

# SCIENCE MUSEUM GROUP

Annual Report and Accounts 2016–2017

Science Museum

Museum of Science and Industry, Manchester

National Railway Museum in York and Shildon

National Media Museum

SCMG Enterprises Ltd



# Science Museum Group

## Annual Report and Accounts 2016–2017

Report and Accounts presented to Parliament pursuant to Section 9(8) of the Museums and Galleries Act 1992

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Science Museum Group (SMG) members:  
(Formerly known as National Museum of Science & Industry)

**Science Museum**

**Museum of Science and Industry, Manchester**

**National Railway Museum in York and Shildon**

**National Science and Media Museum**

**SCMG Enterprises Ltd**

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# 1. Science Museum Group

## Purpose and objectives

The Science Museum Group (SMG) is devoted to the history and contemporary practice of science, medicine, technology, industry and media. Its collections form an enduring record of scientific, technological and medical change since the 18th century. They are the largest, most comprehensive and most significant in their field anywhere in the world. SMG incorporates the Science Museum, the Science Museum Library and the Wellcome Collections of the History of Medicine in South Kensington; the Museum of Science and Industry (MSI) in Manchester; the National Railway Museum (NRM) in York and in Shildon; and the National Science and Media Museum (NSMM) in Bradford. Collections stores are located at Wroughton, Wiltshire and Blythe House in West Kensington, London.

As defined in the 1983 National Heritage Act, SMG's charitable objectives are to:

- Care for, preserve and add to the objects in its collections
- Secure that the objects are exhibited to the public
- Secure that the objects are available to persons seeking to inspect them in connection with study or research, and
- Generally promote the public's enjoyment and understanding of science and technology and of the development of those subjects, both by means of the Board's collections and by such other means as they consider appropriate.

During 2016–17 the Board of Trustees of the Science Museum (the SMG Board) agreed a new vision and mission for SMG, as set out in section 2, which takes due regard of the Charity Commission's general guidance on public benefit and informs all decision-making, future planning and strategic priorities.

## History and organisation

The Science Museum has its origins in the South Kensington Museum set up soon after the Great Exhibition of 1851. The South Kensington Museum was reorganised as the Victoria and Albert Museum and the Science Museum in 1909. The Science Museum expanded outside London and the National Railway Museum, which opened in 1975, was established as a result of the transfer of the British Transport Commission's railway collection to the Board of Trustees of the Science Museum. The National Railway Museum at Shildon was opened in 2004 in

partnership with Sedgefield Borough Council. The National Science and Media Museum was established in 1983 as the National Museum of Photography, Film & Television, with the support of Bradford City Council. The Science Museum collections store at Wroughton, a former Second World War airfield, was made available to the museum by the Ministry of Defence in 1979. The Museum of Science and Industry opened in 1969 as the North Western Museum of Science and was registered as a charity in 1987; it joined SMG in 2012.

## Legal status and Group structure

The Board of Trustees of the Science Museum is the corporate body of SMG and was established under the National Heritage Act 1983. Until 1984, SMG was managed directly by Government when it ceased to operate as part of a Government department. It now has the status of a non-departmental public body (NDPB), operating within the public sector but at arm's length from its sponsor department, the Department for Culture, Media and Sport (DCMS). These accounts fulfil the requirements of the 1983

Act and the Museums and Galleries Act 1992. SMG is an exempt charity under Schedule 3 of the Charities Act 2011, with DCMS acting as its principal regulator for charity law purposes, and is recognised as charitable by HM Revenue & Customs.

SMG has a wholly owned subsidiary trading company, SCMG Enterprises Ltd (company registration no. 02196149), set up in 1988 and operating across all SMG museums.

## Museum addresses

### Science Museum

Exhibition Road  
London  
SW7 2DD

### National Railway Museum

Leeman Road  
York  
YO26 4XJ

### National Science and Media Museum

Pictureville  
Bradford  
BD1 1NQ

### Museum of Science & Industry

Liverpool Road  
Castlefield  
Manchester  
M4 3FP

### National Railway Museum at Shildon

Shildon  
County Durham  
DL4 1PQ

## Company addresses

Entity	Registered number	Charity registration	Registered office
<b>SCMG Enterprises Ltd</b>	02196149	–	Science Museum Exhibition Road London SW7 2DD

## List of SMG advisers

	SMG	SCMG Enterprises Ltd
Auditors	Comptroller and Auditor General National Audit Office 157–197 Buckingham Palace Road London SW1W 9SP	Grant Thornton UK LLP Grant Thornton House Melton Street London NW1 2EP
Bankers	Barclays Bank plc Floor 27 1 Churchill Place London E14 5HP	Barclays Bank plc Floor 27 1 Churchill Place London E14 5HP
Solicitors	<p>SMG draws advice from a range of solicitors by sector, which this year included:</p> <p>Bates Wells Braithwaite CMS Cameron McKenna LLP DWF Farrer &amp; Co. Hansel Henson Mills &amp; Reeve LLP Veale Wasbrough Vizards</p> <p>The Group also has access to legal firms on the London Universities Purchasing Consortium panel.</p>	



## 2. Achievements and Performance

### Science Museum Group (SMG) strategic objectives

Each SMG museum has its own distinct identity and remit, but SMG also recognises the opportunities it has as a group and its capacity to be greater than the sum of its parts. In order to build on this opportunity the Board of Trustees carried out a review of the Group's strategy in 2016, and identified a new Group-wide vision and mission. In addition it agreed seven Group-wide strategic priorities, which provide the framework for activity across the Group up to 2030.

#### SMG vision:

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

#### SMG 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

#### Focus of each museum:

- The Science Museum (SM) explores the science, technology, engineering, mathematics and medicine that shape our lives
- The Museum of Science and Industry (MSI) explores how ideas can change the world, from the Industrial Revolution to today
- The National Railway Museum (NRM) explores the huge impact of railways on Britain and the wider world
- The National Science and Media Museum (NSMM) explores the transformative impact of image and sound technologies on our lives.

#### Strategic priorities

Seven key priorities drive SMG activity:

##### 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. These are the areas in which a need for significant growth or change has been identified, even where the activity might otherwise be seen as 'business as usual'.

These priorities underpin all of SMG's work, and our achievements and performance this year are set out against these seven priorities.

## Grow ‘science capital’ in individuals and society

**SMG’s offer and reputation for lifelong, informal STEM learning and engagement will be the best in the world.**

SMG plays a central and irreplaceable role in deepening and expanding science literacy in the UK. The breadth of resource 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 (science, technology, engineering and mathematics). Our organising principle is to build ‘science capital’ to enrich people’s lives and enhance their contributions to society. Policy-makers, 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. SMG has a distinctive role in addressing this priority as a national and international leader in STEM education.

No. of visits in booked education groups	Actual 2016–17	Target 2016–17	Actual 2015–16
SM	460,000	467,000	458,000
MSI	73,000	71,500	73,000
NRM	39,000	38,000	37,000
NRM Shildon	7,000	6,000	7,000
NSMM	34,000	30,900	30,000
<b>SMG total</b>	<b>612,000</b>	<b>607,400</b>	<b>605,000</b>

Across the Group, education group visit numbers have either increased or been maintained in comparison with 2015–16. SM has a target to remain the most visited museum in the UK by education groups. We benchmark ourselves using the DCMS performance indicator of the ‘number of facilitated and self-directed visits by students under 18 (including Year 13) in formal education groups’. Comparable data is only available up to 2015–16, however the number of visits achieved this year indicate SM will continue to remain the most visited by this group (see ‘Performance against DCMS indicators’ table).

This year we have been further developing and embedding the principles of science capital through a number of specific projects and strands of work, as outlined below.

### Enterprising Science

We completed year four of the Enterprising Science project. SMG has been working with King’s College London and BP since 2012 to define and measure science capital and devise effective ways to apply the research into practice. We are developing new tools and workshops to integrate science capital principles into our everyday practice, and for the wider informal science learning sector, to enable all audiences to have greater engagement with science. We are using science capital principles to describe and shape our content and programmes and the interpretation of our collections across all SMG sites. As part of the project the Group has also delivered Science Engagement and Science Beyond the Classroom CPD courses to over 622 teachers and educators nationwide, and audience engagement training to 291 scientists and STEM practitioners.

### Building Bridges

We completed year four of the Building Bridges project at SM. The project aims to engage and inspire young people from diverse backgrounds to explore and value the science that shapes their lives. Project activities include visits to participating schools, a visit to the museum, teacher CPD and an exclusive out-of-hours family event at SM. This year almost 500 students took part in the main project programme from 17 schools across our London partner boroughs and Reading. A further 3500 students and 400 adults participated in an element of the project. The project is working with University College London to conduct research into absent or infrequent visitors to the museum through understanding the project families’ cultural values, interest and aspirations. The project model and research is shaping our offer to enable us to more effectively reach out and connect with our under-represented visitors.

### Field Trip Days

The Field Trip Days project engaged with over 5000 people across the four SMG museums as part of an outreach, school trip and family events programme, working with 22 schools. The overarching aim of the programme was to ‘inspire the next generation of scientists’. We invited 10- to 11-year-olds to take part, as we know this to be a very important age for engaging children in science. The project was found to have had a positive influence on the children in terms of challenging stereotypes of science/scientists, increasing awareness of the transferability of science skills and raising awareness of real-world applications of science. It also brought to our museums people who do not normally visit.

## Future Engineers

Through the Future Engineers programme (18–31 October 2016) NRM explored creating an annual schools and family offer around STEM which was more contemporary and relevant in its approach, aiming to explore railway engineering topics through hands-on engagement for audiences and offering opportunities to interact with rail industry professionals. The programme content took an interactive approach and 40 engineers from different rail companies took part. Research found it added to the engagement and enjoyment levels of both schools and families, with the presence of ‘real life’ engineers particularly engaging. We are building on the success of this event, making it a repeatable part of the yearly programme at NRM.

## Wonderlab: The Statoil Gallery

In October SM opened *Wonderlab: The Statoil Gallery*, our most ambitious interactive gallery and a key part of the overall SM Masterplan. The £6m gallery is designed to inspire visitors of all ages to wonder at the science and mathematics that shape our lives. It features interactive exhibits, artworks, live demonstrations and immersive experiences led by the museum’s team of science communicators – Explainers. The new gallery is 60% larger than its predecessor and has a target to double from 100,000 to 200,000 the number of school visitors coming to the gallery within three years of opening. Since opening in October 2016 over 200,000 visits were made to the end of March, and of these 61,000 were visits made in education groups. The gallery has been well received, described in *Time Out* as ‘the best thing you can currently do in London with kids’ and exit interviews indicate a 96% satisfaction rate. The model for *Wonderlab* is being extended across the Group, and at the end of March we opened the £1.8m *Wonderlab* gallery at the NSMM, exploring the stunning science of light and sound.

## Learning outreach

The SM Outreach team visited 148 schools and 21 community and festival venues across the country, providing shows and workshops to 86,000 people. In addition, the Punk Science team delivered science shows to 27,000 people, and between them international activity included visits to Ireland, Gibraltar and Rio during the Olympic Games. At MSI there were 76,000 instances of participation in Manchester Science Festival activities outside the museum (see ‘Grow our audiences and exceed their expectations’ section for more on the festival). In total there were 199,000 instances of participation in off-site learning activities delivered across the Group, by learning teams and other teams such as curatorial (compared with 192,000 in 2015–16).

## STEM Ambassadors

SMG won the contract to expand our existing STEM Ambassador contract in Manchester, run from MSI, and form the STEM Ambassador Hub Trans-Pennine Partnership. Running activity from MSI, NRM and NSMM, the partnership will cover Greater Manchester, North and West Yorkshire, and is a huge opportunity to join up and expand the work of the Manchester STEM Ambassador programme. Starting from 1 October 2016 we now manage 2500 STEM Ambassador volunteers who go into schools, community groups and our museums to engage young people in booked groups and family settings. This will further join up the collaborative work of the northern museums, embed STEM and increase our reach and the impact of science capital. Over the past year the Hub has supported 86% of state-funded primary, secondary and further education institutions in the trans-Pennine region to engage with STEM Ambassadors at least once. In the last 12 months 1700 separate STEM Ambassador activities have taken place, reaching approximately 25,000 young people aged 5–19.

## Learning resources

We have established a Learning Resources Strategy which is developing a new online presence for museum learning resources alongside the development of a suite of new or refreshed core learning resources. This renewal and refresh will enable our users to make the most of our museums both on site and online with pre-visit, on-site/online and post-visit resources. The principles of science capital are being used to shape the learning content and ensure the resources connect our audiences to our unique collections, interactive galleries and contemporary science offer in meaningful ways.

## 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.**

This year we started the development of a unifying brand strategy that supports delivery of our shared goals and which we believe will support audience growth. At the end of this financial year we relaunched the National Media Museum as the National Science and Media Museum, alongside the opening of the new *Wonderlab* gallery. This has made manifest our strategy to focus at the museum on the transformative impact of image and sound technologies on our lives. In 2017–18 we will continue to embed the new name and brand of the National Science and Media Museum and conclude brand development for SMG as a whole. Across the Group we want to share the development and presentation of exhibitions to a much greater degree; in 2017–18 *Robots* will tour to MSI, and as part of a national and international tour Manchester's *Wonder Materials: Graphene and Beyond* will show at SM.

We want our visitor profile to reflect the communities we aim to serve, and each museum has in place an Audience Development Plan that segments visitors according to their needs and behaviours, identifies areas for growth and improvement, and outlines how this will be achieved. Across the Group we have sought to increase the quality of experience for visitors and to remove barriers for under-represented audiences. The make-up of our audiences and their feedback are monitored through systematic exit surveys, specific research projects and sampling of social media comment. We aim to build deeper long-term relationships with our visitors, and in 2016 we implemented a new customer relationship system at SM and are extending this across the Group in 2017.

Work to remove barriers to engagement for specific audiences this year included the establishment of Night Owls at SM, which enables young adults who have an autism spectrum condition to come along and enjoy the museum free from the hustle and bustle of the general public. This follows on from the success of Early Birds for families with children who have autism, which was also established at NSMM this year along with autism-friendly and dementia-friendly film screenings. At NRM a new activity based around *Mallard* and aimed at those with severe learning disabilities was established as a core part of the programme and a new fully accessible platform has been created enabling visitors with limited mobility greater access to locomotives in steam. Our learning and events programmes referred to above and below seek to remove barriers to engagement by building on partnerships with external organisations, and encouraging people to see our museums as places for them.

In 2016–17 our visitor number targets and achievements were as follows:

Museum	Actual	Target	2015–16
SM	3,219,000	3,260,000	3,419,000
MSI	645,000	707,000	707,000
NRM	704,000	750,000	750,000
NRM Shildon	232,000	250,000	213,000
NSMM	405,000	424,000	460,000
<b>Total SMG</b>	<b>5,205,000</b>	<b>5,390,000</b>	<b>5,549,000</b>

Across the Group visit numbers have performed behind last year. At some sites this was anticipated to an extent, based on the scale or popularity of the planned public programme compared with previous years and on-site works taking place. However, in all cases performance was further behind than expected.

### Science Museum visitors

Visit numbers were just 1% short of target this year, aided by strong performance towards the end of the year – reflecting the first full quarter of *Mathematics: The Winton Gallery* being open, the display of Tim Peake's Soyuz spacecraft from January, the blockbuster exhibition *Robots* opening in February and continued promotion of *Wonderlab: The Statoil Gallery*. As expected (based on the programme and holiday periods) visit numbers were behind last year (–6%), however the strong end-of-year performance masks the fact visit numbers were further behind than expected in the first half of the year – something experienced by many of the DCMS-sponsored national museums and galleries in central London.

Exit survey data indicates the drop in visit numbers was largely driven by a drop in the volume of (UK-based) family visits, although the museum remains a favourite with families, with almost half of all visits made in family groups. Internally, the closure of the Museum's main interactive gallery for half the year (whilst *Wonderlab: The Statoil Gallery* was installed) may have impacted on family visits. The museum is actively seeking to increase the volume of visits made by UK-based and overseas independent adults, which this year increased by 2%, aided by the blockbuster exhibition *Robots*, which opened towards the end of the year. Education groups make up 14% of all visits, and this year there were 460,000 visits in education groups (up 2000 on last year). Overseas visitors remain very important to the museum, accounting for almost half of all the visits made.

97% of visitors say they would recommend a visit to SM, and 98% of visitors are satisfied with their visit.

## Museum of Science and Industry visitors

Visit numbers have declined this year (–9%) following three years of growth. The drop has been seen in both family visits and independent adult visits.

MSI's target audiences are: fun and learning families, Greater Manchester pre-schoolers, curious young adults, older self-improvers, and education groups. The museum is now working to increase the number of family visits, including carrying out more focused work with Greater Manchester pre-schoolers, who have increased by 4000 since the previous year. Improvements have included enhancing areas for under-5s and developing new backpack resources. Current and future work is looking at increasing the numbers of fun and learning families, which have fallen significantly over the last three years. Internally the closure of some popular family-focused galleries (e.g. *Underground Manchester*) for the building of the new Special Exhibition Gallery is likely to be part of the reason that family numbers have fallen. Curious Young Adults and Older Self Improvers also decreased in numbers which may in part be due to some programming decisions. As part of the European City of Science celebrations, the museum programmed some significant events outside the museum this year, which are not reflected in visit numbers, including Pi: Platform for Investigation at the Arndale (2000 participants, many of whom had not been to the museum previously). This year the key headline event for the Manchester Science Festival – the Chronarium – was also based at the Arndale, rather than in the museum itself, as in previous years. Otherwise, adult programmes such as regular Lates have continued to attract large audiences.

Visitor feedback indicates the need for improvements to interactives and other working elements of displays, as well as disappointment at closed elements of the site. In the longer term the museum Masterplan will address these challenges, and in the short term effective maintenance and attractive programming, such as the blockbuster exhibition *Robots*, will seek to maintain visit numbers. A fun and learning family cross-museum group has been set up to improve provision for this audience segment in particular, building on qualitative research. The working group has created a set of recommendations/plans, some of which have already begun and will continue throughout 2017–18.

Education group numbers remained the same at 73,000 visits, making up 11% of all visits.

98% of visitors say they would recommend a visit to MSI, and 97% are satisfied with their visit.

## National Railway Museum visitors

In York, visit numbers were behind last year and the target to retain 2015–16 visit numbers by –6%. The drop can be accounted for by the absence of the theatre shows, which took place in 2015–16 and brought in additional evening visitors, but were not part of the 2016–17 programme.

In 2015–16 visit numbers to NRM were also boosted by the display of *Flying Scotsman*. While the locomotive was displayed in the museum in 2016–17 with a successful *Flying Scotsman* Season, it is believed many potential visitors chose to see it in steam from the lineside as it travelled the country or at heritage railways, instead of visiting the museum.

The Museum is seeking to increase visits from families defined as 'Positive Parent Families' and although this group still remains the biggest visitor type to visit the Museum, they declined this year by 21%. Visits by independent adults increased by 4% and plans to increase the number of education group visits were successful with almost 2000 additional visits.

At Shildon, visit numbers increased against last year, driven by the hugely successful nine-day Shed Bash event, with *Flying Scotsman* as the star – visit numbers were three times those in the previous July. Despite this success, total visit numbers were behind the original target for the year, as this was set too ambitiously, based on overly high expectations of the likely draw of *Flying Scotsman*. A more realistic forecast was made early in the year following the experience of visit numbers to see *Flying Scotsman* in York in April 2016.

99% of visitors say they would recommend a visit to NRM in York, and 99% are satisfied with their visit. The museum also received a 'Trip Advisor 2016 Travellers' Choice Award' as the number-one museum outside London (voted by Trip Advisor users as number six in the top ten museums in the UK to visit in 2016.) 95% of visitors say they would recommend a visit to NRM in Shildon.

## National Science and Media Museum visitors

Although it was expected that visit numbers would be behind last year, because of gallery closures and programming, performance was worse than anticipated, being –5% behind target. The reductions were in both families and independent adults, with the drop largest in families. These drops included the target segments of Positive Bradford Families, Positive Further Afield Families and positive younger adults. Plans to increase the number of education group visits (which make up 8% of all visits at 34,000) have been successful, with 3400 additional visits in education groups this year, aided by Bradford Council's £1m three-year investment in revenue funding to support the new STEM-focused offer. Cinema and IMAX attendees account for 21% of all visits. This year they totalled 86,000, a drop of 5000 against 2015–16, which had seen increases with the opening of the new digital IMAX screen in September 2015 and some significant blockbuster releases.

During the year one of the museum's largest galleries was closed while work was completed on the new *Wonderlab* interactive gallery. On 23 March 2017 the museum relaunched itself with a new name and brand, alongside the opening of *Wonderlab*. The gallery saw over 6000 visits in its opening week alone. It is anticipated visit numbers will return to the higher levels achieved in 2015–16, and that future Masterplan activity will result in further increases in visitor numbers.

98% of visitors say they would recommend a visit to NSMM, and 98% are satisfied with their visit.

## Science Museum programme activity

SM is working towards a regular pattern for programming major exhibitions that attract big audiences, alongside a suite of other content streams of varying scales to keep the offer fresh. In 2016–17 major programme activity at the museum included:

### *Ticketed exhibitions*

- *Leonardo da Vinci: The Mechanics of Genius* (February – September 2016) investigated both the facts and the misconceptions that surround this great genius of the Renaissance, and included 39 historical models of Leonardo's inventions including flying machines, diving equipment and weapons. Visit numbers: 84,500 v. target of 89,000
- *Fox Talbot: Dawn of the Photograph* (Media Space, April – September 2016) displayed one of the world's most comprehensive and important collections of this polymath and pioneer of Victorian photography. Visit numbers: 7500 v. target of 7000
- *Robots* (February – September 2017) reveals the astonishing 500-year quest to make machines human, focusing on why they exist rather than on how they work. In advance of the exhibition opening Eric, the UK's

first robot, was put on display following a successful Kickstarter fundraising campaign to rebuild him. There were 61,000 visits to 31 March 2016, exceeding targets by 63%. Alongside this is an events programme and the Robots Revealed series (March – April 2017) providing free live demonstrations of the latest robots.

