practice in our design, procurement and operations. We also recognise the special responsibility we hold in respect of listed historic buildings. Reducing the operational and maintenance burden of our estate both reduces energy consumption and saves costs; we will continue to drive this down as a priority, and to seek opportunities to generate income through our estate.

A good deal of the significant and consistent reduction in the Group's carbon footprint over the last two decades has come through estates work and Masterplan projects – for example shifting to LED lighting, replacing plant, increasing use of solar power and embracing passive design principles. Masterplan projects can also be key to explaining and exploring sustainability issues with our audiences. The Science Museum Group will continue and strengthen this commitment to a more sustainable future, not only through actions such as these but by adopting a more holistic approach that integrates technological solutions and culture change, as noted in the 'Rising priorities at 2020' section (p12).

Our museums need to work in their local and regional contexts. Multiple stakeholders may be involved, including local authorities, other public bodies and commercial interests. In York and Manchester in particular, museum developments sit within and alongside bigger neighbourhood developments. Here, and in Bradford and Shildon, our museums have a particular role to play in place-making and regeneration.

The National Railway Museum will see the greatest transformation during the period of *Inspiring Futures* through Vision 2025, a huge city-centre development that envelops our site and presents a once-in-a-lifetime opportunity to create a place that is more than a museum. Positioned at the heart of York Central, the museum will be a catalyst for take-up of new residential and office space, and our stunning new public spaces will be a hub for the community. Inside the museum we will inspire tomorrow's much-needed engineers by increasing access to the collection, telling powerful stories and doubling the number of visiting schoolchildren. The completion date of 2025 marks the 50th anniversary of the museum and 200 years since the founding of the Stockton and Darlington Railway.

Locomotion in Shildon, which became a full member of the Science Museum Group in 2017, will see big changes through Vision 2025. A new building will enable us to house and display more of our collection for more visitors.

The Science and Industry Museum is seeking synergies with new commercial and cultural developments on its boundaries, as well as exploring ways to integrate Manchester's aspirations for STEM education into its own plans. Work on a new Special Exhibitions Gallery was well under way by the end of 2016, and on completion in 2020 it will hugely increase the museum's capacity to deliver world-class exhibitions.

Occupying listed buildings on an important historic site, the Science and Industry Museum has experienced some of the worst effects of deteriorating buildings. It is therefore the focus of our Group-wide programme of capital works. The much-loved *Power Hall* was closed in 2019 and will reopen in sound condition and with refreshed interpretation in 2021.

The solar array at the Science Museum Group site in Wroughton, Wiltshire

Masterplan projects at 2019 (working titles)	
Science Museum	
Masterplan Phase 2	In development
IMAX refurbishment	2020
Technicians gallery	2021
Early Years gallery	2023
Modern Agriculture gallery	In development
Science and Industry Museum	
Special Exhibitions Gallery	2020
Power Hall repair and interpretation	2021
Public realm	In development
Wonderlab	In development
1830 Warehouse commercial	In development
National Railway Museum	
Wonderlab	2022
New wing and gallery	2025
South Yard	2025
Great Hall and Open Store	2025
Conference suite refurbishment	In development
Locomotion	
Historic Buildings repair	2020
Building Two	2024
National Science and Media Museum	
Sound and Vision gallery	2022
National Collections Centre	
One Collection facility	2023

In Bradford, the National Science and Media Museum has been building strong links with local organisations and communities while refocusing its vision on STEM. This was physically manifested in a new *Wonderlab* interactive gallery which opened in 2017. *Sound and Vision*, a new gallery to showcase highlights of the collection related to image and sound technologies, is planned to open in 2022.

Between 2014 and 2019, over one-third of public space at the Science Museum has been transformed through the Masterplan. The task is never finished, though, and the next phase is already being considered.

To thrive, we must remain ambitious and energetic. This inevitably requires funding. As well as increasing unrestricted income, we need to nurture a virtuous circle whereby successful projects and fruitful relationships with funders sustain each other.