### *Non-ticketed exhibitions and displays*

- *Wounded: Conflict, Casualties and Care* (July 2016 – January 2018) is the museum's contribution to the First World War centenary commemorations, exploring the huge medical and human impact of wounding during and beyond the First World War.
- *Our Lives in Data* (*Antenna* feature, July 2016 – September 2017) uncovers some of the diverse ways our data is being collected, analysed and used.
- *Beyond the Lab: The DIY Science Revolution* (July – September 2016) celebrated the everyday innovators around Europe who are taking science into their own hands, with astounding results. This EU-supported exhibition aims to bridge the gap between the incredible pace of scientific innovation and society, and is being displayed across the EU.
- 'Tim Peake's Spacecraft' features the Soyuz capsule used by Peake as the UK's first ESA astronaut to take part in a mission to the International Space Station, and went on display in January 2017.
- *The Last Supper* (Media Studio, February – May 2017) is a 13-minute robotic performance by kinetic artist and sculptor Giles Walker, running alongside the *Robots* exhibition.
- *Voyages* (Media Space, March – June 2017) is an exhibition by internationally acclaimed photographers Anderson & Low, who have created a series of beautiful and ethereal images capturing the museum's collection of maritime models in a fascinating new light.
- 'Valentina Tereshkova: First Woman in Space' is a new display opened on 16 March to mark the achievements of the pioneering Russian cosmonaut, timed to celebrate the occasion of her 80th birthday.

### *Event highlights*

- The Power UP! video gaming event (22 July – 7 August 2016) was attended by 17,000 people.
- Lates, our monthly late-night opening events, were attended by 40,000 visitors, with themes ranging from Mathematics to Childhood Wonder. The highlight of the June Lates was the space fashion show *Couture in Orbit* where fashion schools from ESA astronauts' home countries were challenged by ESA to create outfits inspired by space flight. At the October Lates visitors joined Bill Gates and will.i.am for a discussion on how science is delivering breakthroughs and innovations that are transforming lives around the world.
- In July 2016 then NASA Administrator Charles Bolden talked to an audience of 380 teenagers about life in space and how he became an astronaut.



- Tim Peake and his International Space Station crewmate Tim Kopra came to SM on 19 October as part of the Principia UK post-flight tour. The visit followed a live screening at the museum of their return to Earth on 18 June, with a commentary from Helen Sharman.
- Astronights and Science Nights sleepover events were attended by 3400 people.
- Live science residencies continued, with audiences contributing to university-led research.
- Showings of *Rogue One: A Star Wars Story* in the IMAX Theatre were attended by 13,400 people.

Programme highlights for 2017–18 include the *Illuminating India* season of exhibitions and events.

## Museum of Science and Industry programme activity

MSI is working towards a regular pattern for programming major exhibitions which will be aided by the opening of the Special Exhibition Gallery currently under construction. Alongside this are a range of other content streams of varying scale both within the museum and delivered outside as part of city-wide events. In 2016–17 major programme activity at the museum included:

### Exhibitions

- *Wonder Materials: Graphene and Beyond* (23 July 2016 – 25 July 2017) was created in partnership with the National Graphene Institute at the University of Manchester. Its launch formed part of the programme of events celebrating Manchester as European City of Science 2016, alongside the associated five-day EuroScience Open Forum conference. The exhibition looks at the past, present and future of graphene, and takes visitors on a journey with scientists and artists exploring the cutting edge of materials technology. By the end of the year 271,000 people had visited. The exhibition will tour internationally from December 2017.
- *Destination Stations* (opened 24 June 2016) offers a glimpse into the expansion of the railways, focused on Manchester and the route to London. The display features images from NRM and the Science & Society Picture Library, and expands on our *Revolution Railroad* gallery.
- *Cloud Crash* was the headline art installation for Manchester Science Festival 2016 (20 October 2016 – 3 February 2017), and the museum hosted the world premiere of Cape Farewell's annual Lovelock Art Commission. Internationally acclaimed Paris-based artists HeHe – Helen Evans and Heiko Hansen – took inspiration from pioneering climate scientist James Lovelock and ground-breaking science funded by the Natural Environment Research Council to bring atmospheric science powerfully to life across the museum site in the form of three installations.

### Event highlights

- For the Manchester European City of Science 2016 public programme, Sally MacDonald, MSI Director, chaired the European City of Science Steering Group, ensuring a vibrant city-wide programme and an ongoing legacy were delivered. Alongside the opening of *Wonder Materials* on the eve of the EuroScience Open Forum (ESOF) conference in July, the museum delivered a range of events, both at the museum and around Manchester, including taking the museum's monthly Pi: Platform for Investigation to the Arndale shopping centre (visited by 2000 people over two days), the Science in the City Lates event (part of the ESOF conference which attracted 1000 visitors to the museum), and MakeFest (festival of making) in August (which welcomed 8000 visitors to the museum). Activity took place in the run-up to the conference and continued afterwards, leading right up to the Manchester Science Festival in October.
- BBC *Focus* magazine broadcast *In Conversation with Professor Andre Geim*, with the Nobel Prize-winning physicist speaking live from the museum on 29 September 2016.
- On 15 October 2016 Tim Peake came to the museum as part of the Principia UK post-flight tour, taking part in a sell-out Manchester Science Festival Family Trailblazer event.
- On 17 October 2016 the museum was the starting venue for the Olympic Heroes Parade, and hosted Team GB.
- The museum curated the tenth Manchester Science Festival (20–30 October 2016), now the largest science festival in England. This year it welcomed over 136,000 visitors to festival events across Manchester – the highest attendance yet and 14% up on the previous year. The museum worked with 90 local, national and international organisations to deliver 125 unique experiences in 60 venues across Greater Manchester, involving around 1000 scientists, researchers, science communicators and artists.

Future programme highlights include the exhibitions *Robots* (opening October 2017) and *Electricity: The Spark of Life*, a partnership exhibition with the Wellcome Collection and Teylers Museum in Haarlem, the Netherlands, opening in 2020.

## National Railway Museum programme activity

NRM aims to deliver an annual ‘season’ of themed programming enabling it to create impact through the combined strength of cohesive exhibitions, events and learning activities. The programme creates opportunities to test new content and interpretive techniques that inform ambitious future plans. Outside the museum, a major part of the programme is the tour of locomotives to heritage railways and other sites. In 2016–17 major programme activity included:

### *Exhibitions and seasons*

With the return of *Flying Scotsman* to steam in February 2016, the museum ran a *Flying Scotsman* Season of events and exhibitions to June 2016 that attracted 272,000 visitors.

The *Starring Scotsman* exhibition (25 February – 19 June 2016) examined the highs and lows of *Flying Scotsman*’s roller-coaster career, from glamorous modernist icon, film star and world record-breaker, to sixties globetrotter, symbol of the preservation movement and modern-day national treasure. *Starring Scotsman* is the most well attended exhibition ever hosted in the gallery space in Station Hall, seen by over 140,000 visitors. During its run, 60% of visitors to the museum included the exhibition as part of their itinerary, which is much greater than any previous exhibition average.

- A six-week display of the locomotive in the museum (25 March – 7 May 2016) provided visitors with the chance to access the cab. The locomotive formed part of the *Stunts, Speed and Style* display, which explored the history of the east coast main line high-speed service from the 1890s to the 1960s, and provided visitors with the opportunity to get on board the cabs of four locomotives that hauled the iconic train which departed London for Edinburgh at 10.00.
- Visitors could also book tickets for a virtual journey on *Service with Style*, which used three carriages of the kind that travelled the *Flying Scotsman* route to create a sensory experience, with cutting-edge 3D binaural sound technology bringing stories of speed, innovation, fame and luxury to life. During the six-week period 132,000 visits were made to see the locomotive and over 4000 to *Service with Style*.
- Throughout the season there was a family-friendly science show on the theme of speed, craft activities during the school holidays, a schedule of photography events and a programme of talks.
- The season’s finishing flourish was the chance to see *Flying Scotsman* in light steam at a sixties-style Shed Bash at NRM Shildon (23–31 July 2016), attended by 35,000 people. This lifted Shildon’s visitor numbers for July to three times those for the previous year.
- Throughout the year *Flying Scotsman* operated 24 main-line trips with 13,000 passengers and ran rides at two heritage railways for 17,000 passengers. In addition it is estimated a further 60,000 people came to see the locomotive from heritage railway platforms. Hundreds of thousands more viewed the locomotive from the lineside

and the *Flying Scotsman* Returns event at the North Yorkshire Moors Railway won the 2016 White Rose Award for Tourism Event of the Year.

*Ambulance Trains* (opened 7 July 2016), set on board a historic railway carriage, tells the forgotten story of ambulance trains used to evacuate sick and injured troops during the First World War. The experience is brought to life using projection, film and sound and increases access to our collection. The exhibition is part of the museum’s strategy to provide more immersive, sensory experiences for our visitors, and is now part of our permanent displays. To date 60% of visitors have included *Ambulance Trains* as part of their visit and it sits firmly within the top five favourite experiences across the whole site. The exhibition was accompanied by a programme of events and activities.

*Locos in a Different Light* (28–31 October 2016) gave visitors the chance to see some of our iconic locomotives come to life after dark in the seventh annual lighting design spectacular, as part of the city-wide Illuminating York festival.

The *Mystery on the Rails* season (23 March – 3 September 2017) explores the way railways have inspired crime and detective fiction. The programme highlight is *The Missing Passenger*, a commission by artist and theatre-maker Geraldine Pilgrim, inviting visitors to step into a murder mystery, investigate a series of installations and identify the culprit. This is supported by a programme of activities and events, from working alongside a local crime writer to joining curators to delve deeper into the story behind our Murder Carriage.

At Shildon, alongside the *Flying Scotsman* Shed Bash, highlights included the inaugural Lego Weekend (7000 visitors) and the Police and Crime Commissioner event (3000 visitors).

Future programme highlights include the Future Rail season in 2018.



## National Science and Media Museum programme activities

NSMM is focusing on holiday programming to bring in family audiences, and establishing a pattern of two exhibitions per year delivered through partnerships. Developing partnerships within Bradford and the local community is a key part of the museum's strategy and central to the delivery of the museum's programme of events. In 2016–17 major programme activity at the museum included:

### Exhibitions

- *Gathered Leaves: Photographs by Alec Soth* (22 April – 26 June 2016) presented works by one of the world's foremost documentary photographers. *Gathered Leaves* (which premiered at SM) was the first UK exhibition of Alec Soth's work, presenting highlights from the US photographer's four major series created between 2004 and 2014. There were 11,000 visits to the exhibition.
- *Fox Talbot: Dawn of the Photograph* (November 2016 – February 2017) was a major exhibition on William Henry Fox Talbot, pioneer of Victorian photography. It showcased one of the world's most comprehensive and important collections of his work and explored the influence of Talbot's technology, techniques and practices. There were 38,000 visits to the exhibition.
- *In Your Face* (23 July – 30 October 2016) was a family experience that explored the face through more than 20 different exhibits, activities and experiments. There were 85,000 visits to the learning-centred experience. Learning team Explainers roamed the galleries armed with an iPad and lots of apps, games and quizzes, tailoring the experience to our wide-ranging audiences. *In Your Face* was very successful in engaging audiences, with over 75% of visitors saying it made the museum feel like a place for them.
- *Poetics of Light* (17 March – 25 June 2017), drawn from the Pinhole Resource Collection, is the first display outside the USA of an exhibition originally created for a two-year residence at the New Mexico History Museum. It brings together more than 200 photographs and 40 cameras to tell the story of contemporary pinhole photography, offering an alternate vision of reality and producing a unique visual poetry.
- *Britain in Focus: A Photographic History* (17 March – 25 June 2017), created in partnership with BBC Four, explores the changing ways we make, view and share photographs and was accompanied by a three-part television series.

### Film programme

- The third year of partnership between NSMM and Picturehouse Cinemas began in November 2016 and continues to deliver a three-screen daily cinema programme including IMAX. The partnership now has over 1800 paid members compared with over 600 in October 2014. Exclusive film events were delivered alongside the core programme.

- This year the festival offer was renewed to grow audiences and be financially sustainable:
  - Widescreen Weekend is a unique festival of large-screen formats and new cinema technologies celebrating the past, present and future of film. The 20th weekend (13–16 October 2016) was curated by Sir Christopher Frayling, and focused on new technologies with VR demos around the museum, as well as celebrating past cinema technology with premieres of new digital restorations of *Cinerama's Russian Adventure* and *The Golden Head*. There were 3400 admissions – 3% up on 2015.
  - Yorkshire Games Festival (9–13 November 2016) was a brand-new five-day event delivering workshops, big-screen demos and keynote talks from games designers, writers and developers. It provided insights into the industry and celebrated games created in the region, as well as welcoming guests from the UK and overseas. There were 7600 admissions, exceeding targets.
- The Cine North community cinema initiative is a project to help communities in mostly rural areas of Yorkshire and Cumbria deliver their own cinema screenings. This year it has delivered 300 screenings to 50 venues. Cine North also worked in partnership with Yorkshire Film Archive to deliver the Moving North programme of local rural archive screenings.

### Events

- Bradford Family Learning Festival (22–30 October 2016) was a city-wide festival supported by NSMM through its programme of half-term activity, including activities delivered with Aardman to celebrate the studio's 40th anniversary.
- The focus on holiday programming continued throughout the year, including the Yo-Kai Watch half-term takeover in February, delivered in partnership with Nintendo and attracting 23,300 visitors in nine days.
- The museum delivered a programme of outreach work, engaging under-represented families and using schools as the gatekeepers of trusted information. Events included Bedtime Stories, which attracted 1500 people during the quiet after-school period.
- For British Science Week (10–19 March 2017) the museum worked with four Bradford primary schools and delivered a full day of Light Fantastic activities.
- Four evening Lates took place over the year, bringing in a strong local audience, a high proportion of students and a growing number of repeat visitors.

## Sustain and grow our world-class collection

**SMG's collection will be the best in the world for our fields; well understood, well housed and accessible (physically and digitally), and used effectively by SMG and others for research, display, learning and pleasure.**

The SMG collection comprises about 7.3 million items, of which the vast majority are photographs and archives and about 425,000 are artefacts. 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. In addition, we are aiming to improve services for our users by addressing three areas of historic under-investment in collections: preservation, acquisition and digitisation.

### One Collection project

In 2016 we embarked on the One Collection project. This was precipitated by the Government agreeing to provide £150m at the Comprehensive Spending Review 2015 to enable the three occupying museums, SMG, the Victoria & Albert Museum and the British Museum, to build new facilities to house their collections currently stored at Blythe House. One of the biggest programmes of change SMG has undertaken in recent times, it will reinforce and make manifest our Group-wide approach to collections management. This will deliver a new, purpose-built collection facility at Wroughton that will apply the latest in collections management thinking to help us use our collection better. It will provide improved and appropriate physical 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. Mostly funded by Treasury, and delivered in partnership with DCMS, the project will be completed by 2023. This year the focus has been on building the teams, and undertaking preparatory work for both the move and the construction of the new purpose-built store at Wroughton. Work has also taken place making the case to other major funders. In the meantime the Group has continued to consolidate its collections at Wroughton and this year large objects were moved there from gallery decants at MSI.

### Effective collections management

We continually improve our holdings through acquisition and ethical disposal. This year we published a new and coherent suite of collecting policies for our museums. We have resolved to be more ambitious in collecting, especially in contemporary science and for gallery developments and exhibitions. This will often require funding, but through pre-emptive communications in identified areas we are also encouraging the deposit of relevant items with SMG.

Our most high-profile acquisition this year was the purchase of Soyuz TMA-19M. This is the Soyuz spacecraft used by Tim Peake, the UK's first ESA astronaut to go on a mission to the International Space Station. Currently on display at SM, the craft will be shown at all five SMG museums from autumn 2017 and other UK venues.

Acquisitions made through pre-emptive communications included, at NSMM, a rare example of a camera designed for a specific industrial application (UMK 1318 universal photogrammetric camera head, c. 1975) from a company which used this equipment, based previously in Harrogate and currently in York. Responding to opportunities as they arise, we acquired the extremely rare barograph clock made by Alexander Cumming in 1766.

Acquisitions for gallery developments and exhibitions are an important part of our collecting strategy. As part of the *Wonder Materials* exhibition at MSI the group acquired the Graphene Lightbulb – the first commercially available UK product to use graphene, made by a University of Manchester spin-out company. As a result of the *Robots* exhibition this year, the Group has established a human robotics collection including the Robina partner robot, the first attempt at a robot intended for human care tasks. At NRM we acquired the *Flying Scotsman* headboard, probably made at British Railways' Doncaster works in 1969. The headboard was used on the locomotive's tour of the United States from 1969 to 1971.

A sustainable approach to collections requires disposals as well as acquisition. Disposals are never undertaken lightly and call on extensive subject expertise and sector knowledge. However, SMG has a duty to ensure that we do not keep items that, for a range of reasons, are not relevant or suitable for our purposes. We are increasingly proactive in reviewing our holdings and, where appropriate, transferring items to organisations where they may be better accessed and used. A programme of rigorous collections reviews starting in 2017–18 is planned to determine the status of our museums' holdings and what should be retained within the Group. Following the refocus of NSMM on image and sound technologies, it was agreed the Royal Photographic Society collection was to be transferred to the Victoria & Albert Museum. The removal of material from Bradford to London was completed at the end of this financial year, and the legal title is expected to pass in summer 2017.

## Conservation

Conservation forms an important part of exhibition, Masterplan and storage projects. A highlight of the year was the reconstruction of the huge and ornate automaton lathe for the *Robots* exhibition. The lathe entered the collection in 1888 and had been stored in 250 pieces for over a century. It was reassembled in a collaboration between SMG conservators, curator Ben Russell and external specialists. At MSI, the conservation team oversaw the decant of over 600 objects, including very large early computers and electrical machinery, from tired old galleries to make way for construction of the new Special Exhibition Gallery. At NSMM, painstaking work to remove harmful adhesive tape from a photograph album exemplifies the work undertaken on hundreds of photographic items, ensuring that they can safely travel to exhibitions around the world. At NRM Shildon, the great treasure of the historic railway site, the 1829 locomotive *Sans Pareil*, has been relocated into the main museum building so that it can be seen by more visitors. At NRM in York, a drawing table used by engineer George Stephenson was conserved by a University of Lincoln student. A highlight of the year at Wroughton was the conservation of the oldest petrol-engined car in the UK, the 1888 Benz, which will be going on display at SM in the future. The site also houses SM's library and archives store. Work this year included conservation of a rare 16th-century anatomical book by Andreas Vesalius, which had come off long-term display at SM.

## Collections digitisation

Collections digitisation provides the fundamental building blocks of digital access and interpretation. SMG has not been sufficiently active in this area and in 2015 determined to step up the scope and rate of digitisation, and in enabling use of our assets. Collections Online was launched in December 2016, with more than 250,000 records from the object and archive collections and 150,000 images attached to 22,800 items. This will be dramatically enhanced through the One Collection project as well as delivery of the Medicine Galleries, enabling us to radically progress digitisation of the collection. 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 up to 300,000 object records arising from the Medicine Galleries and One Collection projects.

Alongside this large-scale digitisation, more in-depth narrative information will be added to our websites, which all Masterplan projects and exhibitions will contribute. This year we started this new approach with online narratives for the *Mathematics* pages of the SM beta website.

## Research

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 via collaborations over research projects, doctoral supervision and conferences.

The Dana Research Centre and Library, which formally opened in March 2016, aims to be one of the most stimulating national and international centres for the history of science and technology. This is being achieved through an amalgam of ready access to the entirety of its library and archives and the concentration of research students, associates and fellows working on funded projects in the same building. A programme of conferences, workshops and seminars enables the free exchange of insights. The Centre hosted its inaugural conference in spring 2016 – Science Museums and Research – covering the whole range of our active research, including work investigating objects and collections, and projects seeking understanding of audiences and how they learn. We also hosted the conference AHM: Alternative Histories of Electronic Music in April, resulting from a research collaboration with the University of Leeds, and the annual Artefacts conference in October, bringing together curators and researchers from across the world. The research seminars programme, running across all three academic terms, provided the opportunity for our staff and students as well as university colleagues to share their current research in a supportive environment.

The Institute of Railway Studies' seminar series has continued in York, with a regular programme of talks by academics, museum staff and the NRM's collaborative students. In November 2016 the museum sponsored the Making the Connections workshop at the University of York, which brought together scholars from various disciplines to discuss transport's pivotal contributions to history. The museum's annual conference in September 2016 was Railways and Warfare, which included speakers on ambulance trains, the Berlin to Baghdad Railway and railways during the Irish Civil War.

SMG holds an Arts and Humanities Research Council-funded Collaborative Doctoral Partnership Award, and in January our panel awarded the second tranche (out of four) of six studentships. The consortium includes the SMG museums, British Telecom Archives, the Royal Society and the Royal Geographical Society. Research is based on the Group's and our partners' collections; findings will inform gallery developments and public programmes. Several other funded research projects have continued this year, including the European Research Council project on the history of civilian nuclear energy, research by SM's first composer in residence – Leverhulme Trust-funded Jean-Philippe Calvin – resulting in the performance of a new

score for Charles Gwynne's 1928 silent film *The Building and Operation of Industrial Museums*, two research fellows each from the universities of Oxford (under funding from TORCH, The Oxford Research Centre in the Humanities) and Nottingham, and we have also hosted two Wellcome Trust Secondment Fellows under what will be an annual scheme. SM curators and research staff also taught the fourth cohort of UCL MSc students in curating science and technology, an option in UCL's science and technology studies course. MSI hosted Manchester School of Art's Unit X interdisciplinary module within which students have the opportunity to work on live briefs in a real-world environment.