We will:

- Deliver agreed Masterplan projects, and develop future phases, using best practice in procurement standards, and focusing on value for money and customer service.
- Work with a wide range of partners and stakeholders to ensure that our museums deliver optimum benefits for the places where they are located as well as for museum users.
- Use Masterplan projects to drive programmes for academic research, collection digitisation and acquisitions, online content, and for increased efficiency, sustainability and social inclusion.
- Develop skills in project and programme management across the organisation.
- Deliver efficient and fit-for-purpose back-of-house facilities and integrated estate management.

HARNESS THE POTENTIAL OF DIGITAL

Our digital offer will be acknowledged as one of the best in the world and our websites will be a global destination for their subjects.

Digital display in the Science Museum's *Information Age* gallery

INSPIRING FUTURES: STRATEGIC PRIORITIES 2017–2030: REISSUED 2020

By 2030:

- Our websites will attract 40 million visits per year (10.47 million in 2018/19).
- The objects in the collection will almost all be digitally accessible to an acceptable standard.
- Digitisation of photographic and archive collections will be under way according to an agreed, prioritised plan.
- Our websites will be the number-one destination for information, ideas and debate in our subject domains.
- On-gallery digital interactives will remain at the forefront of technology and include 'centrepiece' experiences.
- Digital will be integral to the visitor experience; we will have the knowledge, skills and capability to realise the potential of digital across all Group activities and across all channels.

Museums in the digital age

We have had some notable digital successes, such as innovative on-gallery interactives and games at the Science Museum. However, we recognise that the digital offer is uneven across our museums and within the museums themselves. We also know that the status of our museums, the strength of our collection and the expertise of our people means that there is vast dormant potential for the Group digitally. Together these factors make digital an urgent priority and there is appetite for change throughout the organisation.

The first phase (2015–17) of a new digital strategy established a set of digital principles and practicable objectives. These principles will continue to inform our progress in digital throughout the period of *Inspiring Futures*. Our digital offer will be:

- Audience-centred to ensure highest impact
- Sustainable and scalable for longevity and growth
- Entrepreneurial and innovative to provide audiences with unique experiences
- Open and generous to empower audiences
- Embedded across the organisation to build capacity

By the start of 2018 this phase of the strategy had addressed a great deal of the essential behind-the-scenes infrastructure work that will underpin future growth and started the cultural change in ways of working that will bring it about.

Digitisation is a fundamental means of accessing the collection via online catalogues and provides the building blocks for other digital content. It can add layers of information and explanation for users to explore at their own pace and via their own routes. Our holdings have been insufficiently digitised in both quantity and quality and a key aim of the digital strategy is to redress this. Priorities for digitisation have been determined based on audience demand, research potential, collections strengths and project opportunities. Our collection comprises about 7.3 million items, of which the vast majority are photographs and archives. We hold about 425,000 artefacts and by 2023 almost all of these, plus the most significant items from the photographic and archival collections, will be accessible online to at least a minimum consistent publication standard; this includes about 247,000 new object records arising from the *Medicine: The Wellcome Galleries* and One Collection projects.

We also deliver digital outputs through partnerships. For example, we worked with the BBC on its new digital science platform, *Tomorrow's World*, on which we also collaborated with the Royal Society. We have collaborated with the Google Cultural Institute on capturing our exhibitions so that they can be enjoyed digitally after they have closed, and with ArtUK to bring the Group's art collection to new audiences.

DIGITAL HIGHLIGHTS

Numbers

- **10.47** million website visits in 2018/19
- **45%** of Science Museum website visits are international
- **2.9 million+** game app downloads, including 1.2 million of *Rugged Rovers* and 1.6 million of *Transmission*
- **3 million+** plays of the Science and Industry Museum's *Hooked on Music* game, across 208 countries
- **5.4 million** video plays on YouTube
- **744,000** Twitter followers
- **403,000** Facebook likes
- **205,000** Instagram followers

Awards

- Science Museum Group websites: winner GLAMi Awards, 2018
- *Rugged Rovers*: Gold, International Serious Play Awards, 2015
- *Hooked on Music*: Silver Award, Davey Awards, 2014
- *Launchball*: Best Game and Best in Show, SXSW, 2008

A virtual reality headset demonstration at the press preview for *Mathematics: The Winton Gallery*

An evolving digital landscape
The qualities of our digital spaces shape the audience experience as much as the museum spaces. The digital landscape and audience behaviour evolve rapidly, presenting us with exciting new ways to fulfil our mission through increased reach, interactivity and participation, but also presenting the challenge of how to keep up with ever-changing digital technologies. The increasing prevalence of digital should also prompt us to reflect on the value and presentation of our physical collections, and on how the two streams complement and support each other.

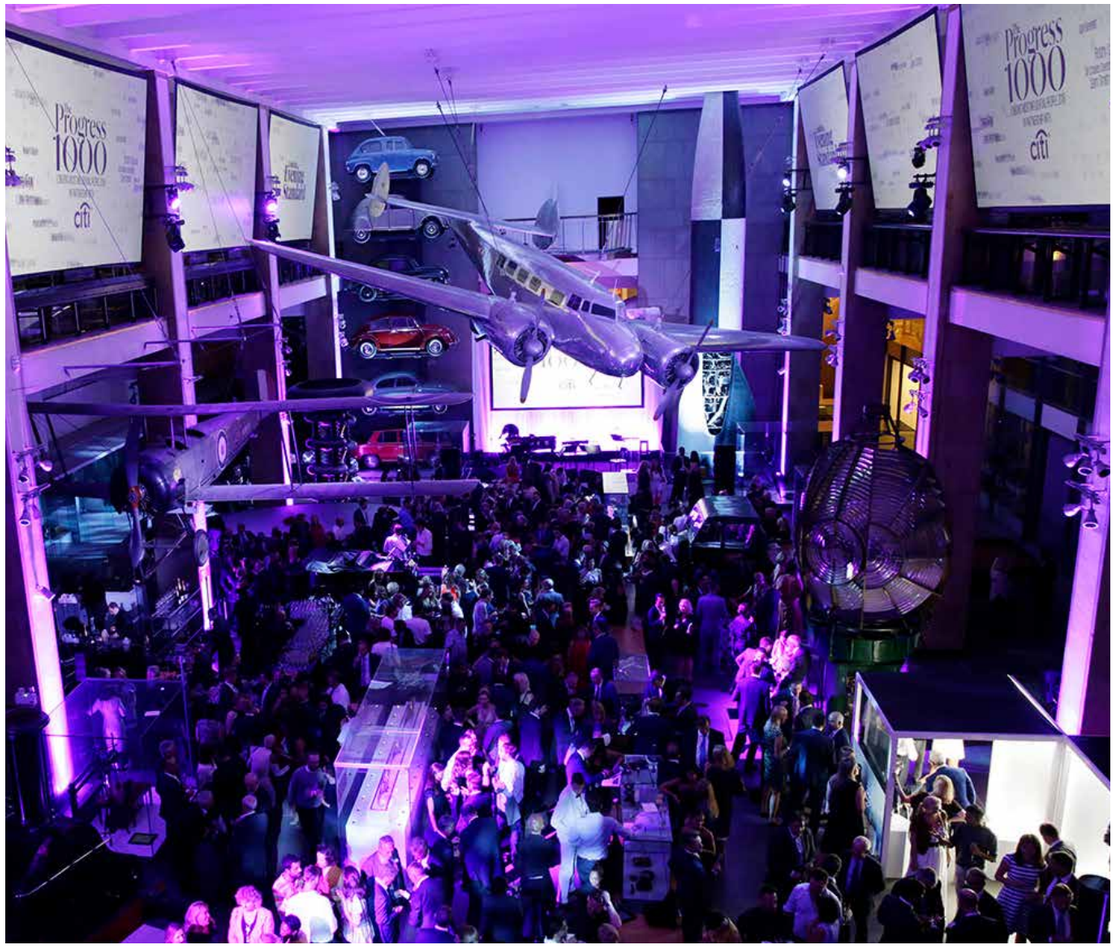
There is vast potential to extend our digital reach in an age when museums are global online places, accessible to all. For some, the digital visit will be their only visit. If we are to become the go-to destination for our subject domains, we need to put online presentation of the collection and increasing use of digital to provide new forms of contextualisation at the heart of our global ambition. Digitisation of the artefact collection will be practically complete by 2023. Systematic digital records for the bulk of the archives and photographs remain to be tackled, presenting both a huge challenge and a huge opportunity. We will be in a much better position to plan for this once digitisation processes have been tested through artefact digitisation, and the plan will be agreed and implemented in the second half of this strategy period.