Many research outputs are published in the *Science Museum Group Journal*, which has continued to publish a spring and autumn edition. The journal presents the global research community with peer-reviewed papers relevant to the wide-ranging work of the Group, sharing the research of the Group and also publishing external contributions. Across the year, SM employees continued to publish articles and books with a variety of publishers, and to deliver conference and seminar presentations, reinforcing our contacts with leading universities.

## Extend our international reach

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

As well as being a group of national museums, in both name and action, SMG aspires 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 SMG itself, but also the cities and regions in which we operate, and the UK as a whole. Since 2013 SMG has transitioned from an organisation that undertook pockets of international work to one with a global outlook and presence.

### Touring exhibitions

Touring exhibitions are the most visible manifestation of SMG's 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 2016–17 there were over 440,000 visits to SMG exhibitions overseas. The new touring capability also enabled sharing of exhibitions within the Group and further afield in the UK. We will continue to grow the touring exhibition programme based on the current programme at our museums. Exhibitions touring in 2016–17 touring were:

- *Collider* – Hong Kong Science Museum (March – May 2016); Powerhouse Museum, Sydney (August – October 2016); Queensland Museum, Brisbane (December 2016 – April 2017).
- *Beyond the Lab* – all EU countries plus Switzerland.
- *Only in England* – Beane House of Art & Knowledge, Canterbury (July – September 2016); Bowes Museum, County Durham (February – May 2017).
- *Cosmonauts* – VDNKh, Moscow (June 2016 – January 2017).
- Blueprint exhibitions – an Exhibition Blueprint Pack is a digital pack containing everything a venue needs to re-create one of our contemporary science feature exhibitions. The first blueprint exhibition, *3D: Printing the Future*, opened at the Beacon Museum, Cumbria in July 2016, and the next version will open at the Museum of Astronomy and Related Sciences, Rio in 2017.

### International online audiences

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 35% of the 11.656 million visits to SMG websites in 2016–17 originating overseas.

### International partnerships

We have established a number of new 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. Activities in our targeted countries and regions included the following this year:

#### Russia

- Our acclaimed exhibition *Cosmonauts: Birth of the Space Age* (September 2015 – March 2016) was adapted for display in Moscow. Following receipt last year of the Pushkin Medal, which the Director of SMG was awarded by the Russian Federation in connection with the exhibition, several other awards have been received. *Creative Review's* 'The Annual 2016' recognised the exhibition design by Real Studios as well as the show's bespoke typeface by Kellenberger-White. The exhibition design was also shortlisted for the 2016 *Design Week* Awards.
- Tim Peake's Soyuz spacecraft landed in SM and proved extremely popular with our visitors. The opening event in January 2017 was attended by ministers and VIPs from the UK and Russia, and marked the start of the UK–Russia Year of Science.
- Other *Cosmonauts* legacy initiatives included a new display at SM from 15 March to mark the achievements of Valentina Tereshkova, a Memorandum of Understanding with the Tsiolkovsky Museum of the History of Cosmonautics in Kaluga, potential exhibitions for the SMG future programme and collaborations for the redevelopment of the *Exploring Space* gallery at SM.

#### Brazil

There were several visits between the Museum of Tomorrow (MoT) and SM in 2016–17 which helped to deepen and strengthen the partnership. As well as the highlights noted below, planning was advanced for exhibitions cooperation and professional development activities that are expected to be realised in 2017–18 and beyond.

- In August 2016 the Director of SMG visited MoT during the Rio Olympic Games. The highlight was a talk by the SMG Director and the signing of a three-year Memorandum of Understanding in the presence of the UK Secretary of State for Culture, Media and Sport,



Karen Bradley, the British Ambassador to Brazil and the British Council Director, Brazil.

- In the same period, SMG Explainers ran an experience-sharing event with their MoT counterparts, and a day of public demonstrations and workshops at MoT.
- The SMG Head of Learning Research and Resources co-led a week-long British Council Museum Academy training programme on audience development.
- In November 2016 the SMG Deputy Director and Chief Operating Officer spoke at a British Council/MoT conference on the future of museums.
- In March 2017 the MoT–SMG partnership was awarded funding from the Newton Fund Institutional Skills programme for collaboration on our respective projects on agriculture and food.

#### India

- The focus has been on developing relationships and securing loans for SM's *Illuminating India* season in 2017, part of the UK–India Year of Culture. The central exhibition was announced by the two countries' prime ministers, Theresa May and Narendra Modi, in November 2016 when the UK premier visited India.
- Members of the SM Medicine Galleries team visited Delhi to research and acquire objects relating to the Global Polio Eradication Initiative, hosted by Rotary India.

#### Europe

- MSI led on the cultural programme for the EuroScience Open Forum (ESOF) in July 2016 and Manchester European City of Science 2016, and hosted the ESOF media networking event with around 500 international journalists and science communicators from 60 countries.
- SMG was a lead partner in the European consortium that delivered the *Beyond the Lab* exhibition and events programme, funded by the EU Commission's Horizon 2020 programme, which will be shown in every EU country plus Switzerland.
- *The Spark of Life* is an exhibition collaboratively developed with national and international partners the Wellcome Collection and Teylers Museum in Haarlem, the Netherlands. The Wellcome Collection show opened in London in February 2017 and after a spell at Teylers Museum, MSI will show its version in 2020.
- With our peer network members Uniscience (Paris), the National Museum of Science and Technology Leonardo da Vinci (Milan) and the Deutsches Museum (Munich), SMG ran three workshops on public participation in science research and policy.
- We worked with the European Space Agency on several projects, including public events for the launch of Tim Peake's Principia mission, the Couture in Orbit fashion show, the 25th anniversary of the mission of first UK astronaut Helen Sharman, and acquisition of the Soyuz spacecraft and the accompanying virtual reality experience.
- SM is a partner in HoNEST, an EU-funded consortium for research into the history of civil nuclear power.

#### China

- *Collider* was shown at the Hong Kong Science Museum. It is expected that the museum will show other SMG exhibitions, and that other Chinese museums will join our touring network.
- We made significant progress in extending relationships in China when the Director of SMG spoke at a symposium in Shanghai for Chinese science and technology museums. Other staff visited Shanghai, Beijing, Hong Kong and Wuhan to advance negotiations on our touring exhibitions and explore the potential for cooperation on STEM learning and engagement with a number of Chinese cultural organisations and UK bodies.

### Skills sharing

SM hosted two short placements from Russia: one from the Polytechnic Museum in Moscow as part of the European Union National Institutes for Culture Staff Mobility Scheme and the other from the British Council in Moscow as part of the UK–Russia Year of Science and Education. Additionally SM hosted a 12-month internship with the Exhibitions team for a curator from our partner the National Science Museum in Daejeon, South Korea.

### Promoting the UK

Sustaining the UK's leading position in soft power through international working is one of the four key planks of the DCMS culture white paper (2016). SMG was 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 activities that promote the UK and our museums' localities. For example, *Wonder Materials: Graphene and Beyond* was developed with the National Graphene Institute at the University of Manchester and showcases British innovation. In Rio SMG was represented at the British House, the UK's cultural showcase during the Olympic Games in August 2016.

Through membership of the British Council's Cultural Diplomacy Group and participation in other sector forums, SMG has been active in considering the potential impacts of the UK's decision to exit the European Union. While this undoubtedly brings challenges, SMG welcomes the renewed focus on international relationships embodied in the Government's Global Britain campaign and inclusion as a key theme in the culture white paper published in April 2016. SMG will continue to play its part in promoting UK science, education and cultural heritage in Europe and the rest of the world.

## 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.**

At every SMG 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 (e.g. lifts, lavatories and circulation spaces) and exterior spaces. Masterplans place emphasis on significantly improving visitors' experience, as well as providing better and more meaningful access to our world-class collection and heritage sites. This is being delivered through coherent and well-considered design interventions, as well as appropriate investment in infrastructure and services to ensure that considerations of sustainability and efficiency are built into all that SMG does.

At SM, the Masterplan is a 10- to 15-year programme, the first phase of which is now being delivered. Media Space opened in September 2013, followed by the *Information Age* gallery in 2014 (shortlisted this year for the 2016 Structural Steel Design Awards and Regional Finalist in the 2017 Civic Trust Awards) and the Dana Research Centre and Library in 2015. This year two major elements of the plan were completed: our most ambitious interactive gallery yet, *Wonderlab: The Statoil Gallery*, which opened in October 2016 (see 'Grow "science capital" in individuals and society' section for more information), and the beautiful new gallery designed by Zaha Hadid Architects, *Mathematics: The Winton Gallery*, which opened in December 2016. 29% of general admissions visitors have visited the gallery since opening and 16% of those visitors name it as the 'favourite thing' about their whole visit to the Museum – which is a strong conversion rate given the range of competing interests. The remaining priority projects for this phase will be completed by 2019. The existing lecture theatre will be transformed into a functional and beautiful space in which to deliver our public programme; levels 4 and 5 of the museum will form a bold, high-profile dedicated events space; the Group Entrance will be redeveloped and a new Supporters' Centre established; the *London: Science City* gallery will open to explore the rich heritage of London as a city of science; and the Medicine Galleries will showcase the world's largest and most significant collection of medical artefacts.

This year MSI has continued to progress the new Special Exhibition Gallery. This is MSI's first major Masterplan project and will enable it to bring internationally acclaimed exhibitions to the museum as well as create its own. The longer-term development of the public realm continues with negotiations around the potential for permeability between MSI and the neighbouring St John's site and the impact of The Factory, a major new cultural venue being built immediately adjacent to the MSI site. Liaison with local stakeholders to secure the optimum outcome for SMG and the public it serves is a vital component of planning, while ensuring that the development works well for the city.

At NRM, planning continues to be dominated by the £50m Masterplan to transform the museum alongside the city development plan, York Central. NRM has been engaged in discussion with City of York Council, the Homes and Communities Agency and Network Rail about this development of land around the museum as a major new business and residential quarter. NRM's interests are both as a landowner and as a major cultural attraction at the heart of the development. The project is large and complex, and planning is still in its earliest phase, but there is potential to effect a once-in-a-generation transformation of NRM, including, for example, unifying the site by closing Leeman Road. In the meantime, NRM has been pressing on with plans for the redisplay of the Great Hall to tell the story of how railways changed the world, and is looking to submit major funding applications in 2017.

At NSMM the museum's strategy of refocusing on the science and technology of image and sound has been played out in learning programmes and events, and in renewed engagement with local communities and stakeholders. This commitment has been demonstrated this year in a permanent and tangible way with the opening of *Wonderlab* in March 2017, along with the launch of a new name and brand. The next phase of the Masterplan will be the development of the object-rich *Sound and Vision* galleries, a showcase of the NSMM collection.

Wroughton is the primary storage facility for SMG, currently housing our large objects and the majority of the library and archive collections. Since 2014–15, SMG has continued to consolidate storage of its collections from various sites to Wroughton. Consolidation is part of SMG's long-term strategy of saving operational costs, improving storage conditions and releasing valuable space within the museums. The programme of investment in upgrading and replacing existing storage at Wroughton has been united with the planned vacation of Blythe House as part of the One Collection project (see 'Sustain and grow our world-class collection' section). A new consolidated facility is planned to open by 2023 and this year work was undertaken to identify the best location on the site to construct this low-energy storage facility.

SMG places high demands on its estate and many behind-the-scenes projects are delivered without impacting on its visitors or collections. For example the complex separation of the Post Office Building from SM to become the new Dyson School of Design and Engineering at Imperial College is under way and expected to be complete in spring 2018. Major office moves related to this work were completed this year, bringing a large number of staff together in SM's Wellcome Wolfson Building. Work also took place to resolve the humidity issues affecting the Special Exhibition Gallery in Manchester, and at NRM Shildon the extension of the museum's railway line eastwards in February increased the operational railway line by over 300 metres and will greatly improve both the visitor offer and the experience for our hugely valued volunteer rail operations crews. Health and safety is a key part of estates work, and this year systems to enable horizontal evacuation were developed at SM, and a new system for managing health and safety was rolled out across the Group.



## Harness the potential of digital

**SMG's digital offer will be acknowledged as one of the best in the world and its websites will be a global destination for their subjects.**

SMG recognises there is vast dormant potential for the Group digitally. Digital is an urgent priority and there is appetite for change throughout the organisation. The first phase of the SMG Digital Strategy (2015–17) is well under way. The focus of this first phase is to improve audiences' digital experiences in the museums and online, embed digital activity across the organisation and build organisation-wide digital capability, provide improved digital access to the collection, tell the stories of how the modern world was shaped by the areas covered by the collection through narrative-based content, and build sustainable and scalable technical infrastructure to deliver these ambitions and lay the foundations for ambitious future initiatives.

### Digital experience

Website	2016–17 visits	2015–16 visits
SM	7,805,000	8,568,000
MSI	665,000	839,000
NRM	2,040,000	2,101,000
NSMM	530,000	611,000
SMG sites	617,000	359,000
<b>SMG Total</b>	<b>11,656,000</b>	<b>12,477,000</b>

In total online visits are behind last year. This is mostly driven by the fact that a significant amount of legacy content has been retired as part of the project to relaunch the museums' websites. As the websites are relaunched in the coming year, we expect to see these numbers recovering over time.

The project to relaunch the museums' websites is well under way. In the autumn of 2016, a prototype beta website was launched to test approaches for the new web estate, notably including greater use of video, simplified structures, clear calls to action and better support for mobile devices and touch screens. At the end of 2016–17 we relaunched the NSMM website as part of the launch of the new museum name and brand identity. In 2017–18 we will relaunch the rest of the museums' web estate using a modern, scalable and flexible architecture, informed by approaches that have been tested in 2016–17. Looking further ahead we will realise the potential of digital to increase audience reach by investing in continued digitisation of the collections and online publication, ensuring that every programme and project has a digital aspect, and undertaking analysis and research into digital audiences to ensure that the digital output is led by audience needs.

### Digital culture

To better understand our digital audiences, in 2016–17 we commissioned two large-scale pieces of audience research into visitor use of mobile technology in the museum, and online audience use of collections and narrative content. Smaller pieces of audience research have been carried out around teachers' use of the website, possible website navigation structures and use of features on the beta website.

To coincide with the opening of *Mathematics: The Winton Gallery* we launched the Digital Lab in December 2016, with Samsung as the founding partner. The Digital Lab undertakes initiatives with short lifetimes, explores new technologies through collaborations, and publishes findings and outputs of research. This year work has started on three initial projects: a virtual reality (VR) experience using Samsung's Gear VR headsets to explore use of VR technology in gallery spaces to bring objects to life; enhanced digitisation of key objects in *Mathematics: The Winton Gallery*, helping bring the stories behind collection objects to a global online audience; and a two-day 'hackathon' in February 2017 to bring together designers, programmers and technologists to explore new modes of engagement with the museums' collection dataset and digitised assets. A second hackathon is planned for 2017–18.

SMG is committed to open content. Since 2016–17, where possible images of objects in the collection are now published using a Creative Commons licence allowing non-commercial reuse by the public. The online collection catalogue dataset is available under the public domain Creative Commons Zero (CC0) licence, and the new Collections Online website's code is publicly available under an open-source licence. Looking forward we will enable audience participation by adopting an open-by-default approach to increase the use and distribution of digital content, establishing platforms for audience contribution to the museums' work and building (digital) communities of interest.

### Digital infrastructure

The first phase of the digital strategy has focused on ensuring we have in place the right digital infrastructure to enable large-scale publication of digital content. As part of their relaunch the websites are being moved to an open-source content management system to reduce ongoing support and maintenance costs and increase the number of potential partners we can work with. The websites will have a shared technical architecture enabling efficient enhancements and a shared infrastructure road map. The collection's online delivery infrastructure has been completely reworked with a focus on scalability, performance and simplicity, facilitating future plans for large-scale digitisation.

See 'Sustain and grow our world-class collection' section for information on collections digitisation

## Increase income

**Sustainable unrestricted income from a variety of sources will be significantly greater than in 2015–16 and used efficiently to realise SMG’s vision.**

The biggest part of SMG income is direct Grant in Aid from the UK Government via our sponsor department, DCMS. On 25 November 2015, HM Treasury’s Spending Review and Autumn Statement 2015 announced that funding for national museums, including SMG, was to remain at the current level in cash terms until 2019–20 and that free admission was to be maintained. In the current economic climate, the UK Government’s decision to demonstrate its continuing support for investing in national museums was especially welcome.

We have continued to bear down on the cost of operations, but there are diminishing returns. In order to fulfil our goals on behalf of our visitors we are prioritising income generation to an even greater degree.

SMG is very successful at generating income through corporate sponsorship and philanthropy. We have continued to pursue these sources, which are vital to realise our ambitious vision for major exhibitions, acquisitions and capital projects across the Group (see ‘Supporters of SMG’ section for achievements this year). But in order to invest in our people, our collections and our buildings for the benefit of our millions of users, we are seeking to significantly increase unrestricted income by achieving sustainable growth in the amount of income from other sources. These include revenue from commercial activity, visitor giving and exhibition ticket sales.

New income-generating initiatives pursued in 2016–17 were:

### **Wonderlab: The Statoil Gallery**

We made an ambitious choice to obtain a substantial DCMS loan and secure significant backing from funders such as Statoil and URENCO, allowing us to invest in a world-beating interactive gallery. The modest entry charge contributes to the cost of maintaining the high-quality visitor experience and operating the gallery, while allowing school groups to visit free of charge. Income in 2016 was £678k against a target of £670k. Next year we will explore membership models at SM incorporating access to *Wonderlab: The Statoil Gallery*.

### **Corporate events business**

Work started this year on the development of a bold and versatile dedicated events space on levels 4 and 5 of SM. The demand for additional capacity for events was particularly apparent at SM in December this year, when corporate events achieved its best month to date, generating three times as much income as in the previous year.

### **Wroughton**

In 2016–17 estates-derived commercial activity has grown apace, with tenancies and short-term lets contributing just over £1m to SMG’s income stream. All sites (barring NSMM) yield income from rental leases, with Wroughton contributing the greatest value (£975k). Surplus land and buildings at this site, which are unsuitable for collections storage, are used for a wide variety of commercial activities. These include providing filming locations for TV shows, large industrial equipment storage on disused runways, a 61 MW solar farm, six major heritage sector clients, domestic property rentals, agricultural holdings and a number of high-value short-term commercial lets.

### **Revenue generated from learning activities**

During the year we have sought to improve our learning offer to increase income. This has included reviewing our pricing structures, better integrating commercial offers into our learning activities and packaging our existing learning resources to create new income-generating programmes. We increased income generated from Science Nights for children and piloted Astronights for adults. Changes to our outreach pricing have resulted in a reduction in costs and increased income, and we remain on track to ensure the programme becomes cost neutral by 2018. We have introduced additional commercial offers into our schools programme and a children’s birthday party offer at SM, and will look to develop similar offers for our other sites. In 2016–17 £1.1m (2015–16: £1.1m) of income was generated through learning activities.

## Enabling activities

### **People and culture**

In order to deliver the SMG strategy we need to ensure we have the right people in the right roles, working in a culture that supports entrepreneurialism, income generation and professionalism. We are focusing on strategic resourcing, growing volunteers and apprenticeships, and implanting improved ways of working to support organisational change. In 2016–17 we implemented a new payroll and HR system, established recruitment process improvements which will continue to be developed and embedded in 2017–18, and started work on a Group-wide induction process. Over the next three years we will promote and achieve sustainable growth of apprenticeships to become a natural part of our resource planning, with an initial three or four planned for 2017–18.

### **Volunteers**

During 2016–17 we have broadened participation across the Group, with volunteers supporting festivals and exhibitions at all sites, undertaking collections activities and supporting administrative functions. We have continued to implement our Volunteering Strategy, delivering our first Group-wide volunteer database and

introducing new policies and frameworks to support all aspects of volunteer management and health and safety. In total our average volunteer base of over 700 volunteers contributed 82,000 hours across SMG (8% up on last year). In 2017–18 work will focus on understanding the resources and requirements necessary to make SMG the leading national museum for volunteer involvement and on developing training that will increase capacity and skills in volunteer management.

Museum	Average number of volunteers	Total hours
SM	127	8,252
MSI	78	13,667
NRM York	300	41,186
NRM Shildon	120	15,492
NSMM	27	2,972
<b>Total</b>	<b>652</b>	<b>81,570</b>

In order to ensure that volunteering supports SMG's individual museums, each site is responsible for the creation and delivery of its own Volunteering Strategy and programme. Built around the national strategy, these focus on specific growth areas, the resolution of local challenges and the delivery of local objectives. During the course of the year our volunteers have made a huge contribution to the success of the museums.

At SM our first team of Commercial Experiences volunteers gave 1800 hours to Power UP!, helping visitors and playing a pivotal role in the operation of the event. Alongside this, our 40 on-gallery *Robots* volunteers use a volunteer-developed object-handling collection to help engage with and enrich the experience of our visitors. In addition to these activities, we have a new Touring Exhibitions role and a new team of Events Ambassadors who assist with Lates. In total we have 15 active volunteer roles, spanning seven departments.

At NRM our volunteers have played a key role in the success of our special events, with 80 volunteers welcoming 27,000 visitors to *Stunts, Speed and Style* and 30 volunteers giving over 800 hours to *Future Engineers*. In addition, our core teams have continued to play a major role in the operation of the museum. Our volunteer-run miniature railway has generated £192,000, our guards have given steam rides to 12,000 visitors and our information point team have answered over 12,000 enquiries. Behind the scenes, our Conservation team have partnered with the University of York, recruiting students to undertake a condition survey of our art collection, and in March John Watling completed a 20-year project to locate, sort and list all drawings in our collection relating to the locomotive works of the Great Eastern Railway.

At MSI we have grown the range of volunteering opportunities. A significant highlight has been moving to a volunteer-run gallery for our exhibition *Wonder Materials*. This has created great opportunities for volunteers and has had a positive impact on our visitors, who increasingly comment on the friendly and informative teams they meet in our galleries. This year, rather than seeking an external partnership to support volunteering, we took the bold step of embedding the learning from previous partnerships into our own practice. Alongside MakeFest, Play It! and our largest ever Manchester Science Festival, we had more object-handling volunteers, more diversity in our Rail Operations team and a growth in our STEM Ambassador volunteers from 1100 last year to over 2000 this year. Manchester Science Festival's volunteers' contribution grew this year from 70 volunteers donating 1000 hours to 80 volunteers donating 2000 hours. Alongside Manchester Museum and Imperial War Museum North, our partnership project – Inspiring Futures: Volunteering for Wellbeing – won the Skills for Business Collaboration Award 2016.

At NRM Shildon, 13 different roles are supported by volunteers. These include cab access, cleaning, education, rail operations and caring for the collection. Sixty volunteers signed up to help with our nine-day Shildon Shed Bash event. For their hard work during this they received regional recognition by winning a Museum Volunteers of the Year Award from Tyne & Wear Archives & Museums. This year has also seen the launch of an internal volunteer recognition scheme and our first volunteer recognition events.

At NSMM we increased the scope of the volunteer programme, with volunteers supporting the Widescreen Weekend festival and newly launched Yorkshire Games Festival. There are six different volunteer roles and through the Silver Screen and Reminiscence roles our volunteers helped enhance the experience of visitors and made a real difference to their lives. By assisting us with cataloguing and research our various collections teams have also helped to enrich and deepen our understanding of the collection.

#### IT infrastructure

In order to enable the organisation to achieve its plans, a number of IT infrastructure projects are taking place. The first phase of our ICT Strategy will complete at the end of 2017–18 when we will have stabilised existing infrastructure and transformed networks, platforms, systems and processes into a modern estate. From 2018 onwards we will begin to look at adding value to the investment made through better business processes, agile development, automation and integration.

## Financing and fundraising

### Grant in Aid

Continuing receipt of Grant in Aid from DCMS is dependent upon SMG's compliance with the DCMS/SMG Management Agreement dated January 2017. This sets out DCMS policy and financial requirements, which include the relevant provisions of Managing Public Money and such other guidance as the Treasury, Cabinet Office or DCMS have issued. It also describes the delegated powers and limits.

On 25 November 2015, HM Treasury's Spending Review and Autumn Statement 2015 announced that funding for national museums, including SMG, was to remain at the current level in cash terms until 2019–20 and that free admission was to be maintained. In the current economic climate, the UK Government's decision to demonstrate its continuing support for the nation's museums was especially welcome. In addition it was announced that the Government will invest £150m to support the British Museum, Science Museum and Victoria & Albert Museum to replace out-of-date museum storage at Blythe House with new world-class storage facilities.

### Distribution of Grant in Aid to the National Coal Mining Museum

In 2012–13, SMG took on responsibility for distributing Grant in Aid to the National Coal Mining Museum for England (NCMME). This arrangement is governed by a Management Statement and Memorandum agreed between SMG and NCMME. NCMME retains its own Board of Trustees and continues to publish its own annual report of its activities, together with its audited annual accounts, no later than 31 December each year. NCMME is not considered a subsidiary undertaking for the purposes of group accounting and SMG does not exercise any control over, nor does it have any responsibility for, the operations of NCMME.

### Supporters of SMG

SMG is hugely grateful to all the sponsors and supporters who helped make this the Group's most successful year to date in terms of likely new funding commitments. Their generous support has enabled the Group to deliver a broad and diverse range of initiatives both this year and for the future with key funding secured for a number of long-term initiatives that are truly transformational for the museums and the collection.

### Major gallery developments

Masterplan redevelopments continued across the Group and have seen a number of exciting new galleries open at SM this year. These were the culmination of many years' work, and planning and fundraising continues for the upcoming phases.

- *Mathematics: The Winton Gallery* opened in December 2016 at SM and was made possible thanks to a transformational gift from the David and Claudia Harding Foundation, as well as support from a number of corporate sponsors, trusts and individuals.
- Fundraising for the new interactive gallery, *Wonderlab: The Statoil Gallery*, which opened in October 2016, was successfully completed and included the Group's largest corporate sponsorship gift to date.
- Significant funding was secured for SM's Medicine Galleries project from the Wellcome Trust, the Wolfson Foundation and a number of other funders. The galleries are due to open in autumn 2019, and the museum seeks an additional £3m to close the funding gap.

### Exhibitions and programme

This year's programming has attracted a number of new funders to the Group thanks to an exciting and diverse run of exhibitions, festivals and other public programming across the museums.

- The blockbuster exhibition *Robots* was supported by several generous individuals and trusts, and also included both a successful object restoration appeal and the museum's first crowdfunded initiative: a Kickstarter project that enabled the rebuild of robots Eric and Inkha. The exhibition will be going to MSI for the Manchester Science Festival in 2017 before touring internationally.
- *Our Lives in Data*, the creative and educational exhibition in *Antenna* at SM, was generously supported by several new funders whose strategic priorities aligned with those of the exhibition and the museum, including Lloyd's Register Foundation, PricewaterhouseCoopers and Microsoft.
- The annual Widescreen Weekend at NSMM was highly successful this year and further cemented its position as a world-leading specialist film festival with a well-defined audience, which the museum is looking to grow further in 2017. Widescreen Weekend was supported by the BFI and the British Kinematograph Sound and Television Society.
- The inaugural Yorkshire Games Festival at NSMM was a five-day event focused on games culture, design and production. The festival was generously supported by key local stakeholders Bradford College, the University of Bradford and Bradford Council, as well as the Yorkshire Screen hub.
- Manchester Science Festival celebrated its tenth anniversary this year and funding was provided by a portfolio of income sources. Key corporate sponsors continued to support the festival, and emerging channels such as visitor giving and corporate membership also contributed to the overall funding mix.

### Acquisitions and appeals

SM made a major new acquisition of a 1766 barograph clock by noted London clockmaker Alexander Cumming. The clock was purchased with grateful assistance from the Art Fund and the Wolfson Foundation.

Thanks to the generosity of a group of donors SM was able to restore an automaton lathe which has been in the collection since 1881. The lathe features in the Group's *Robots* exhibition.

### Other projects

Building on the success of our Digital Lab partnership, Samsung also supported the creation of the first virtual reality (VR) lounge at SM, Space Descent VR with Tim Peake. The VR lounge, which opened in March 2017, uses Samsung Gear VR technology to give visitors a 360° view inside a Soyuz capsule and allow them to experience the thrill of being an astronaut, retracing Peake's 400 km journey back to Earth from the International Space Station.

### Unrestricted income

The Group continues to work with individuals and corporate supporters at a variety of levels to help fund the Group's core work. Unrestricted funding ensures that the Group can continue to build on its charitable aims and is spent where the need is greatest.

SMG runs patrons schemes at SM and NRM. Patrons are able to join at different levels and gain access to a broad programme of exclusive events, behind-the-scenes tours, private views and curator talks. The focus this year has been to build a deeper level of engagement with current patrons to grow the number of individuals supporting the museums at these levels.

Corporate membership schemes continued to deliver new partnership opportunities for companies and organisations whose interests align with those of the Group. Both SM and NRM continue to review their schemes to ensure that they deliver unique engagement opportunities and added value for those partnering with the Group in this way.

In 2016–17 SMG sought to raise £2.5m through visitor giving and, thanks to the generosity of over 5 million visitors, the Group raised £2.9m. This has been a record year for SMG, with the average donation exceeding 56p and over £200,000 raised through Gift Aid.

### Events

Exhibition launches, dinners, private views, lecture series and thought leadership discussions take place throughout the year and offer up an opportunity to thank key supporters as well as providing a platform to share the Group's ambitions and aims.

Dr Craig Venter, the world's best known biotechnology entrepreneur, was the keynote speaker for this year's Science Museum annual dinner. The dinner provided a glimpse into the upcoming Medicine Galleries project and Dr Venter showcased real-life applications of how big data is enabling a more proactive, preventative and predictive approach to solving the medical challenges that lie ahead.

NRM's annual dinner is a prestigious event for up to 500 senior stakeholders from the rail industry and other associated sectors. Not only is it an opportunity to give thanks to important supporters, but it also delivers important unrestricted income through sponsorship and table sales. This year's keynote address was given by Sir Peter Hendy CBE, Chairman of Network Rail

As part of this year's programme of events SM awarded Fellowships to Professor Dame Ann Dowling OM DBE FRS FREng, Dr Helen Sharman OBE FRSC, the Rt Hon. George Osborne CH MP, Professor Dame Nancy Rothwell and Timothy Peake CMG.

### Fundraising oversight

SMG is an exempt charity under Schedule 3 of the Charities Act 2011, with DCMS acting as its principal regulator for charity law purposes, and is recognised as charitable by HM Revenue & Customs. SMG adheres to the Code of Fundraising Practice issued by the Fundraising Regulator. In 2016–17 SMG did not work with any third-party commercial participators or professional fundraisers. This year 31 complaints have been made regarding the Group's fundraising. SMG regularly reviews fundraising processes to ensure that no undue pressure is placed on visitors or supporters and that all approaches protect the public and vulnerable people from unreasonably intrusive or persistent fundraising.

## Performance

Performance information is sourced through both internal records and periodic independent visitor surveys.

### Performance against DCMS indicators

	SM	MSI	NRM York	NRM Shildon	NSMM	SMG*
Number of visits to the museum						
<b>2016–17</b>	<b>3,219,000</b>	<b>645,000</b>	<b>704,000</b>	<b>232,000</b>	<b>405,000</b>	<b>5,205,000</b>
2015–16	3,419,000	707,000	750,000	213,000	460,000	5,549,000
Number of visits by children under 16						
<b>2016–17</b>	<b>1,056,000</b>	<b>216,000</b>	<b>165,000</b>	<b>45,000</b>	<b>116,000</b>	<b>1,598,000</b>
2015–16	1,122,000	237,000	193,000	62,000	134,000	1,748,000
Number of overseas visitors						
<b>2016–17</b>	<b>1,471,000</b>	<b>94,000</b>	<b>84,000</b>	<b>12,000</b>	<b>11,000</b>	<b>1,672,000</b>
2015–16	1,562,000	96,000	55,000	6,000	16,000	1,735,000
Percentage of visitors who would recommend a visit						
<b>2016–17</b>	<b>97%</b>	<b>98%</b>	<b>99%</b>	<b>95%</b>	<b>98%</b>	<b>98%</b>
2015–16	98%	98%	99%	92%	98%	97%
Number of facilitated and self-directed visits by children under 18 in formal education						
<b>2016–17</b>	<b>363,000</b>	<b>44,000</b>	<b>31,000</b>	<b>5,000</b>	<b>22,000</b>	<b>465,000</b>
2015–16	381,000	46,000	30,000	5,000	24,000	486,000
Number of instances of children under 18 participating in on-site organised activities						
<b>2016–17</b>	<b>404,000</b>	<b>179,000</b>	<b>124,000</b>	<b>24,000</b>	<b>83,000</b>	<b>813,000</b>
2015–16	416,000	173,000	136,000	25,000	80,000	830,000
Number of unique website visits						
<b>2016–17</b>	<b>7,805,000</b>	<b>665,000</b>	<b>2,040,000</b>		<b>530,000</b>	<b>11,656,000**</b>
2015–16	8,568,000	839,000	2,101,000		611,000	12,119,000
Number of UK loan venues						
<b>2016–17</b>	<b>100</b>	<b>12</b>		<b>105</b>	<b>12</b>	<b>229</b>
2015–16	103	6		100	13	222

\*Any discrepancies in SMG totals are due to roundings

\*\*Total includes Group website not included in previous year.

### SMG-wide performance indicators

	2016–17	2015–16
	£'000	£'000
Exhibitions admission income (gross income)	1,864	1,884
Trading income (net profit, excluding sponsorship income)	2,858	2,726
Total charitable giving (including sponsorship income)	19,497	12,667
Ratio of charitable giving to Grant in Aid	47.2%	33.4%



## 3. Financial Review

### Review of financial position

#### Summary of performance in 2016–17

In 2016–17, the Group's funds have increased by £31.9m, of which £27.6m relates to the annual revaluation of fixed assets, to a total of £487.2m at 31 March (2016: £455.3m). Of this amount, £447.8m (2016: £420.4m) relates to non-expendable reserves, being associated with capital assets, endowment funds and the Group's defined benefit pension liability, and £39.4m (2016: £34.9m) to expendable reserves, of which £32.3m (2016: £31.3m) are restricted and £7.1m (2016: £3.6m) unrestricted.

The Group's net income (before revaluations) of £6.9m (2016: £16.4m) has resulted in an increase in expendable reserves of £4.5m, with the remainder used for capital purchases, as outlined below:

- Expendable restricted funds have increased by £1.0m primarily because of a £2.9m (2016: £0.6m) revaluation gain on the Group's investment portfolio. This revaluation has offset planned expenditure of £3.2m from restricted funds.
- Expendable unrestricted funds have increased by £3.5m to £7.1m (2016: £3.6m) and at year end £5.6m (2016: £1.9m) is designated for future projects, of which the most significant amounts relate to infrastructure improvements (£2.0m) and development of the new events space at the Science Museum (£1.6m).
- Non-expendable reserves, both restricted and unrestricted, have increased by £27.4m to £447.8m (2016: £420.4m) primarily as a result of the upwards revaluation of property of £27.6m and the difference between funding for future depreciation of £15.2m and the current year depreciation charge of £15.6m.

Details of significant transactions are as follows.

#### Income and expenditure

Net income in 2016–17 was £6.9m, a reduction of £9.5m from 2015–16. The two most significant constituent elements in this reduction are as follows:

- In 2015–16 a profit of £19.6m on the sale of the Post Office Building was realised and a grant to the Science Museum Foundation of £6.7m was made, neither of which have counterparts in 2016–17. This results in a £12.9m net reduction in income in 2016–17.
- As described above, investment returns of £2.9m in 2016–17 exceeded the £0.6m achieved in 2015–16, resulting in a net increase in income of £2.6m.

Adjusting for the effect of these transactions, net income of £4.0m (on gross income of £85.5m and expenditure of £81.5m) was up from £2.8m in 2015–16 (on gross income and expenditure of £79.2m and £76.4m respectively). These movements are described in more detail below.

#### Income

Grant in Aid received from DCMS increased from £40.4m in 2015–16 to £43.3m in 2016–17. The allocation for core activities at the Group of £34.8m remained stable, as did the Grant in Aid received for the National Coal Mining Museum of England at £2.4m. This was supplemented by an increased core capital allocation of £4.6m (2015–16: £2.5m), continued funding for works on the Special Exhibition Gallery in Manchester of £0.7m (2015–16: £0.5m) and the first tranche of funding (£0.7m) for the Group's One Collection project to relocate objects currently stored at Blythe House in Kensington to a new facility. One Collection is a major project that is anticipated to run until 2023, to which Government has committed £40.0m of funds and the Group £6.2m of its own reserves.

Donations and legacies declined by £2.3m. Included within this figure are donated assets, which fluctuate significantly depending on the assets received. In 2015–16 a donation of a collection of 1930s photographs by Lewis Morley resulted in a higher than usual figure in this line. The 2015–16 figure also includes a generous donation for the refurbishment of the Science Museum's lecture theatre, a project due for completion in summer 2017.

Other charitable income – mainly grants and ticket income – increased from £4.9m to £10.4m. A £5.0m grant from the Science Museum Foundation for *Mathematics: The Winton Gallery* is included in the current-year figures. A further amount of £0.1m is shown from the Biotechnology and Biological Sciences Research Council for work on the new contemporary agriculture gallery.

The recognition of sponsorship income is closely related to significant projects across the Group. The increase from £1.9m in 2015–16 to £5.3m in 2016–17 is the result of the completion of the major gallery projects *Wonderlab: The Statoil Gallery* and *Mathematics: The Winton Gallery*, and the recognition of income from their sponsorship. In a related move, the deferred sponsorship balances have reduced from £2.6m at 31 March 2016 to £1.5m in 2017.

Ticket income has remained stable at £1.9m, reflecting the success of *Leonardo da Vinci: The Mechanics of Genius* and *Robots* in the financial year, even though the latter will run into 2017–18. The 2015–16 figure of £1.9m also included income from *Cosmonauts: Birth of the Space Age*.

Other income of £1.9m in 2016–17 is lower than £5.2m in 2015–16, mainly because of receipt in the previous year of a significant one-off compensation payment for the impact on the Museum of Science and Industry's site in Manchester of the works on the Ordsall Chord rail link.

No grant (2015–16: grant of £6.7m) was made to the Science Museum Foundation this year.

Total resources expended were £81.5m (2015–16: £76.4m, excluding the £6.7m grant to the Science Museum Foundation), reflecting an increased level of operational investment in the financial year.

## Balance sheet

Tangible assets increased by £30.1m in the year, driven primarily by the revaluation of the Group's property of £27.6m (2015–16: £42.8m). Additions of £18.3m to these assets represented a variety of capital projects across the Group, including the new Masterplan galleries described above, *Wonderlab* in Bradford, the Medicine Galleries in London and the Special Exhibition Gallery in Manchester.

Investments of £16.8m were held at year end (2015–16: £13.6m), representing the holdings in equity and fixed-income funds of some of the proceeds from the sale of the Post Office Building. The remainder of the proceeds were held as short-term deposits or cash and cash equivalents at year end. The reduction of £3.1m in net current assets to £23.1m represents expenditure of brought-forward reserves, primarily on capital projects.

Creditors have fallen by £3.4m to £3.3m, this decrease attributable largely to settlement of the residual grant of £3.7m payable to the Science Museum Foundation at 31 March 2016. Accruals and deferred income have fallen from £8.7m to £6.3m, with the deferred sponsorship income within this falling from £2.6m to £1.5m. Deferred sponsorship income relates to exhibitions and galleries due to open in future periods and to several learning projects across the Group where the activity – and therefore the benefit to sponsors – is scheduled for future years.

The Group repaid the first tranche of its loan funding with DCMS in 2015–16, details of which are provided in Note 18 of the accounts. The total loan balance of £4.7m (2015–16: £4.9m) is repayable over the next ten years and relates to three loans designed to support the increase of commercial income generation across the Group.

The Group's pension liability increased from £3.2m to £5.9m at 31 March 2017. This is primarily the result of a lower discount rate being used for future liabilities. Following the acquisition of the Museum of Science and Industry in 2012, SMG became an admitting body of the Greater Manchester Pension Fund, a defined benefit scheme. Details are given in Note 20 of the accounts.

## Financial policies

### Creditor policy

SMG operates a 30-days payment policy where no payment terms have been specifically agreed. Using a sampling method, 74% of payments were made within this policy during 2016–17 (2015–16: 67%). No allowance has been made within these statistics for disputed invoices.

### Investment policy

The Trustees are empowered to invest by the Trustees Act 2000. Taking into account both best return, short-term availability and security, SMG ensures that all funds identified as surplus to working capital are reviewed daily and invested on short- to medium-term facilities to maintain their value over time.

The Trustees continued to invest in line with their policy, which allows for investment in equity and fixed-income funds aimed at preservation of value over the period to expenditure by seeking to produce the best financial return within an acceptable level of risk. The investment objective for the long-term reserves is to generate a return of 3% in excess of inflation over the long term. The investment objective for the short-term reserves is to preserve capital value with a minimum level of risk. Assets should be readily available to meet unanticipated cash-flow requirements.

In 2016–17 the long-term portfolio returned 20.8%, exceeding its target return, and the short-term portfolio increased in value by 5.0%.

### Reserves policy

The Trustees seek to maintain unrestricted general funds not committed or invested in tangible fixed assets at a level equivalent to three months' worth of non-contractual income. This level of reserves is held as a safeguard against unpredictable income streams, which may be vulnerable to the wider economic climate, including retail income and visitor donations. The Trustees agreed at their meeting in March 2017 that £1.5m was an appropriate level of reserves to hold in this respect, taking account of the level of operating contingency included in the 2017–18 budget. The value of reserves at 31 March 2017 was £1.6m.

The Trustees review the reserves policy each year and make changes where appropriate to reflect likely funding requirements or known risks.

Designated funds are unrestricted income funds held for specific future projects of high strategic value. The Museum Improvement fund represents the aggregate value of designated funds held for such projects, which include major capital works as well as exhibitions, research and educational projects. The majority of projects for which funds are held in the Museum Improvement fund will be undertaken during the coming financial year.



## Immunity from seizure

SMG has approved status under Part 6, Section 136 of the Tribunals, Courts and Enforcement Act 2007. This was granted by the Secretary of State for Culture, Media and Sport on 9 November 2009. Part 6 of the Act confers protection on objects loaned from abroad for temporary public exhibitions, provided the conditions set out in Section 134 of the Act are met when the objects enter the UK. If the conditions of this legislation are met, a court cannot make an order to seize an object that has been loaned from abroad for an exhibition, except where required to under EU law or the UK's international obligations.

Information regarding immunity from seizure is provided on the SM website: <http://group.sciencemuseum.org.uk/policy/immunity-from-seizure>

This year SM was again pleased to collaborate with key cultural partners in Russia including Exhibition Centre Rosizo, Yaroslavl State Historical-Architectural and Art Museum-Reserve, Cosmonautical Museum of Moscow and Yaroslav Art Museum. The 'Valentina Tereshkova: First Woman in Space' exhibit includes works for which protection under the legislation was sought. The museum also borrowed items from the Tereshkova family.