In the digital age, audiences increasingly experience museum artefacts through multimedia and interactivity. We must keep pace with audience expectations, connecting people to the collections in new ways and ensuring effective and holistic use of digital media across the whole audience experience. Historically, museum collections were presented largely in a one-way broadcast mode. Digital technology enables presentation that is two-way, interactive and participatory. Through digital, the Science Museum Group will enable audiences to shape their own experiences, and to build on our content and intellectual output by engaging in a dialogue around STEM and the collections, and contributing to the museums' work.

We will:
- Increase audience reach by:
  - Investing in continued digitisation of the collections.
  - Ensuring that every programme and project has a digital aspect.
  - Undertaking analysis and research into digital audiences.
- Enhance the audience experience by:
  - Delivering a programme of centrepiece digital offerings beginning with an immersive mixed reality experience funded through Innovate UK's Audiences of the Future fund.
  - Responding to changes in technology and audience behaviour, and proactively managing the life cycle of digital interactives.
  - Communicating more effectively with audiences, using increased data capture and customer relationship management tools.
  - Establishing the Digital Lab to foster new forms of partnerships and funding that enable innovation.
- Enable audience participation by:
  - Adopting an open-by-default approach to increase the use and distribution of our digital content.
  - Establishing platforms for audience contribution to the museums' work and building (digital) communities of interest.
  - Using the museums' convening powers tied to digital channels to create two-way engagement with audiences.
  - Encouraging our own people to publish online to engage audiences, attract talent and volunteers, and establish the Group as a centre of expertise.

INCREASE INCOME

Sustainable unrestricted income from a variety of sources will be significantly greater than in 2015/16 and will be used efficiently to realise our vision.



A corporate hire function at the Science Museum

By 2030:

- Self-generated unrestricted income will grow in absolute terms with reference to 2015/16 results, and Grant in Aid will represent less than 50% of our total unrestricted income.
- The Group will hold sufficient funds for investment, meaning that we can plan and implement continued improvements to public services with greater confidence and likelihood of success.
- Every part of the Group will understand its role in ensuring financial sustainability and actively contribute towards it, according to agreed targets.
- The Group will be an exemplar among museums for commercial activity and entrepreneurship.

The new normal

Entrepreneurship is valued throughout our Group and opportunities for income generation are actively sought out. We seek to grow all our income streams, including philanthropic income, but the emphasis is on increasing sustainable unrestricted income. The prize is greater freedom to determine our own future as reliance on government funding diminishes.

The biggest part of the Science Museum Group's income is direct Grant in Aid (GIA) from the UK government via our sponsor department, DCMS. GIA declined in recent years (by 30% in real terms between 2010 and 2015) and in response we achieved efficiency savings worth millions of pounds. We will continue to bear down on the cost of operations, but there are diminishing returns. Museums must become more financially resilient just in order to remain sustainable. We are more ambitious than that, and in order to fulfil our goals on behalf of our visitors we must prioritise income generation to an even greater degree.