'Valentina Tereshkova: First Woman in Space'

6 March – 30 September 2017

Science Museum, Exhibition Road, London SW7 2DD

30 objects

Details of the objects were published on the website at least four weeks before the objects were imported into the UK. Up to 31 March 2017 no enquiries or claims had been received with respect to these objects under Section 7 of the Protection of Cultural Objects on Loan (Publication and Provision of Information) Regulations 2008.

## 4. Remuneration Report

### Remuneration

#### Membership of Remuneration Committee

The membership of the Remuneration Committee during the year is shown in the Governance Statement.

The SMG Director, Mr Ian Blatchford, and Director of People and Culture were in attendance at the meeting that reviewed senior employees' pay (excluding discussion concerning their own pay and performance).

#### Policy on the remuneration of senior managers for current and future financial year

The Remuneration Committee reviews salaries of all of the museums' senior managers whose jobs are of a certain size (as determined by job evaluation).

When determining salary levels generally, a number of factors are taken into account:

- The projected budget for the annual staff settlement
- Salary levels internally and in the marketplace (through salary surveys)
- Job size and whether this has changed over the period (through formal evaluation, where applicable)
- Government guidance
- The individual manager's performance over the year

#### Performance-related pay for senior managers

At the beginning of the year, senior managers are set objectives based on the museums' business plans. At the end of the year they are assessed by the Director, Chief Operating Officer or Group Executive member on the extent to which they have achieved their objectives and their performance is rated accordingly. The Chairman of the Board of Trustees assesses and rates the Director's performance. All ratings are then reviewed by the Remuneration Committee. All of senior managers' pay depends on performance being delivered, this being deemed the most effective way of achieving the business plans. Members of the Group Executive are eligible to be considered for a discretionary bonus within a range from 0 to 15% of their annual salary.

When determining the salary increase for each individual, the performance and contribution of the individual over the period (through performance appraisal) forms the major component together with any impact from changes in job scope and external factors.

#### Policy on contractual terms

Senior employees are on permanent contracts with either SMG or SCMG Enterprises Ltd. Notice periods for senior employees are between three and six months, for the Director, six months. Termination payments are in accordance with Museum or SCMG Enterprises Ltd contractual terms.

All Museum employees, except those working at the Museum of Science and Industry, are members of the Principal Civil Service Pension Scheme with associated redundancy and early retirement conditions. Civil Service pension details are given in notes to the accounts at Note 11. Museum employees working at MSI are members of the Greater Manchester Pension Fund, for which SMG is an admitting body. All SCMG Enterprises Ltd employees may participate in a group personal pension scheme, currently provided by Aviva, as opposed to being auto-enrolled in a stakeholder pension. In the event of redundancy they will be entitled to payments as defined under the Employment Rights Act 1996 unless individual contracts define other terms.

The members of the Board of Trustees of the Science Museum, who hold overall responsibility for SMG, are not remunerated. Expenses paid are disclosed in Note 10 of the annual accounts.

## Remuneration information

The information below has been audited.

‘Remuneration’ includes gross salary, performance pay or bonuses, overtime, reserved rights to London weighting or London allowances, recruitment and retention allowances, and any other allowance to the extent that it is subject to UK taxation.

The monetary value of benefits in kind covers any benefits provided by the employer and treated by HM Revenue & Customs as a taxable emolument.

### Senior directors

This Remuneration Report has been prepared in accordance with the Government Financial Reporting Manual, which requires disclosure of information about directors’ remuneration, where ‘directors’ is interpreted to mean those having authority or responsibility for directing or controlling the major activities of SMG. This means those who influence the decisions of the entity as a whole rather than the decisions of individual directorates or sections within the entity.

It is the view of SMG that this requirement encompasses the two posts listed below, whose emoluments and pension details are disclosed. SMG considers that no other key management staff details need to be disclosed under this guidance for 2016–17.

Remuneration	Salary	Bonus payments	Benefits in kind	Pension benefits	Single Total Figure of Remuneration
	£000	£000	nearest £100	£000	£000
<b>Ian Blatchford, Director</b>					
2016–17	165–170	10–15	–	44 <sup>[1]</sup>	220–225
2015–16	155–160	10–15	–	93 <sup>[1]</sup>	260–265
<b>Jonathan Newby, Deputy Director and Chief Operating Officer</b>					
2016–17	130–135	10–15	900	9 <sup>[2]</sup>	160–165
2015–16	125–130	10–15	800	9 <sup>[2]</sup>	145–150

[1] Calculated as 20 times the real increase in pension plus the real increase in any lump-sum payment due, less member contributions.

[2] Non-PCSPS employee; the figure is the employer’s contributions in the year.

Pension benefits (PCSPS scheme members only)	Total accrued pension and related lump sum at pensionable age 31.03.17	Real increase in pension and related lump sum at pensionable age	CETV at 31.03.16	CETV at 31.03.17	Real increase in CETV
	£000	£000	£000	£000	£000
Ian Blatchford	45–50	2.5–5	703	758	19

The figures in the tables above have been subject to audit.

## Cash-equivalent transfer values

A cash-equivalent transfer value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme. A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another pension scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in his/her former scheme. The pension figures shown relate to the benefits that individuals have accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies. The figures include the value of any pension benefit in another scheme or arrangement which the individual has transferred to the Civil Service pension arrangements. They also include any additional pension benefit accrued to the member as a result of his/her purchasing additional pension benefits at his/her own cost. CETVs are calculated within the guidelines and framework prescribed by the Institute and Faculty of Actuaries and do not take account of any actual or potential reduction to benefits resulting from Lifetime Allowance Tax which may be due when pension benefits are drawn.

## Real increase in CETV

The real increase in CETV reflects the increase effectively funded by the employer. It takes account of the increase in accrued pension that is due to inflation, contributions paid by the employee (including the value of any benefits transferred from another pension scheme or arrangement) and uses common market valuation factors for the start and end of the period.

## Median remunerations

Reporting bodies are required to disclose the relationship between the remuneration of the highest-paid director in their organisation and the median remuneration of the organisation's workforce. The midpoint for the banded remuneration of the highest-paid director in SMG in the financial year 2016–17 was £177,500 (2015–16: £172,500). This was 7.7 times (2015–16: 8.4 times) the median remuneration of the workforce, which was £22,950 (2015–16: £20,300). The ratio has decreased mainly because of adjustments in the composition of the work force.

In 2016–17 no employee received remuneration in excess of the highest-paid director. Remuneration ranged from banded midpoint of £7,500 to £177,500 (2015–16: £12,500 to £172,500) on a full-year basis.

Total remuneration includes salary, non-consolidated performance-related pay and benefits in kind. It does not include employer pension contributions and the cash-equivalent transfer value of pensions.

## Off-payroll arrangements

There were two off-payroll arrangements in 2016–17 lasting longer than six months, for more than £220 a day (2015–16: none). These had both ended at the date of reporting and existed for less than one year. All off-payroll arrangements have been subject to a risk-based assessment as to whether assurance needs to be sought that the individual is paying the right amount of tax, and where necessary, this assurance has been sought.

## Employees

The information below has been audited.

Details of employee numbers, employees receiving remuneration over £60,000 and the remuneration of key management personnel are now provided in Note 11.

### Civil Service and other compensation schemes – exit packages

The numbers of exit packages agreed during the year, split by cost band, are shown in the table below:

	Number of compulsory redundancies	Number of other departures	Total number of exit packages for 2016–17	Total number of exit packages for 2015–16 <i>restated</i>
< 10,000	–	7	7	6
10,001 – 25,000	–	1	1	6
25,001 – 50,000	–	–	–	3
50,001 – 75,000	–	–	–	4
75,001 – 100,000	–	–	–	3
> £100,001	–	–	–	–
Total	–	8	8	22
Cost (£'000)	–	38	38	750

### Employee engagement

SMG continues to operate various ways of facilitating effective communications with employees. Regular employee briefings from the SMG Director, the Directors of museums and other senior managers on strategic and topical issues are supplemented by Group-wide and museum-specific announcements and news on the SMG intranet and by e-mail.

There are a number of forums where SMG engages with employee representatives and officials from the trade unions on matters of mutual interest and concern. These forums are used for the usual business of addressing pay and benefits but also for the development of policies and health and safety matters.

SMG operates a performance development process that enables personal objectives to be articulated and fully aligned to wider business goals. The process looks at how results are achieved as well as the results themselves, and provides an opportunity to look at the development and support that employees require to deliver their objectives.

SMG continues to focus on supporting managers and employees in dealing with change and has increased the level of support offered in career transition activity. This year SMG has continued to invest in leadership and management development and has focused on the National Railway Museum, Museum of Science and Industry and Enterprises management teams.

## Sickness absence

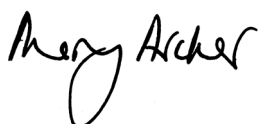
The average number of days lost from sickness for each full-time equivalent employee was 4.8 days (2015-16: 4.0 days).

## Equality and diversity

It is SMG policy that all eligible people should have equal opportunity for employment and advancement on the basis of their ability, qualifications and fitness for the work. There should be no discrimination based on gender, race, religion, age, physical disability or sexual orientation against any eligible person whether in recruitment, training, promotion or in any other way.

SMG works with local communities, schools and education groups to increase access for under-represented groups.

This financial year SMG has continued to work with occupational health providers, Access to Work and a range of other specialist advisers to make reasonable adjustments to the workplace for employees and potential recruits with disabilities.



**Dame Mary Archer**  
Chairman of the Board of Trustees

28 June 2017



**Mr Ian Blatchford**  
Accounting Officer and Director

28 June 2017

## 5. Sustainability Report

### Summary of performance

We continue to ensure that sustainability is at the core of our activities. Measures taken this year build on our previous achievements, minimising energy consumption, encouraging our suppliers to be conscientious in their activities, and helping our visitors to understand both their and our impacts on resources and the environment. Highlights of the past year include:

- Acquisition of two Toyota Mirai zero-emission hydrogen fuel cell cars. These vehicles courier resources stored at Wroughton to and from the Dana Research Centre and Library in South Kensington.
- At the National Railway Museum at Shildon replacement of all the lights in the main building with high-efficiency LEDs, reducing energy consumption and maintenance and running costs.
- At the Museum of Science and Industry over 200 litres of leftover paint has been donated to local charities, saving on waste and helping these important groups.

### Greenhouse gas emissions

		2017	2016	2015
<b>Non-financial indicators</b> (tCO <sub>2</sub> e)	Total gross emissions	8,769	9,108	10,059
	Scope 3 business travel gross emissions	219	237	266
<b>Related energy consumption</b> (see individual metrics)	Electricity – non-renewable (kWh)	14,057,528	13,500,032	13,934,670
	Electricity – combined heat and power (CHP) (kWh)	45,884	465,637	626,063
	Gas (kWh)	13,116,567	12,819,299	13,938,548
	Oil (litres)	22,573	19,529	22,637
	Biomass – wood pellets (tonnes)	46	32	47
<b>Financial indicators</b> (£000)	Expenditure on energy	1,665	1,753	1,760
	CRC expenditure	151	154	161
	Expenditure on business travel	719	502	618

#### Performance

Emissions continue to reduce across the estate, partly through investment in energy efficiency technology such as LED lighting, reduced travel emissions and the adoption of zero-emission vehicles within the fleet.

We continue to invest in technology such as biomass, solar PV and solar thermal to maximise our use of renewable technology at our sites.

The Wroughton solar farm has also been operational for a year, and its final design allowed for an increase in output from 43 to 62 MW. This is operated by a third party and supplies electricity directly to the national grid.

The Group's CHP generator has been non-operational during 2016–17, which accounts for the reduction in energy from CHP above.

#### Direct and indirect impacts

The main direct impacts from SMG come through electricity and gas consumption. Thus the biggest influence on consumption relates to heating, cooling and lighting in visitor areas and climate-controlled galleries, and the impacts of these requirements are regularly reviewed and challenged.

Where possible travel is minimised through the use of video and on-screen conferencing services.

## Waste

	Non-financial indicators (tonnes)			Financial indicators (£000)		
	2017	2016	2015	2017	2016	2015
Total waste	1,487.1	922.8	1,116.1	153.5	130.3	89.3
Hazardous (including waste electric and electronic equipment)	2.0	1.4	0.7	10.6	3.8	0.5
Non-hazardous						
Landfill	86.4	56.2	93.6	15.9	8.8	8.3
Energy from waste	358.1	291.1	253.6	41.8	45.4	39.2
Mixed recycling	950.0	399.1	292.4	75.5	48.2	38.2
Wood recycling	32.1	25.3	30.6	6.0	2.7	3.2
Metal recycling	25.8	12.2	18.7	1.9	0.9	0.8
Glass recycling	32.8	37.6	31.5	1.8	0.8	0.6

### Performance

Waste from SMG shows a rise in this financial year, which is a result of better monitoring and recording and an increased programme of new exhibitions from which waste records are now being properly captured.

### Direct and indirect impacts

The most significant direct impact on the volume of waste comes via our visitor services. We encourage all visitors to recycle in clearly marked bins and work closely with our caterers and suppliers to minimise waste production.

## Finite resources

			2017	2016	2015
<b>Non-financial indicators</b> (see individual resource for metrics)	Water – including locomotive operations	(m³)	74,478	74,899	82,087
	Coal – locomotive operations	(tonnes)	96	59	45
	Non-fuel oils	(litres)	2,175	1,118	2,375
	Diesel – rail operations	(litres)	15,294	12,620	13,056
<b>Financial indicators (£000)</b>	Water supply – including locomotive operations		97.6	90.0	94.6
	Coal – locomotive operations		19.4	16.0	11.4
	Lubricating oil – locomotive operations		4.2	3.0	4.2
	Diesel – rail operations		13.6	8.0	8.3

### Performance

Coal and diesel consumption for our rail operations are directly related to the visitor offer. This year has seen the introduction of steam rides for our visitors at NRM and this accounts for the increase in coal and lubricating oil consumption. The decrease in diesel is also directly related to the type of locomotives being operated. Water has seen a small reduction in use despite these activities.

### Direct and indirect impacts

Our visitor offers are the main direct impact on finite resource consumption across the Group. These are carefully operated to reduce consumption, emissions and cost.

Procurement of materials evaluates the provenance of the supply, particularly in respect of the coal used in the locomotives at NRM.



## Biodiversity enhancement

### Performance

The Wroughton site continues to be the most significant site for biodiversity management. Initiatives here have delivered 14 new nest boxes for owls, kestrels and small birds and 6 new bat boxes at the site.

Our farm practices are low impact and help keep our country wildlife sites in good order.

### Direct and indirect impacts

We work with suppliers to ensure that appropriate certificated products, such as Forest Stewardship Council (FSC)-approved timber, are chosen above others, and have a list of excluded chemicals and materials known to have impacts on ecosystems that are not to be used on SMG's premises.

## Sustainable procurement

### Performance

Our procurement tenders and contracts include criteria for sustainability and energy performance where appropriate.

### Direct and indirect impacts

Our contracts now include sustainability, engagement and partnership working clauses and have increased the ability of SMG to work with suppliers to reduce our impacts.

## Strategy for the future

We will continue to work on refining and improving our knowledge regarding waste and finite resources to help us drive decision-making in these areas.

We will continue to build on our past successes and identify new opportunities to reduce waste, increase on-site low-carbon energy generation and adopt sustainable technology.

Our projects will continue to place sustainability at the heart of their design and procurement briefs.

## 6. Statement of Board of Trustees' and Director's Responsibilities

Under Sections 9(4) and (5) of the Museums and Galleries Act 1992, the Secretary of State for Culture, Media and Sport with the consent of the HM Treasury has directed the Science Museum Group to prepare for each financial year a statement of accounts in the form and on the basis set out in the Accounts Direction. The accounts are prepared on an accruals basis and must give a true and fair view of the state of affairs on the Science Museum Group and of its net resource outturn, application of resources, changes in funds and cash flows for the financial year.

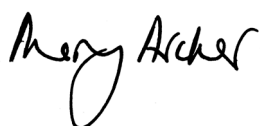
In preparing the accounts, the Board of Trustees and Accounting Officer are required to comply with the requirements of the *Government Financial Reporting Manual* and in particular to:

- Observe the Accounts Direction issued by the Secretary of State, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis;
- Make judgments and estimates on a reasonable basis;
- State whether applicable accounting standards have been followed, and disclose and explain any material departures in the financial statements; and
- Prepare the financial statements on the going concern basis, unless it is inappropriate to presume that Science Museum Group will continue in operation.

The Accounting Officer for the Department for Culture, Media and Sport has designated the Director as the Accounting Officer of the Science Museum Group. The responsibilities of an Accounting Officer, including responsibility for the propriety and regularity of the public finances for which the Accounting Officer is answerable, for keeping proper records and for safeguarding the Science Museum Group's assets, are set out in Managing Public Money published by the HM Treasury.

As far as the Board of Trustees and the Accounting Officer are aware there is no relevant audit information of which the entity's auditors are unaware. The Board of Trustees and the Accounting Officer have taken all the steps that they ought to have taken to make themselves aware of any relevant audit information and to establish that the entity's auditors are aware of that information.

The annual report and accounts as a whole is fair, balanced and understandable and the Board of Trustees and the Accounting Officer take responsibility for the annual report and accounts and the judgements required for determining that it is fair, balanced and understandable.



**Dame Mary Archer**  
Chairman of the Board of Trustees

28 June 2017



**Mr Ian Blatchford**  
Accounting Officer and Director

28 June 2017

## 7. Governance Statement

### The governance framework

The Board of Trustees of the Science Museum (the SMG Board) is responsible for the whole of the Science Museum Group (SMG). The Trustees, who may number between 12 and 20, are appointed by and responsible to the Prime Minister through the Department for Culture, Media and Sport (DCMS). The Director of SMG, as Chief Executive Officer, is responsible to the Board of Trustees and, as Accounting Officer, is accountable to DCMS for compliance with the Management Agreement. Within the framework of their statutory duties as stated under the National Heritage Act 1983, the role of the Trustees is to establish SMG's policy, review performance and endorse appointments to key management positions. Their primary activity is to assist the Chairman in meeting the Board's overall responsibilities, in accordance with the policies of the Secretary of State, and in compliance with charity law. Trustees offer guidance and expertise to the Chairman on setting and implementing SMG strategy.

The recruitment of Trustees takes place in accordance with the procedures defined by DCMS and the Office of the Commissioner for Public Appointments. Descriptions of

the roles required are advertised, interviews conducted and recommendations made to DCMS for appointment by the Prime Minister in accordance with the National Heritage Act 1983. Professor Brian Cantor, Dr Sarah Dry and Ms Lopa Patel were appointed as Trustees from 1 June 2016.

When new Trustees are appointed, officers of SMG provide both general briefings about the museums and the role of the Board of Trustees within a charity and non-departmental public body context and specific information about particular areas of interest. This is done through documents and meetings. The SMG Directorate has responsibility for coordinating secretarial functions for the main Board and oversight of governance arrangements and management of Board committees.

To help support a diverse and complex organisation, the Board has chosen to delegate some of its activities to a number of advisory boards and committees, each with a defined remit and terms of reference. The structure that operated in 2016–17 is briefly summarised in the table below:

Committee	Hierarchy	Remit
Board of Trustees	Board	Determine all matters requiring Board approval
Audit and Risk Committee	Board subcommittee	Provide assurance on risk, control and governance
Collections and Research (CoRe) Committee	Board subcommittee	Advise Board of Trustees on all aspects of collections and research
Finance Committee	Board subcommittee	Advise Board of Trustees on all financial matters and make financial decisions within its remit and delegated limits
Masterplan and Estate (M and E) Committee	Board subcommittee	Advise Board of Trustees on all SMG's capital development plans and make financial decisions within its remit and delegated limits
Remuneration (Rem) Committee	Board subcommittee	Advise Board of Trustees on remuneration of Director and senior executives
Science Museum Advisory Board	Board subcommittee	Advise SMG Director and Board of Trustees on cultural offer
Museum of Science and Industry Advisory Board	Board subcommittee	Advise local Director and Board of Trustees on cultural offer
National Railway Museum Advisory Board	Board subcommittee	Advise local Director and Board of Trustees on cultural offer
National Science and Media Museum Advisory Board	Board subcommittee	Advise local Director and Board of Trustees on cultural offer
Railway Heritage Designation Advisory Board	Board subcommittee	Make recommendations to Board of Trustees on designation and disposal of railway heritage artefacts and archives
Board of Directors of SCMG Enterprises Ltd	Board of Directors of trading subsidiary	Make decisions regarding commercial operations and monitor progress against budget
Management Board of SCMG Enterprises Ltd (to 05.10.16)	Management Board of trading subsidiary	Advise Board of Directors of trading subsidiary
Income Advisory Board (from 05.10.16)	Reports to Board subcommittee	Provide oversight and guidance on development and implementation of an Income Strategy for SMG

Trustees who served during the year and their attendance at meetings and a strategy day of the Board of Trustees and its subcommittees are shown in the table below.

A full list of membership of subcommittees and advisory boards can be found at the end of this Governance Statement.

	Term	Date of current appointment	Expiry of appointment	Attendance					
				Board <sup>1</sup>	Audit & Risk	CoRe	Finance	M and E	Rem
Chairman									
Dame Mary Archer DBE (as chair)	1	01.01.15	31.12.19	5/5		3/3			1/1
Members									
Professor Brian Cantor	1	01.06.16	31.05.20	4/5					
Mr Howard Covington	2	–	06.04.16	–					
Mr Matthew d’Ancona	1	01.04.15	31.03.19	3/5	0/4				
Professor Dame Athene Donald DBE	2	–	07.10.16	3/3					
Dr Sarah Dry	1	01.06.16	31.05.20	5/5		2/3			
Lord Faulkner of Worcester	2	05.01.15	04.01.19	6/6	4/4				1/1
Miss Sharon Flood	1	01.04.15	31.03.19	6/6			4/4		
Professor Russell Foster CBE	1	01.04.15	31.03.19	2/5					
Mr Andreas J Goss	2	01.08.15	31.07.19	5/5			1/4		
Lord Grade of Yarmouth CBE	2	01.08.15	31.07.19	5/5					1/1
Professor Ludmilla Jordanova	2	01.08.15	31.07.19	6/6		3/3			
Mr Simon Linnett	2	05.01.15	04.01.19	5/5			4/4		
Professor Averil Macdonald	2	–	06.04.16	–					
Ms Lopa Patel MBE	1	01.06.16	31.05.20	5/5					
Professor David Phoenix OBE	1	01.04.15	31.03.19	5/5	4/4				
Mr Anton Valk CBE	1	01.04.15	31.03.19	5/5				5/6	
The Rt Hon the Lord Willetts	1	01.04.15	31.03.19	3/5					
Dame Fiona Woolf CBE	1	01.04.15	31.03.19	5/5				6/6	

<sup>1</sup> The SMG Board meets four times a year; a Strategy Day was also held in October 2016.

## Reports from Board committees

### Board of Trustees

Significant issues considered by the Board of Trustees in 2016–17 included:

- Group strategy – The Board's working group – led by the Rt Hon. the Lord Willetts to devise a long-term strategic framework for SMG as a whole – concluded its review. The group met regularly and reported to the main Board; the new Group strategy, *Inspiring Futures: Strategic Priorities 2017–2030* was published in 2016–17.
- Financial resilience – In light of uncertainty in the wider economy and the risk of further reductions in Government funding, there is a continued and overarching need for SMG to increase income from other sources, achieve operational efficiencies and exercise stringent financial management. This imperative has influenced – explicitly or implicitly – all Board and Executive discussions. An Income Advisory Board was set up in 2016–17 (reporting to the Finance Committee) to provide oversight and guidance on the development and implementation of an Income Strategy for SMG.

- Masterplans – Every SMG site is engaged in masterplanning for the development of the estate and the public offer, each with its own range of opportunities and constraints. The Board considers the overall approaches to masterplanning and approves specific projects where the budget exceeds a designated threshold. The Board is advised by the Masterplan and Estate Committee. Of particular note in 2016–17 were various decision points relating to the Blythe House and One Collection projects, and the public realm and Masterplan projects at NRM and MSI.
- National Science and Media Museum – The Board has devoted considerable time to the museum's new vision and rebrand, focusing on the science and technology of light, image and sound, and on being better integrated into its local community. This year the Board considered and endorsed the museum's new brand, name and visual identity, which were announced to the public in late 2016–17.

- National Railway Museum at Shildon – The Board agreed to consider governance arrangements at NRM Shildon by engaging in discussion with Durham County Council about the optimal future arrangement for the site.

Other matters included the Group ethics policy, collecting and research policies, investments and deployment of reserves, disposal of the Brush Ljungström turbine, and health and safety.

### Audit and Risk Committee

The Audit and Risk Committee kept the management of risks under review throughout the year, particularly with respect to collections management and estates management. Members of internal and external audit attended each meeting of the Audit and Risk Committee and their work was considered by the committee.

### Collections and Research Committee

The Collections and Research Committee advises the Board on the suitability and appropriateness of strategy and policy for SMG's collections and research, including acquisitions and disposals of objects and the management and care of the SMG collection.

### Finance Committee

In addition to its continuing work to provide the Board with assurance on the financial management and performance of SMG, the Finance Committee reviewed and approved a number of major projects including the Blythe House and SM levels 4 and 5 projects, and supported the implementation of the strategic income plan via the creation of the Income Advisory Board in 2016–17.

### Masterplan and Estate Committee

The Masterplan and Estate Committee provided focused technical and strategic advice to the Board on SMG's capital development plans. The committee reviews and manages the execution and completion of SMG's capital development plans.

### Remuneration Committee

The Remuneration Committee provided advice to the Board on the remuneration of the Director and senior management team.

### Railway Heritage Designation Advisory Board

From 1 April 2013 the Board of Trustees assumed statutory powers – formerly held by the Railway Heritage Committee – to designate certain artefacts and records related to railways as being of significant heritage value. A new subcommittee, the Railway Heritage Designation Advisory Board (RHDAB), was formed to advise the Board on designation and disposal matters. The RHDAB has two Trustee members, one of whom is the Chairman, and includes representatives of a range of stakeholders.

Designation recognises the significance of the items concerned and confers responsibility for their care and maintenance on the owners and recipients. Designated items may not be disposed of without the approval of the SMG Board. The RHDAB was established as a subcommittee of the main Board to advise the Trustees on designations and on disposal of designated material. The designation powers cover specific bodies. In 2014 GB Railfreight Ltd, recognising the heritage value of its railway assets, decided voluntarily to come within the scope of the powers alongside Transport for London.

The RHDAB met four times in the financial year 2016–17 and recommended 31 items for designation, 8 items for disposal and no de-designations. Among these have been 1 class designation and 4 items through its voluntary agreement with Transport for London and GB Railfreight Ltd.

### Board effectiveness

Following a comprehensive restructure of Board subcommittees carried out in 2015–16, a review of the operation and performance of the Board as a whole was conducted in 2016–17 as part of SMG's internal audit programme. This review was focused on Board leadership strategy and culture, subcommittee structure and performance oversight, and transparency and reporting. The final report was presented to the Board in 2016–17 and the findings were positive, demonstrating effective governance and leadership and a good relationship between the Executive and the Board. Recommendations, relating principally to improving consistency in management of subcommittees and board administration, were reviewed by the Board together with an action plan to implement approved changes. In addition, and led by the Chairman, the Board conducted reviews of each Trustee's contribution to the Board.

The Board has high standards in terms of the data it expects to receive to support it in discharging its duties. Data relating to the delivery of SMG's objectives, including financial control and the management of risk, is regularly reviewed by the Board and its committees.

### Group Executive

As Accounting Officer, the Director is personally responsible for safeguarding the public funds for which he has charge, for propriety and regularity in the handling of those public funds as guided by Managing Public Money, and for the day-to-day operations and management of SMG. The Director of SMG is also Director of the Science Museum and is supported by the Deputy Director of SMG. Each of the other museums within SMG is headed by a Director who is directly responsible for collections, the museum's cultural programme and for coordinating the overall delivery of the museum's goals.

The Group Executive is accountable to the Director of SMG, and comprises senior managers, most of whom report directly to the Director. The Group Executive is responsible for resource allocation, leading strategic management,

developing the cultural content and programmes, and sustaining SMG values.

Senior managers who served on the Group Executive during the year were:

Ian Blatchford	Lydia Lee	Jonathan Newby
Jane Ellis	Karen Livingstone	Tom O'Leary
Roger Highfield	Sally MacDonald	Jo Quinton-Tulloch
Paul Kirkman	Judith McNicol	John Stack

## Risk management framework and risk assessment

The Board of Trustees believes considered risk-taking is a necessary feature of the entrepreneurialism that is essential to success; the decision-making approach balances potential consequences against the scale of opportunity. The Board of Trustees' risk appetite varies according to the nature of the risk, but in general SMG takes a moderate approach to risk and the system of internal controls is structured accordingly.

The Accounting Officer is responsible for managing risk and ensuring an effective system of internal control is in place. The Accounting Officer places assurance on the work of the Corporate Risk Group, an executive committee that meets regularly to review the risk environment, identify changes in the corporate risk profile as well as emerging risks, and report on these areas to the Director, the Group Executive and the Audit and Risk Committee.

The Board of Trustees places assurance on reports from the Chairs of the Audit and Risk Committee and Finance Committee and the Director concerning matters affecting internal control. The minutes of all subcommittees are distributed to Trustees.

The Audit and Risk Committee places assurance on the work of the internal auditor. Internal audit services in 2016–17 were provided by PricewaterhouseCoopers LLP, in accordance with Public Sector Internal Audit Standards. The work of the internal audit provider is informed by an analysis of the risk to which the body is exposed, and annual internal audit plans are based on this analysis, which is endorsed by the Audit and Risk Committee. The Head of Internal Audit (HIA) provides the Audit and Risk Committee with regular reports on internal audit activity, which include the HIA's independent opinion on the adequacy and effectiveness of the system of internal control, together with recommendations for improvement. The HIA's opinion for 2016–17 is given below. Actions arising from all the audits are addressed by the Group Executive and progress is monitored through the Audit and Risk Committee.

The Corporate Risk Group monitored the major risks and focused on measures in place to manage them during the year, reporting to the Group Executive, the Audit and Risk Committee and the Board of Trustees. Risk assessment and management formed an integral part of business planning and project management.

The system of internal control has been in place in SMG throughout the year ended 31 March 2017 and up to the date of approval of the Annual Report and Accounts, in accordance with Treasury guidance. The system of internal control is based on a framework of regular management information, administrative procedures including the segregation of duties, and a system of delegation and accountability.

In particular, it includes:

- A Group Executive management team, as described above, which met regularly throughout the year to review progress against plans, make operational and policy decisions and to consider the management of identified and emerging risks.
- Regular reports from managers to the Audit and Risk Committee, Finance Committee and Board of Directors of SCMG Enterprises Ltd or management team (as appropriate) on the steps they are taking to manage risks in their areas of responsibility, including progress on key projects.
- Annual completion of internal control schedules by senior managers to confirm their compliance with SMG's internal control standards.
- Comprehensive budgeting systems, with an annual budget which is reviewed and agreed by the Board of Trustees.
- Regular reviews by the Board of Trustees of progress against the key performance indicators that measure attainment against objectives, and of regular financial reports that track financial performance against forecasts.

- A Corporate Risk Group, chaired by the Director of Corporate Services and reporting to the Audit and Risk Committee, responsible for
  - Raising the profile of management awareness and accountability for the risks faced by SMG
  - Supporting the ongoing development of risk management and implementation of the risk management process
  - Acting as a source of advice on risk management to aid embedding of risk management across the organisation
  - Reviewing departmental risk registers on a cyclical basis and assessing the need for escalation of those risks
  - Identifying emerging risks and reviewing and assessing existing corporate risks and appropriate actions to manage those risks
  - Reporting corporate risks and recommended actions to the Group Executive (for validation) and to the Audit and Risk Committee
  - Identifying the need for investment to fund high-priority risk response actions
- Maintenance of a register of interests for Trustees, Directors of SCMG Enterprises Ltd, subcommittee advisers and senior staff.

The system of internal control is designed to manage rather than eliminate the risk of failure to achieve the Group's policies, aims and objectives; it can therefore only provide reasonable and not absolute assurance of effectiveness. The system of internal control is based on an ongoing process designed to identify the principal risks to the achievement of the Group's policies, aims and objectives, to evaluate the likelihood of those risks being realised and the impact should they be realised, and to manage them efficiently, effectively and economically.

## Risk profile

A reduction to government funding continues to be a major risk. The likelihood of this risk having a critical impact was reduced following the announcement of a stable funding settlement in the Autumn Statement 2015. There remains a risk around future levels of Grant in Aid, given uncertainty in the wider economic climate, and SMG continues to seek ways to both increase self-generated income and reduce expenditure in order to secure longer-term financial sustainability.

The Group has also focused in 2016–17 on risks relating to the state of its estate, both physical and digital. Work has continued during the year to manage identified weaknesses in the management of the estate, however investments in local- and wide-area networks and the rationalisation of the Group's websites have been made to mitigate risks to business continuity and visitor experience, and these investments will continue over the coming financial years.

The scope of standing risks resulting from a failure to care for and manage the collection in line with statutory requirements has been expanded to include the risks of not developing the collection appropriately through acquisition and donation. A clearly articulated acquisition policy has been developed that will ensure areas for future collection are clearly articulated and aligned with the Group's strategic themes. A collections audit process has also been implemented in 2016–17, with regular reporting to the Audit Committee and Collections Research Committee. Further progress has been made in the DCMS-led project to vacate the Group's shared storage facility at Blythe House in west Kensington that will support a step change in the storage of collections to be delivered over the medium term, and plans are under development for a new purpose-built storage facility at Wroughton.

Other areas of risk identified during the year included reputational risk associated with the new name and brand of the National Science and Media Museum in Bradford, the opening of *Wonderlab: The Staitoil Gallery* in London and the move to a charged-for model in the interactive gallery, and water ingress at the 1830s Warehouse in Manchester, where the Special Exhibition Gallery is being developed.

Internal audit work during the year identified weaknesses relating to statutory compliance monitoring in the Estates department. Remedial action has been taken and planned as follows:

- A clear risk-based action plan with milestones to address identified issues in the building fabric as well as priority compliance testing. All identified high-risk items will be closed by agreed deadlines; these and all further remedial work will be completed by March 2018.
- An activated contractor performance management plan, escalated to the highest levels within both organisations. Contractual performance improvement notices have been issued to the contractor; further penalty and escalation processes are in place for non-compliance.
- Appointment into key leadership roles within the estates team. The Heads of Estates North and South will actively manage the closing of all high-risk items and, where necessary, will work with contractors outside the main Estates contract to ensure completion.
- Assurance – both our own H&S team undertaking monthly checks and PwC undertaking further assurance work throughout 2017–18.



## Assessment of risk management framework

The Accounting Officer and Board of Trustees have to maintain a balance between the strength of internal control systems and the cost of their implementation and improvement. At present, the Accounting Officer and Board of Trustees consider that the framework of internal controls and risk management is effective, although they acknowledge there are weaknesses in the estates management function, for which there is a clear action plan in place.

The opinion of the Head of Internal Audit was that there are significant weaknesses and non-compliance in the framework of governance, risk management and controls which put the achievement of organisational objectives at risk; that major improvements are required to improve the adequacy and effectiveness of governance, risk management and control.

This opinion has arisen from the weaknesses identified relating to statutory compliance monitoring in the Estates department. Corrective action is being taken to address the specific control weaknesses identified, as set out above, and this is being closely monitored by the Audit and Risk Committee. Management has demonstrated a clear commitment to responding to the internal audit recommendations, and has also extended the scope of review to include buildings fabric as well as infrastructure and systems, as the built environment is where risk to people is most likely to occur.

## Information security

During the year there were no centrally recorded incidents related to protected personal data and a report to the Information Commissioner's Office has not been required (2015–16: one breach, no report required).

## Records and Enquiries

### Corporate records

As a public body SMG has a responsibility to preserve organisational records, and this duty is fulfilled by a team that also handles collections records and enquiries. This year the team handled 293 general enquiries.

### Freedom of Information

SMG's statutory responsibility to respond to enquiries under the Freedom of Information Act and Data Protection Act was met by responding to 82 requests for information which focused on income-generating activities, cost-cutting, procurement, major events and other high-profile projects and activities.

## Compliance with the Corporate Governance Code

While the Board of Trustees has different responsibilities and is appointed in accordance with the relevant Acts, SMG confirms that SMG's governance processes comply with the intentions of 'Corporate governance in central government departments: Code of good practice 2011'. The Board is well balanced in composition, and supports the Director in leading SMG through strategic direction, monitoring activity and achievement of objectives, and ensuring good governance is in place. The work of the Board is well supported by strong committee management. Regular evaluation by the Board of its effectiveness, including the views of senior staff, ensures that the Board is reviewing its activities and processes to continue to improve its performance. The Trustee register of interests is available for inspection on the SMG website or on application to the Directorate at the Science Museum, Exhibition Road, London SW7 2DD.



## Membership of Trustee sub-committees, subsidiary company boards and advisory boards

Full memberships of the Trustee sub-committees, advisory boards and subsidiary company boards are set out below.

### Audit and Risk Committee

#### Chairman

Professor David Phoenix OBE (Trustee)

#### Members

Mr Matthew d'Ancona (Trustee)

Lord Faulkner of Worcester (Trustee), to 01.03.17

Mr Paul Feldman, from 08.04.16

Ms Lopa Patel MBE (Trustee), from 08.03.17

### Collections and Research Committee

#### Chairman

Professor Ludmilla Jordanova (Trustee)

#### Members

Dame Mary Archer DBE (Trustee), to 01.06.16

Dr Sarah Dry (Trustee), from 01.06.16

Mr Philippe Garner

Dr Jeff Hughes

Ms Sarah Staniforth

### Finance Committee

*(met concurrently with Board of Directors of SCMG Enterprises Ltd)*

#### Chairman

Ms Sharon Flood (Trustee)

#### Members

Mr James Bilefield, to 16.06.16

Professor Brian Cantor (Trustee), from 08.03.17

Mr Andreas J Goss (Trustee)

Mr Simon Linnett (Trustee), from 17.06.16

Mr Iain McIntosh, from 16.09.16

Dame Fiona Woolf CBE (Trustee), to 17.06.16

### Masterplan and Estate Committee

#### Co-Chairmen

Mr Steve McGuckin

Dame Fiona Woolf CBE (Trustee)

#### Members

Mr Nick Kirkbride

Mr Ken Shuttleworth

Mr Anton Valk CBE (Trustee)

### Remuneration Committee

#### Chairman

Lord Faulkner of Worcester (Trustee)

#### Members

Dame Mary Archer DBE (Trustee)

Mr Howard Covington (Trustee), to 06.04.16

Lord Grade of Yarmouth CBE (Trustee), from 01.06.16

### SCMG Enterprises Ltd Management Board (to 05.10.16)

#### Chairman

Mr Jonathan Newby (SMG Deputy Director and COO)

#### Members

Mr Charles Coates

Ms Sharon Flood (Trustee)

### Company information

#### SCMG Enterprises Ltd

#### Directors

Mr Ian Blatchford

Ms Jane Ellis

Mr Jonathan Newby

### Advisory Boards

#### Income Advisory Board (from 05.10.16)

#### Chairman

Lord Grade of Yarmouth CBE (Trustee)

#### Members

Mr Charles Coates

Ms Sharon Flood (Trustee)

#### Science Museum Advisory Board

#### Chairman

Mr Howard Covington (Trustee), until 06.04.16

The Rt Hon. the Lord Willetts (Trustee), from 07.04.16

#### Deputy Chair

Sir Paul Nurse, from 06.06.16

#### Members

Ms Jane Atkinson

Dr Sarah Caddick

Mr Matthew d'Ancona (Trustee)

Professor Dame Athene Donald DBE (Trustee), to 07.10.16

Dr Marcus du Sautoy

Professor Russell Foster CBE (Trustee), from 01.03.17

Mr Malcolm Garrett

Dr Lucie Green

Sir Paul Nurse

Dr Robert Parker, from 06.06.16

Professor Michael J Reiss

Professor Simon J Schaffer

Professor Molly Stevens

Professor Helen Storey MBE

### **Museum of Science and Industry Advisory Board**

#### **Chairman**

Professor Russell Foster CBE (Trustee), to 01.03.17  
Lord Faulkner of Worcester (Trustee), from 01.03.17

#### **Members**

Professor Colin Bailey, to 20.03.17  
Dr Maria Balshaw, to 28.02.17  
Mr Michael Emmerich, to 28.02.17  
Clare Hudson  
Mr Steve Johnson  
Sir Richard Leese CBE  
Professor Andy Miah  
The Rt Hon. Baroness Morris  
Dr Erinma Ochu  
Ms Lopa Patel MBE (Trustee), from 16.08.16  
Professor David Phoenix OBE (Trustee)  
Ms Sheona Southern, from 20.12.17  
Councillor Alex Williams, from 24.03.17

### **National Railway Museum Advisory Board**

#### **Chairman**

Mr Simon Linnett (Trustee)

#### **Members**

Mr Philip Benham  
Dr David Brown  
Lord Faulkner of Worcester (Trustee and Observer)  
Mr Bryan Gray CBE  
Professor Ludmilla Jordanova (Trustee)  
Dr Ellen McAdam  
Professor Clive Roberts  
Mr Adrian Shooter CBE  
Mr Anton Valk CBE (Trustee)  
Mr Christian Wolmar

### **National Science and Media Museum Advisory Board**

#### **Chairman**

Lord Grade of Yarmouth CBE (Trustee)

#### **Members**

Ms Samira Ahmed  
Ms Yvonne Baker  
Professor Brian Cantor (Trustee), from 01.06.16  
Baroness Margaret Eaton DBE  
Professor Elizabeth Edwards  
Ms Kersten England  
Professor Russell Foster CBE (Trustee), to 10.06.16  
Mr Philippe Garner  
Mrs Sally Joynson  
Professor Averil McDonald (Trustee), to 06.04.16  
Dr Annette Nabavi  
Ms Gillian Reynolds MBE

### **Railway Heritage Designation Advisory Board**

#### **Chairman**

Lord Faulkner of Worcester (Trustee)

#### **Members**

Mr Mike Ashworth  
Mr Christopher Austin OBE, to 01.04.16  
Dr David Brown  
Mr Ian Brown CBE  
Mr Malcolm Brown, to 27.06.16  
Mr Neil Butters  
Ms Liz Hallam Smith, from 01.04.16  
Ms Louise Innes  
Dr David Jenkins  
Mr Mike Lamport, from 01.04.16  
Mr Simon Linnett (Trustee and Observer)  
Professor Averil Macdonald (Trustee, to 06.04.16)  
Mr Peter Ovenstone  
Mr Jonathan Pepler, to 01.04.16  
Mr Andy Savage  
Ms Vicky Stretch  
Mr Anton Valk CBE (Trustee), from 06.04.16  
Mr Andrew McLean



**Dame Mary Archer**  
Chairman of the Board of Trustees

28 June 2017



**Mr Ian Blatchford**  
Accounting Officer and Director

28 June 2017

## 8. The Certificate and Report of the Comptroller and Auditor General to the Houses of Parliament

I certify that I have audited the financial statements of the Science Museum Group for the year ended 31 March 2017 under the Museums and Galleries Act 1992. The financial statements comprise: the Consolidated Statement of Financial Activities, the Consolidated and Museum Balance Sheets, the Consolidated Statement of Cash Flows and the related notes. These financial statements have been prepared under the accounting policies set out within them. I have also audited the information in the Remuneration Report that is described in that report as having been audited.