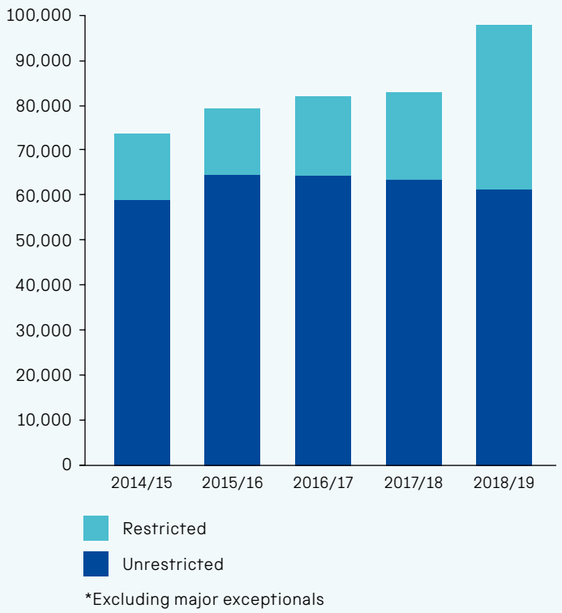
Funding for investment in the future

The Science Museum Group is already very successful at generating income through corporate sponsorship and philanthropy. We will continue to pursue these sources, which are vital to realise our ambitious vision for major exhibitions, acquisitions and capital projects across the Group. But in order to invest in our people, our collections and our buildings for the benefit of our millions of users, we need to both diversify and grow sustainable, unrestricted income.

In 2015/16 GIA formed 80% of all our unrestricted income. The challenge here lies not only in generating more income in a very testing economic climate, but in adjusting our organisational culture and developing the skills of our teams. All parts of the organisation need to be enabled to contribute to income generation against targets that are meaningful and transparent.

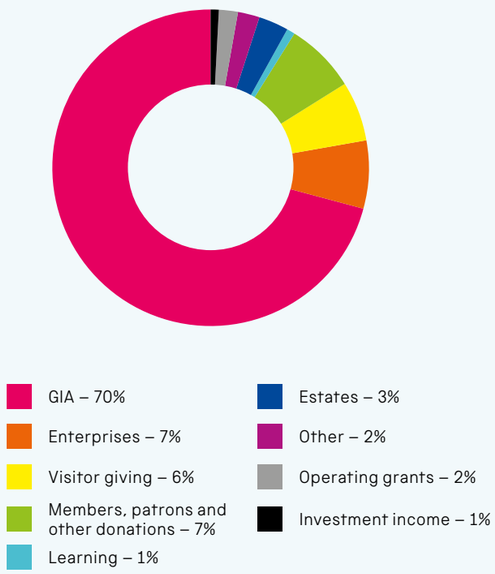
INCOME DATA

Restricted/unrestricted income* (£000s)

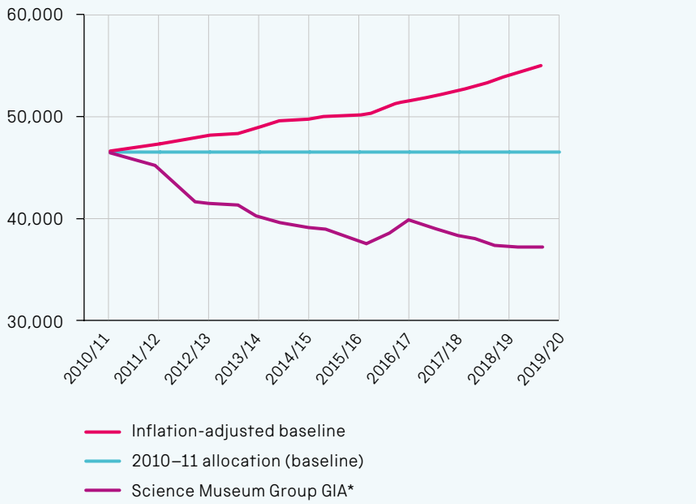


*Excluding major exceptionals

Unrestricted income sources in 2018/19



Grant in Aid (£000s)