### Respective responsibilities of the Board of Trustees, Accounting Officer and auditor

As explained more fully in the Statement of Board of Trustees' and Director's Responsibilities, the Trustees and the Director as Accounting Officer are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. My responsibility is to audit, certify and report on the financial statements in accordance with the Museums and Galleries Act 1992. I conducted my audit in accordance with International Standards on Auditing (UK and Ireland). Those standards require me and my staff to comply with the Auditing Practices Board's Ethical Standards for Auditors.

### Scope of the audit of the financial statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Science Museum Group's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Science Museum Group; and the overall presentation of the financial statements. In addition I read all the financial and non-financial information in the Annual Report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by me in the course of performing the audit. If I become aware of any apparent material misstatements or inconsistencies I consider the implications for my certificate and report.

I am required to obtain evidence sufficient to give reasonable assurance that the expenditure and income recorded in the financial statements have been applied to the purposes intended by Parliament and the financial transactions recorded in the financial statements conform to the authorities which govern them.

### Opinion on regularity

In my opinion, in all material respects the expenditure and income recorded in the financial statements have been applied to the purposes intended by Parliament and the financial transactions recorded in the financial statements conform to the authorities which govern them.

### Opinion on financial statements

In my opinion:

- the financial statements give a true and fair view of the state of the Science Museum Group's affairs as at 31 March 2017 and of its net income/(expenditure) for the year then ended; and
- the financial statements have been properly prepared in accordance with the Museums and Galleries Act 1992 and Secretary of State directions issued thereunder with HM Treasury's consent.

### Opinion on other matters

In my opinion:

- the part of the Remuneration Report to be audited has been properly prepared in accordance with Secretary of State directions made with HM Treasury's consent under the Museums and Galleries Act 1992; and
- the information given in the Annual Report for the financial year for which the financial statements are prepared is consistent with the financial statements.

### Matters on which I report by exception

I have nothing to report in respect of the following matters which I report to you if, in my opinion:

- adequate accounting records have not been kept or returns adequate for my audit have not been received from branches not visited by my staff; or
- the financial statements and the part of the Remuneration Report to be audited are not in agreement with the accounting records and returns; or
- I have not received all of the information and explanations I require for my audit; or
- the Governance Statement does not reflect compliance with HM Treasury's guidance.

### Report

I have no observations to make on these financial statements.

### Sir Amyas C E Morse

Comptroller and Auditor General

3 July 2017

National Audit Office, 157-197 Buckingham Palace Road, Victoria, London SW1W 9SP

## 9. Financial Statements

### Consolidated Statement of Financial Activities for the year ended 31 March 2017

		2017					2016			
		Notes	Unrestricted £000	Restricted £000	Endowment £000	Total £000	Unrestricted £000	Restricted £000	Endowment £000	Total £000
All activities are continuing activities										
Income and endowments from:										
Donations and legacies										
Grant in Aid for SMG										
Grant in Aid for NCMME										
Other donations and legacies										
Charitable activities										
Lottery income										
Other charitable income										
Other trading activities										
Commercial activities										
Sponsorship										
Rental income										
Investments										
Other income										
Profit on sale of Post Office Building										
Total										
Expenditure on:										
Charitable activities										
Care for and research into collections										
Science education and communication										
Visitor services										
Grants awarded										
Raising funds										
Activities for generating funds										
Commercial activities										
Total										
Net gains / (losses) on investments										
Net income / (expenditure)										
Transfers between funds										
Other recognised gains/losses										
Gains/(losses) on revaluation of fixed assets										
Actuarial (losses)/gains on defined benefit pension scheme										
Net movement in funds										
RECONCILIATION OF FUNDS										
Total funds brought forward										
Total funds carried forward										

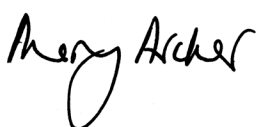
Notes 1 to 27 form part of these accounts.

## Consolidated Balance Sheets as at 31 March 2017

	Notes	2017 £000	2016 £000
<b>Fixed assets</b>			
Tangible assets	12	431,412	401,356
Heritage assets	13	26,246	23,435
Intangible assets	14	525	–
Investments	15	16,807	13,620
		<b>474,990</b>	<b>438,411</b>
<b>Current assets</b>			
Stock		1,212	1,309
Debtors	17	7,758	6,100
Short-term deposits		1,003	5,750
Cash and cash equivalents		23,118	28,163
		<b>33,091</b>	<b>41,322</b>
Creditors: amounts falling due within one year	18	(11,155)	(16,340)
Net current assets		21,936	24,982
Total assets less current liabilities		496,926	463,393
Creditors: amounts falling due after one year	18	(3,673)	(4,747)
Provisions for liabilities and charges	19	(141)	(128)
Net assets excluding pension liability		493,112	458,518
Defined benefit pensions liability	20	(5,883)	(3,222)
<b>Net assets</b>		<b>487,229</b>	<b>455,296</b>
Represented by:			
<b>Restricted funds</b>			
Grants and donations fund		2,562	1,120
Post Office Building sale fund		29,711	30,163
Capital reserves		190,998	182,113
	23	<b>223,271</b>	<b>213,396</b>
<b>Unrestricted funds</b>			
<b>Designated funds</b>			
Museum improvement fund		5,572	1,924
Collection purchases fund		–	217
Capital assets fund		27,607	26,845
Capital asset revaluation fund		235,010	214,558
		268,189	243,544
<b>MSI defined benefit pension scheme deficit fund</b>		(5,883)	(3,222)
<b>General funds</b>		1,574	1,500
<b>Total unrestricted funds</b>	23	<b>263,880</b>	<b>241,822</b>
<b>Endowment funds</b>	23	78	78
<b>Total Funds</b>		<b>487,229</b>	<b>455,296</b>

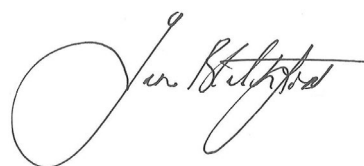
Notes 1 to 27 form part of these accounts.

Approved by the Board of Trustees and authorised for issue.



Dame Mary Archer  
Chairman of the Board of Trustees

28 June 2017



Mr Ian Blatchford  
Accounting Officer and Director

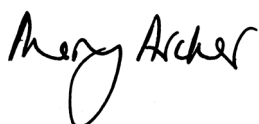
28 June 2017

## Museum Balance Sheets as at 31 March 2017

	Notes	2017 £000	2016 £000
<b>Fixed assets</b>			
Tangible assets	12	429,633	399,577
Heritage assets	13	26,246	23,435
Intangible assets	14	525	–
Investments	15/16	17,218	14,031
		<b>473,622</b>	<b>437,043</b>
<b>Current assets</b>			
Debtors	17	8,925	8,786
Short-term deposits		1,003	5,750
Cash and cash equivalents		20,881	22,896
		<b>30,809</b>	<b>37,432</b>
Creditors: amounts falling due within one year	18	(7,712)	(11,246)
Net current assets		23,097	26,186
Total assets less current liabilities		496,719	463,229
Creditors: amounts falling due after one year	18	(3,673)	(4,747)
Provisions for liabilities and charges	19	(141)	(128)
Net assets excluding pension liability		492,905	458,354
Defined benefit pensions liability	20	(5,883)	(3,222)
<b>Net assets</b>		<b>487,022</b>	<b>455,132</b>
Represented by:			
<b>Restricted funds</b>			
Grants and donations fund		2,562	1,120
Post Office Building sale fund		29,711	30,163
Capital assets fund		190,720	181,750
		<b>222,993</b>	<b>213,033</b>
<b>Unrestricted funds</b>			
<b>Designated funds</b>			
Museum improvement fund		5,572	1,924
Collection purchases fund		–	217
Capital assets fund		27,607	26,845
Capital asset revaluation fund		234,752	214,417
		267,931	243,403
<b>MSI defined benefit pension scheme deficit fund</b>		(5,883)	(3,222)
<b>General funds</b>		1,903	1,840
<b>Total unrestricted funds</b>		<b>263,951</b>	<b>242,021</b>
<b>Endowment funds</b>		78	78
<b>Total Funds</b>		<b>487,022</b>	<b>455,132</b>

Notes 1 to 27 form part of these accounts. All activities are continuing.

Approved by the Board of Trustees and authorised for issue.



Dame Mary Archer  
Chairman of the Board of Trustees

28 June 2017



Mr Ian Blatchford  
Accounting Officer and Director

28 June 2017

## Consolidated Statement of Cash Flows

	Notes	2017 £000	2016 £000
<b>Net cash from operating activities</b>	25	<b>10,136</b>	<b>12,317</b>
<b>Cash flows from investing activities</b>			
Proceeds from the sale of fixed assets		–	30,000
Purchases of fixed assets	12/14	(18,679)	(8,339)
Purchases of heritage assets	13	(1,169)	(134)
Proceeds from sales/(purchases) of investments	15	50	(13,000)
Proceeds from redemptions/(purchases) of short-term deposits	15	4,750	(5,750)
Interest received from investments		111	124
<b>Net cash provided by/(used in) investing activities</b>		<b>(14,937)</b>	<b>2,901</b>
<b>Cash flows from financing activities</b>			
Repayment of bank loans		–	(81)
Interest paid		–	(4)
Cash inflows from/(repayment of) DCMS loan funding	18	(244)	4,349
<b>Net cash provided by/(used in) financing activities</b>		<b>(244)</b>	<b>4,264</b>
<b>Change in cash and cash equivalents in reporting period</b>		<b>(5,045)</b>	<b>19,482</b>
Cash and cash equivalents at beginning of reporting period		28,163	8,681
<b>Cash and cash equivalents at end of reporting period</b>		<b>23,118</b>	<b>28,163</b>

Notes 1 to 27 form part of these accounts.

## Notes to the consolidated account for the year ended 31 March 2017

### 1 Basis of preparation and consolidation

#### 1.1 Basis of preparation

The Science Museum Group (SMG, the Group) is a non-departmental public body, sponsored by the Department for Culture, Media and Sport (DCMS). SMG is an exempt charity as listed in Part 3 of the Charities Act 2011.

The Group's financial statements have been prepared in compliance with applicable United Kingdom accounting standards, including Financial Reporting Standard 102 – 'The Financial Reporting Standard applicable in the United Kingdom and Republic of Ireland' (FRS 102).

The Group's financial statements have also been prepared in compliance with 'Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland' (FRS 102, effective 1 January 2015, the Charities SORP) and the Financial Reporting Manual for 2016–17 (FReM) issued by HM Treasury. The accounting policies contained in the FReM follow UK generally accepted accounting practice (UK GAAP) to the extent that it is meaningful and appropriate to the public sector.

The financial statements have been prepared under the historic cost convention as modified by the revaluation of certain fixed assets. The financial statements are prepared in sterling, which is the functional currency of the Group and rounded to the nearest £000.

#### Going concern

After reviewing the Group's forecasts and projections, the Directors have a reasonable expectation that SMG has adequate resources to continue into operational existence for the foreseeable future. The Group therefore continues to adopt the going concern basis in preparing its financial statements.

#### 1.2 Basis of consolidation

Consolidated accounts have been prepared which include the Museum and its subsidiary company, SCMG Enterprises Ltd. The consolidation is on a line-by-line basis with the recharges between the Museum and the trading subsidiaries eliminated from the Statement of Financial Activities. Amounts owed and owing between the entities have been eliminated from the consolidated balance sheet.

### 2 Principal accounting policies

#### 2.1 Revenue recognition

##### Grant and donation income

Grant and donation income, including Lottery income, is recognised as income when the Group is entitled to the funds, when the receipt is probable and when the value of income can be measured reliably.

##### Grant in Aid income

Grant in Aid from DCMS is recorded in the Statement of Financial Activities and recorded in the year in which it is received. Except where it has been allocated for a specific purpose, it is disclosed as unrestricted income.

##### Exchange transactions

Revenue from contractual arrangements is measured at the fair value of the consideration received, excluding discounts, rebates, VAT and other sales taxes or duty. The following criteria must also be met before revenue is recognised:

**Sale of goods** – Revenue from the sale of goods is recognised when the significant risks and rewards of ownership of the goods have passed to the buyer, usually on dispatch of the goods, when the amount of revenue can be measured reliably, it is probable that the economic benefits associated with the transaction will flow to the entity and the costs incurred or to be incurred in respect of the transaction can be measured reliably.

**Exhibition sponsorship income** – The Group recognises the costs and income of a charged exhibition in the year(s) in which the exhibition takes place. Income received for an exhibition taking place in a future period is treated as deferred exhibition income and costs treated as deferred exhibition costs. Both are included in deferred income and prepayments respectively on the balance sheet.

All other income is accounted for on a receivable basis.

#### 2.2 Expenditure

Expenditure is classified under the principal categories of charitable and other expenditure rather than the type of expense, in order to provide more useful information to users of financial statements. An analysis of resources expended is set out in Note 10.

Costs of raising funds include fundraising and publicity costs incurred in seeking voluntary contributions to the Group.

Charitable expenditure comprises direct expenditure, including direct staff costs attributable to the activity, and, where costs cannot be directly attributed, an allocation of indirect costs on a basis consistent with the use of the resources as set out in Note 10. The costs of publicising the museums are included in the cost category 'Science education and communication'.

Governance costs, which are included in the support costs allocated to charitable activities, are the costs associated with the governance arrangements and the strategic management of the charity's activities. These costs include internal and external audit, legal advice for Trustees and costs associated with constitutional and statutory requirements.



## 2.3 Fixed assets valuation and depreciation

Fixed assets are defined as assets costing £5,000 or more with a useful life of greater than one year.

All property assets are subject to quinquennial valuations in accordance with the RICS Appraisal and Valuation Manual. These revaluations are supplemented by independent desktop valuations in the third year of the five-year cycle. As part of the revaluation process asset lives are evaluated and re-estimated; the restated expected useful life is then applied to the original historic cost, and to any previous revaluation movements, for the purposes of calculating depreciation. These revaluations are supplemented by annual indexation adjustments in relevant property cost categories.

Galleries and exhibitions are not revalued but the lives of these assets are reviewed annually to reflect their true value. For other asset categories, where the assets have short useful lives or low values, SMG adopts a depreciated historic cost basis as a proxy for fair value. Fixed assets are reviewed annually for evidence of impairment.

Depreciation is provided on all tangible fixed assets, other than freehold land and collection items, at rates calculated to write off the cost or valuation, less the estimated residual value, on a straight line basis for each asset over its expected useful life as follows:

Asset category	Expected useful life in years
Freehold, leasehold and residential buildings	5–50
Plant and machinery	3–30
Galleries and exhibitions	5–15
Information technology and audio-visual equipment	2–25
Fixtures and fittings	2–30

A full year of depreciation is charged in the year of capitalisation and none in the year of disposal.

## 2.4 Heritage assets

Heritage assets acquired since April 2001 are reported in the balance sheet at cost. Donated assets with an estimated value greater than £5,000 are reported at an internally generated valuation for which reliance is placed on the professional knowledge and expertise of the museums' in-house curatorial staff.

For the collections that existed at March 2001, the Board of Trustees is of the opinion that valuation information cannot be obtained at a cost commensurate with the benefits to users of the financial statements, so a valuation approach is not practicable and SMG has adopted a non-recognition approach.

Expenditure which is required to preserve or prevent further deterioration of individual collection items is recognised in the Statement of Financial Activities when it is incurred. Purchases of items at a price less than £5,000 for the collection are charged to the Statement of Financial Activities in the year of acquisition.

Heritage assets are not subject to depreciation or revaluation and are reviewed at the reporting date for impairment.

## 2.5 Intangible assets

Intangible assets with an economic life of more than one year and value greater than £5,000 are capitalised. All intangible assets are measured at cost. Costs relating to assets developed internally are capitalised in accordance with the requirements of FRS 102.

Amortisation is provided on all intangible assets, at rates calculated to write off the value of each asset evenly over its expected useful life, with no residual value assumed. Amortisation is charged to the business function responsible for the acquisition of the assets; where the charge forms part of costs apportioned over charitable purposes, the basis of apportionment is as explained in note 10.

Asset category	Expected useful life
Purchased software licences	Licence period
Databases and developed software	2–5 years

A full year of amortisation is charged in the year of capitalisation and none in the year of disposal. Impairment reviews are carried out at the end of each reporting period in accordance with FRS 102 to ensure that the carrying values of the assets do not exceed their recoverable amounts.

## 2.6 Stock

Stock is stated at the lower of the cost, using the weighted average method, and the price less costs to complete and sell.

## 2.7 Leases

Costs relating to operating leases are charged to the Statement of Financial Activities over the life of the lease. There are no assets held under finance leases.

## 2.8 Employee benefits

### PCSPS pension scheme

Present and past employees are covered by the provisions of the Principal Civil Service Pension Scheme (PCSPS), which is a contributory and unfunded scheme. Although the scheme is a defined benefit scheme, liability for payment of future benefits is a charge to the PCSPS. SMG and other bodies covered by the PCSPS meet the cost of pension cover provided for the staff they employ by payment of charges calculated on an accruing basis.

There is a separate scheme statement for the PCSPS as a whole. Pension contributions are paid at rates determined from time to time by the Government Actuary and advised by the Treasury.

### GMPS pension scheme

SMG is an admitting body of the Greater Manchester Pension Fund, which is a defined benefit scheme. The expected cost of providing pensions, as calculated periodically by professionally qualified actuaries, is charged to the Statement of Financial Activities so as to spread the cost over the service lives of the employees in the scheme, in such a way that the pension cost is a substantially level percentage of current and expected future pensionable payroll.

The pension costs are assessed on the advice of a professional qualified actuary using the projected unit method. The scheme is funded in advance by contributions from its members, including the company and its employees, at rates assessed by the scheme actuary in regular funding reviews.

Pension scheme assets are valued at market value at the balance sheet date. The pension scheme deficit relating to MSI employees is recognised in full on the balance sheet because SMG is able to identify its share of the deficit.

The Group recognises the cost of the defined benefit plan as follows:

- The change in the net defined benefit pension liability arising from employee service rendered during the reporting period in profit or loss
- Net interest on the net defined benefit pension liability during the reporting period in profit or loss
- The cost of plan introductions, benefit changes, curtailments and settlements in profit or loss
- Remeasurement of the net defined benefit liability in other comprehensive income

Interest income on plan assets is a component of the return on plan assets, and is determined by multiplying the fair value of the plan assets by the discount rate.

The difference between the interest income on plan assets and the return on plan assets is included in the remeasurement of the net defined benefit liability.

Remeasurement of the net defined benefit liability comprises:

- Actuarial gains and losses
- The return on plan assets, excluding amounts included in net interest on the net defined benefit liability

#### SCMG Enterprises Ltd pension schemes

SCMG Enterprises Ltd operates two defined contribution pension schemes, the assets of which are held separately in an independently administered fund. Contributions are charged to the Statement of Financial Activities as they become payable, in accordance with the rules of the schemes.

#### Provision for annual leave

The Group recognises a provision for annual leave accrued by employees as a result of services rendered in the current period, and which employees are entitled to carry forward and use within the next 12 months. The provision is measured at the salary cost payable for the period of absence.

## 2.9 Early retirement scheme

The Museum operates an Early Retirement and Severance Scheme, which gives retirement benefits on redundancy terms to certain qualifying employees. These benefits conform to the rules of the Principal Civil Service Pension Scheme. The Museum pays annual compensation payments to those employees retired under the Early Retirement and Severance Scheme.

The total forecast annual compensation payments liability up to normal retiring age in respect of each employee is charged to the Statement of Financial Activities in the year in which the employee takes early retirement. The early retirement provision is recalculated annually, informed by updated information. Funds are released from the provision annually to fund compensation payments made in the year (Note 19).

## 2.10 Taxation

SMG is exempt from corporation tax on its charitable activities under the provisions of the Corporation Tax Act 2010.

For SCMG Enterprises Ltd provision is made at current rates of taxation deferred in respect of all material timing differences except to the extent that, in the opinion of the Directors, there is reasonable probability that the liability will not arise in the foreseeable future.

SCMG Enterprises Ltd undertakes to Gift Aid profits, to the extent that the Directors of the subsidiary judge that they do not need to be retained in the business.

## 2.11 Investments

The value of the Museum's investment in its trading subsidiary is disclosed at cost.

Funds identified as surplus to working capital in the short or longer term are invested to maintain their value over time. SMG has investments in equity and fixed-income funds, and places funds on short-term deposit, as explained in Note 15. These investments are actively traded and are held at fair value, as reported by the Group's fund managers.

## 2.12 Financial instruments

Financial investments comprise investments in equity and fixed-income funds which are measured at fair value. Changes in fair value are recognised in profit or loss, in accordance with FRS 102, Section 11. The nature and extent of the risks associated with the financial instruments are disclosed in accordance with FRS 102. Other financial instruments (trade debtors and creditors, cash and cash equivalents) are initially recognised at fair value (i.e. cost) plus or minus material transaction costs directly attributable to their acquisition or issue; and subsequently measured at cost, less impairment where material.

## 2.13 Cash and cash equivalents

Cash and cash equivalents include cash at bank and in hand. Current investments that comprise highly liquid interest-bearing securities with maturities of three months or less are included in cash equivalents.

## 2.14 Foreign currencies

Transactions in foreign currencies are recorded at the rate ruling at the time of the transaction and, at year end, balances are restated at the year-end rate. All exchange differences are taken to the Statement of Financial Activities.

## 2.15 Provisions

Provisions are made when an obligation exists for a future liability in respect of a past event and where the amount of the obligation can be reliably estimated. Discount rates provided by the Treasury are used in current value calculations for long-term commitments. Details of the discount rates used are provided in Note 19.