*Excluding special projects and Coal Mining Museum for England allocations

A visitor enjoying afternoon tea at the Countess of York, a luxury dining experience in a restored railway carriage at the National Railway Museum

We have some good foundations on which to build. Recent initiatives have included:

- Individual giving – visitor donations generate around £3 million per year.
- *Wonderlab: The Equinor Gallery* at the Science Museum generates income that includes direct ticket sales (£1.5 million in 2018/19).
- Wroughton solar array – one of the largest photovoltaic panel arrays in the UK generates an average annual rental income of £250,000.
- Paid-for major exhibitions not only generate income directly from ticket sales but drive visitation and other on-site sales; they may also be developed into touring exhibitions which raise our museums' profiles and are a growing source of income from fees.

In 2018 the Science Museum Group agreed an income strategy with a core target of 38% growth in unrestricted income (excluding GIA) in 2020/21 (compared with the 2017/18 baseline), representing additional sustainable profit of £3.2 million per year. This is to be delivered through new initiatives and growth in certain existing activity, including several areas of commercial operations, touring exhibitions and consultancy, Academy professional training, the visitor offer and fundraising.

The income strategy also looks further into the future, to identify areas for further potential growth, such as through Vision 2025 and use of the National Collections Centre site.

Progress is monitored by a dedicated Income Advisory Board that includes Trustees and that reports to the Finance Committee.

We will:

- Implement the recommendations of our 2018 income strategy to achieve the agreed targets.
- Use the new customer relationship management system to provide a holistic customer offer that encompasses both the free and paid-for elements and encourages increased spend per head.
- Develop commercial skills more widely across the organisation.

MONITORING PROGRESS

The Science Museum Group was established under the National Heritage Act 1983 with its own Board of Trustees, appointed by the Prime Minister.

It has the status of a Non-Departmental Public Body (NDPB), operating within the public sector but at arm's length from its sponsor department, DCMS. It is also an exempt charity under the Second Schedule of the Charities Act 1993, with DCMS acting as its principal regulator for charity law purposes.

The Board of Trustees is the senior decision-making body, supported by a system of specialist subcommittees that comprise both Science Museum Group Trustees and external advisers. The Board has led, through a dedicated working group, the review of long-term strategy that resulted in this document. The Board also approves both the Annual Plan, and the Annual Report and Accounts. Production of the latter is a statutory requirement, audited by the National Audit Office. The report is laid before parliament and published both by HMSO and on our Group website. The Annual Report and Accounts are the primary formal means of reporting on the Group's performance against its statutory purposes and objectives, and against certain indicators required by DCMS.

The priorities and goals in *Inspiring Futures* are reflected in Annual Plans, which set out specific actions and deliverables, alongside a number of key performance indicators (KPIs). This overarching strategic framework also informs the subject and site-specific strategies and plans that are produced from time to time. Progress against the Annual Plan and the associated KPIs is reported biannually to the Board of Trustees. More detailed subject and site-specific action plans are monitored regularly by relevant internal teams. Monthly KPI dashboards containing KPIs from the Annual Plan, alongside more general management metrics, are reported to each museum's Senior Management Team. The strategic priorities themselves will be reviewed at intervals of five years or less.

We have dedicated a good deal of time and thought to *Inspiring Futures*. For a complex and evolving organisation, it was difficult to decide what – out of all the many and diverse things we do – should be included. This document captures the top-level long-term priorities and is to be used actively as a touchstone for decision-making throughout the next decade or so. We anticipate looking back from 2030 onto a period of continued challenge and hard work, but also one of sustainable growth and success.

Family visitors at the National Science and Media Museum in Bradford

INSPIRING FUTURES: STRATEGIC PRIORITIES 2017–2030: REISSUED 2020