### 3 Significant judgements and estimates

#### 3.1 Judgements and key sources of estimation uncertainty

The preparation of the financial statements requires management to make judgments, estimates and assumptions that affect the amounts reported for assets and liabilities as at the balance sheet date and the amounts reported for revenues and expenses during the year. However, the nature of estimation means that actual outcomes could differ from those estimates.

The following judgments (apart from those involving estimates) have had the most significant effect on amounts recognised in the financial statements.

##### Revenue recognition

The timing of revenue recognition on long-term sponsorship contracts depends on the assessed stage of completion of contract activity at the balance sheet date. For exhibitions and galleries that are not completed, sponsorship is deferred until opening. At 31 March, £1.472m of income had been deferred, primarily in relation to multi-year learning projects (2016: £2.576m, primarily in relation to multi-year learning projects, the new interactive galleries in London and Bradford and the *Mathematics* gallery at the Science Museum). These amounts are shown in current liabilities.

##### Property, plant and equipment (PPE)

Property, plant and equipment represents a significant proportion of the asset base and therefore the estimates and assumptions made to determine their carrying value and related depreciation are critical to the reported financial position and expenditure. Revaluation of PPE requires management to apply professionally supplied indices to existing fixed-asset balances in those years when formal valuations are not required. In 2016–17 the sites were subject to desktop revaluation by professional surveyors, as outlined in Note 12, resulting in an uplift of £27.573m. In 2015–16 the application of indexation resulted in an upward revaluation of the Group's PPE of £42.779m.

## 4 Museum Statement of Financial Activities

	Notes	2017 £000	2016 £000
<b>Income and endowments from:</b>			
Donations and legacies			
Grant in Aid for SMG	[A]	40,934	37,969
Grant in Aid for NCMME		2,409	2,409
Gift Aid from subsidiary, SCMG Enterprises Ltd		8,143	4,491
Other donations and legacies		6,125	8,384
Charitable activities			
Lottery income		465	453
Other charitable income		10,400	4,887
Other trading activities			
Sponsorship		62	147
Rental income		1,074	472
Investments		504	136
Other income		2,200	5,356
Profit on sale of Post Office Building		–	19,649
<b>Total</b>		<b>72,316</b>	<b>84,353</b>
<b>Expenditure on:</b>			
Charitable activities			
Care for and research into collections	[B]	16,494	15,845
Science education and communication		34,201	30,681
Visitor services		13,908	12,633
Grants awarded		–	6,716
Raising funds			
Activities for generating funds		2,682	2,576
Commercial activities		915	–
<b>Total</b>		<b>68,200</b>	<b>68,451</b>
Net gains/(losses) on investments		2,866	623
<b>Net income/(expenditure)</b>		<b>6,982</b>	<b>16,525</b>
<b>Transfers between funds</b>		<b>–</b>	<b>–</b>
<b>Other recognised gains / (losses)</b>			
Gains/(losses) on revaluation of fixed assets		27,456	42,719
Actuarial (losses)/gains on defined benefit pension liability		(2,548)	1,322
<b>Net movement in funds</b>		<b>31,890</b>	<b>60,566</b>
<b>Reconciliation of funds:</b>			
Total funds brought forward		455,132	394,566
<b>Total funds carried forward</b>		<b>487,022</b>	<b>455,132</b>

[A] Capital Grant in Aid received from DCMS was £5,876k (2015-16: £3,001k), of which £4,551k was the core capital allocation, £700k was for the MSI Special Exhibitions Gallery and £625k for major projects. (2015-16: £2,501k, £500k and nil respectively).

[B] The £2,409k (2015-16: £2,409k) grant from SMG to the National Coal Mining Museum of England (NCMME) is categorised as 'care for and research into the collections'.

## 5 Other donations and legacies (consolidated)

	Unres. £000	2017 Res. £000	Unres. £000	2016 Res. £000
Value of donated goods and services	–	244	–	250
Corporate donations	43	37	2	4
Individual donations	3,254	165	3,531	637
Legacies	18	117	1	251
	<b>3,315</b>	<b>563</b>	<b>3,534</b>	<b>1,142</b>
Value of donated heritage assets	–	2,247	–	3,708
	<b>3,315</b>	<b>2,810</b>	<b>3,534</b>	<b>4,850</b>

## 6 Other charitable income (consolidated)

	Unres. £000	2017 Res. £000	Unres. £000	2016 Res. £000
Grant income, excluding Lottery grants	328	7,440	326	1,762
European Union grants	–	257	–	295
UK Government bodies	–	511	–	621
Ticket income	1,864	–	1,883	–
	<b>2,192</b>	<b>8,208</b>	<b>2,209</b>	<b>2,678</b>

The figures above exclude grants received from the Heritage Lottery Fund (HLF).

## 7 Income from investments

Excluding gains and losses on the Group's investment portfolio detailed in Note 15, consolidated interest income of £61k (2015–16: £121k) was earned from investing surplus funds.

## 8 Other income

Other income arises from self-generated income, conference and educational events, locomotive hire and cloakroom fees. In the previous year, the figure included a material compensation payment in relation to the development of the Ordsall Chord railway in Manchester, which will have a permanent impact on the heritage site of the Museum of Science and Industry.

## 9 Net income / (expenditure)

Net income/(expenditure) is stated after charging:

	2017 £000	2016 £000
Auditors' remuneration: Comptroller and Auditor General	55	58
Auditors' remuneration: subsidiary company audit fee	36	37
Internal audit fees	76	75
Lease rentals on land and buildings	11	21
Lease rentals on equipment	46	69
Lease rentals on vehicles	30	34
Movement on bad debt provision	[69]	[6]
No fees (2015–16: nil) were paid to the Group's auditors for non-audit services.		

## 10 Total expenditure

### Analysis by functional purpose

	Direct costs	Support Costs [A]	Total 2017	Total 2016
Care for and research into collections	9,849	6,645	<b>16,494</b>	15,845
Science education and communication	25,291	8,910	<b>34,201</b>	30,681
Visitor services	7,651	6,257	<b>13,908</b>	12,633
Grants awarded for charitable activities	–	–	–	6,716
<b>Charitable activities</b>	<b>42,791</b>	<b>21,812</b>	<b>64,603</b>	<b>65,875</b>
Generating donations and legacies	2,417	630	<b>3,047</b>	2,576
Trading activities	13,825	–	<b>13,825</b>	14,639
<b>Total expenditure</b>	<b>59,033</b>	<b>22,442</b>	<b>81,475</b>	<b>83,090</b>

[A] Support costs include the depreciation charged on support activities.

### Support cost allocation

	Management	Finance	HR	ICT	Estates	Governance	Total 2017	Total 2016
Care for and research into collections	194	201	328	506	5,314	102	<b>6,645</b>	5,501
Science education and communication	524	541	908	1,348	5,314	275	<b>8,910</b>	7,786
Visitor services	161	166	262	270	5,314	84	<b>6,257</b>	5,363
<b>Charitable activities</b>	<b>879</b>	<b>908</b>	<b>1,498</b>	<b>2,124</b>	<b>15,942</b>	<b>461</b>	<b>21,812</b>	<b>18,650</b>
Generating donations and legacies	43	45	124	395	–	23	<b>630</b>	789
<b>Total support costs</b>	<b>922</b>	<b>953</b>	<b>1,622</b>	<b>2,519</b>	<b>15,942</b>	<b>484</b>	<b>22,442</b>	<b>19,439</b>

Management, governance and finance (after adjustment for internal recharges) costs were allocated in proportion to the direct costs in each area. HR costs were allocated in proportion to the number of full-time equivalent staff in each area, ICT costs in proportion to the number of PCs/terminals used by each area. Estates costs were allocated equally across the three charitable activities.

Governance costs comprise support for Trustee committee activity and related governance work, internal and external audit, and resources required to produce statutory accounts.

#### Trustees

The Chairman and Trustees (listed in the Annual Report) received no remuneration for their services, but travel expenses totalling £6,658 were paid to 12 Trustees (2015–16: £12,177 paid to 17 Trustees). Amounts paid to third parties in the financial year relating to Trustee activities totalled £17,416.

## 11 Staff costs

	2017 £'000	2016 £'000
Wages and salaries	24,262	22,572
Social security costs	2,241	1,869
Pension costs	1,848	1,975
Agency staff	855	496
Early retirement and redundancy	89	730
	<b>29,295</b>	<b>27,642</b>

Included in the above is £1,114k (2015–16: £778k) in respect of staff costs which have been capitalised. Staff costs are charged to unrestricted or restricted funds on the basis of the activities that they perform.

### Civil Service Pensions

Pension benefits are provided through the Civil Service pension arrangements. The Principal Civil Service Pension Scheme (PCSPS) and the Civil Servant and Other Pension Scheme (CSOPS) – known as ‘alpha’ – are unfunded multi-employer defined benefit schemes but SMG is unable to identify its share of the underlying assets and liabilities. The scheme actuary valued the scheme as at 31 March 2012. Details can be found in the resource accounts of the Cabinet Office: Civil Superannuation ([www.civilservice.gov.uk/pensions](http://www.civilservice.gov.uk/pensions)).

For 2016–17, employer’s contributions of £1,192,333 were payable to the PCSPS (2015–16: £1,361,470) at one of four rates in the range 20.0–24.5% of pensionable earnings, based on salary bands. The scheme actuary reviews employer contributions usually every four years following a full scheme valuation. The contribution rates are set to meet the cost of the benefits accruing during 2016–17 to be paid when the member retires and not the benefits paid during this period to existing pensioners.

Employees can opt to open a partnership pension account, a stakeholder pension with an employer contribution. Employer’s contributions of £10,160 (2015–16: £10,700) were paid to one or more of the panel of three appointed stakeholder pension providers. Employer contributions are age-related and range from 8 to 14.75% of pensionable earnings from 1 October 2015. Employers also match employee contributions up to 3% of pensionable earnings. In addition, employer contributions of £312 (2015–16: £379), 0.5% of pensionable pay from 1 October 2015, were payable to the PCSPS to cover the cost of the future provision of lump-sum benefits on death in service or ill-health retirement of these employees.

None of the contributions due to the partnership pension providers at the balance sheet date were unpaid and none had been prepaid.

### SCMG Enterprises Ltd pension schemes

This is a contracted-in group money-purchase scheme with optional contracted-out pensions to which SCMG Enterprises Ltd contributes 7% and the employees 5%. Employees not opting to join the scheme are auto-enrolled in a stakeholder pension scheme. SCMG Enterprises Ltd pension contributions of £357,248 were paid in the year (2015–16: £303,526).

### GMPF pension scheme

Details of employer’s contributions in respect of the Greater Manchester Pension Fund in respect of employees of the Museum of Science and Industry are contained in Note 20.

## Employee numbers, analysed by activity

	Permanent Contract		Other Staff		Total	
	2017	2016	2017	2016	2017	2016
Care for and research into collections	120	118	1	2	121	120
Science education and communication	329	314	7	5	336	319
Visitor services	93	82	4	10	97	92
Generating income and sponsorship	45	38	1	2	46	40
Trading activities	132	125	5	7	137	132
Sport activities	115	99	13	-	128	99
<b>Total</b>	<b>834</b>	<b>776</b>	<b>31</b>	<b>26</b>	<b>865</b>	<b>802</b>

The average headcount excluding agency and contract staff was 1,134.

## Employees receiving remuneration over £60,000

	2017	2016
60,001–70,000	5	8
70,001–80,000	4	3
80,001–90,000	2	3
90,001–100,000	4	3
100,001–110,000	3	4
110,001–120,000	1	-
130,001–140,000	-	1
140,001–150,000	-	1
150,001–160,000	1	-
170,001–180,000	1	1
	<b>21</b>	<b>24</b>

The figures above exclude pension costs. Contributions were paid to a defined contribution scheme on behalf of 10 (2016: 19) employees. For 10 (2016: 5) of the staff included in this table retirement benefits accrued under a defined benefit scheme.

For 8 (2016: 8) of these employees total remuneration includes BUPA contributions.

### Key management personnel

The total remuneration of the key management personnel, Ian Blatchford and Jonathan Newby, was £382,438 (2015–16: £410,935) (see Remuneration Report).

If employer contributions to defined benefit pension schemes were included rather than the single figure for pension benefits given in the Remuneration Report, the total remuneration would be £371,747 (2015–16: £353,739).

### Exit packages

Details of exit packages agreed during the year are given in the Remuneration Report.



## 12 Tangible fixed assets

### Consolidated assets

	Land and buildings £'000	Plant and machinery £'000	Galleries and exhibitions £'000	Fixtures and fittings £'000	ICT and AV £'000	Assets under construction £'000	Total £'000
<b>Current cost</b>							
At 1 April 2016	323,565	84,692	25,792	4,242	1,389	5,214	444,894
Additions	5,563	304	6,847	224	1,090	4,238	18,266
Disposals	–	(199)	(4,008)	(417)	(226)	(78)	(4,928)
Transfers	–	68	2,881	52	–	(3,046)	(45)
Revaluation	(1,380)	301	–	–	–	–	(1,079)
At 31 March 2017	327,748	85,166	31,512	4,101	2,253	6,328	457,108
<b>Depreciation</b>							
At 1 April 2016	12,030	16,349	12,310	2,147	702	–	43,538
Charge for the year	7,256	4,387	2,765	532	545	–	15,485
Revaluation	(17,845)	(10,807)	–	–	–	–	(28,652)
Disposals	–	(199)	(3,833)	(417)	(226)	–	(4,675)
At 31 March 2017	1,441	9,730	11,242	2,262	1,021	–	25,696
<b>Net book value</b>							
<b>At 31 March 2017</b>	<b>326,307</b>	<b>75,436</b>	<b>20,270</b>	<b>1,839</b>	<b>1,232</b>	<b>6,328</b>	<b>431,412</b>
At 31 March 2016	311,535	68,343	13,482	2,095	687	5,214	401,356

### Museum assets

	Land and buildings £'000	Plant and machinery £'000	Galleries and exhibitions £'000	Fixtures and fittings £'000	ICT and AV £'000	Assets under construction £'000	Total £'000
<b>Current cost</b>							
At 1 April 2016	322,131	82,880	25,598	3,955	1,389	5,214	441,167
Additions	5,563	304	6,847	224	1,090	4,238	18,266
Disposals	–	(199)	(4,008)	(417)	(226)	(78)	(4,928)
Transfers	–	67	2,881	53	–	(3,046)	(45)
Revaluation	(1,497)	301	–	–	–	–	(1,196)
At 31 March 2017	326,197	83,353	31,318	3,815	2,253	6,328	453,264
<b>Depreciation</b>							
At 1 April 2016	12,012	14,900	12,117	1,860	701	–	41,590
Charge for the year	7,223	4,302	2,765	532	546	–	15,368
Revaluation	(17,845)	(10,807)	–	–	–	–	(28,652)
Disposals	–	(199)	(3,833)	(417)	(226)	–	(4,675)
At 31 March 2017	1,390	8,196	11,049	1,975	1,021	–	23,631
<b>Net book value</b>							
<b>At 31 March 2017</b>	<b>324,807</b>	<b>75,157</b>	<b>20,269</b>	<b>1,840</b>	<b>1,232</b>	<b>6,328</b>	<b>429,633</b>
At 31 March 2016	310,119	67,980	13,481	2,095	688	5,214	399,577

## Land and buildings

The Science Museum was transferred from the Secretary of State for the Environment on 10 August 2001. Wroughton Airfield was transferred from the Secretary of State for Defence to the Science Museum on 27 July 1997. The buildings and land relating to the National Railway Museum were transferred from the Secretary of State for the Environment on 1 August 1997. The Royal Naval Air Yard was purchased from the Ministry of Defence on 31 March 2000. When the Museum of Science and Industry became part of the Science Museum Group on 31 January 2012 the Manchester estate was transferred at fair value as determined by an external valuation.

Blythe House is currently occupied by the British Museum, the Science Museum and the Victoria and Albert Museum. The freehold title is held by the Office of the Deputy Prime Minister, although ministerial responsibility for all museum estate issues has subsequently transferred to the Secretary of State for Culture, Media and Sport. As a long-standing tenant and beneficial user SMG shows a one-third share of the value, as established by chartered surveyors Gerald Eve LLP at 31 March 2014 and subsequently revalued for indexation, on its balance sheet.

## Revaluation of land and buildings

A full valuation in accordance with the RICS Appraisal and Valuation Manual was carried out by chartered surveyors Gerald Eve LLP as at 31 March 2014. A desktop revaluation was carried out at 31 March 2017 based on professionally prepared price indices and inspection of the London and Manchester sites by Gerald Eve.

Land and buildings at SM in London, MSI in Manchester, NRM in York and Shildon, and NSMM in Bradford were valued on the basis of depreciated replacement cost. The SM sites at Wroughton and Blythe House are included at existing use valuations. The Concrete Works, an undeveloped site adjacent to NRM in York, owned by SCMG Enterprises Ltd, is also held at an existing use valuation.

The historic cost of the land and buildings and certain plant and machinery is not known.

## 13 Heritage Assets

### 13.1 Overview of the collections

#### Science Museum, London

The Science Museum holds the nation's pre-eminent collections in the fields of science, technology, engineering and medicine. The collections have their roots in those of the South Kensington Museum, founded in 1857, augmented by those of the Patent Office Museum, the Special Loan Collection of Scientific Instruments and the Wellcome Trust.

The diverse collections comprise scientific demonstration instruments from leading makers of the 19th century and other historical artefacts often acquired from major collectors, examples of contemporary instrumentation and laboratory science, non-Western astronomy and elementary mathematics. The Industrial Revolution and postindustrial eras are represented by examples of the work of central figures such as James Watt, Henry Maudslay, Richard Arkwright, and Marc and Isambard Brunel. The development of mechanical, electrical and electronic communications technologies from the mid 19th century to the present is also fully represented and the museum holds the only surviving Fleet Street rotary newspaper press. The development of computing is charted from the Babbage machine, via electromechanical equipment, to early business and home computers and contemporary technologies. Space technologies from the 1960s onward are well represented. The museum also holds the collection of the Farnborough Museum of the Royal Aircraft Establishment.

Additionally, there are significant holdings of prints, drawings, paintings, printed ephemera, technical drawings, maps, photographs, postal items, sculpture and contemporary art, and in the library and archive collections comprising important collections of rare books and documents, which span the full history and development of science and technology.

#### Museum of Science and Industry, Manchester

The museum was founded in the mid-1960s when Manchester's traditional industries, particularly engineering and textile production, were undergoing major changes. The collections reflect Manchester's pre-eminence as the world's first industrial city, and the city's role in an international exchange of goods, people and ideas. They demonstrate the role of Manchester and northwest England as a nexus of industrialisation. As a whole the collections also reflect the effects of science, technology, industrialisation, urbanisation and deindustrialisation on the lives of inventors, designers, workers and consumers.

At the core of the museum is the historic site itself, a very rare example of the development of a working station and railway yard over 150 years. Several of the city's internationally known scientific endeavours and personalities are represented in the object collections, from the pioneering work of John Dalton and James Joule, to graphene, Manchester's latest global scientific export.

Manchester's role as the centre of the Lancashire textile industry is also covered, alongside power for the Industrial Revolution, and the development of precision engineering and machine tools that laid the foundations for a new age of mass production. The collections cover the technologies that affected life in industrial Manchester, including electricity, gas, water supply and sanitation. Communications and information technologies form a major theme, ranging from early photographic material through to ground-breaking calculating and computing machines. Bringing the story up to date, material from the broadcasting, music and animation industries represents the growth of creative industries in the postindustrial city.

## National Railway Museum, York and Shildon

These collections have evolved over the last 150 years, from the amalgamation of the railway collections of the Science Museum with those of the former railway museum at York and railway items from the British Transport Commission's Museum of British Transport, Clapham. They have expanded since the opening of the National Railway Museum in 1975, through collecting from the modern railway industry and private individuals.

NRM curates its collection in five main subject areas: the origins of railways, the impact of railways on our lives, the impact of railways on our world, the impact of railways on our culture, and the science and technology of railways.

## National Science and Media Museum, Bradford

Founded in 1983 as the National Museum of Photography, Film & Television, the National Science and Media Museum inherited collections from its parent institution, the Science Museum.

The collection currently numbers in the region of 3.5 million individual objects. These range from one-off individual donations of ephemeral material such as instruction manuals, to family photographic portraits, to the most significant collection of American television receivers in the UK, to the Kodak Museum collection, comprising photographs and equipment dating back to the very beginnings of photography.

NSMM curates its collection in three main areas: photography (encompassing photographic technology and photographs) cinematography, and television.

## 13.2 Acquisitions, management, preservation and disposals

### Acquisitions

Acquisitions are made in accordance with the collecting policies agreed for each museum by the Board of Trustees and may be by purchase or donation. Further details of policies can be found at [www.sciencemuseumgroup.ac.uk](http://www.sciencemuseumgroup.ac.uk).

### Collections management and preservation

SMG exists, under the terms of the National Heritage Act 1983, to develop, manage and make its collection useful for the public. The Act requires it to preserve, care for and add to the objects in its collection, to exhibit them to the public and to make them available for study and research, and to promote the public's enjoyment and understanding of science and technology and of the development of those subjects.

SMG follows the principle that it will share its collection widely. This objective is mainly delivered through public programmes of displays, events, publications and websites. Objects from the collection are either displayed in its museums, or made available via loans to third parties, or else they are in store for future use and research.

The collection is displayed and stored according to SMG standards for the prevention of material deterioration; these are based on international standards and current research in alignment with PAS 198:2012 'Specification for managing environmental conditions for cultural collections'.

Library and archive storage facilities and exhibitions are based on and informed by the requirements of BS 5454, PAS 198 and the National Archives Standard for Record Repositories.

Collections management and care are regularly reviewed by SMG to ensure adherence to these standards.

SMG will:

- Keep all objects in conditions in which deterioration is minimised.
- Undertake conservation so that objects may be made accessible to audiences.
- Manage hazards in the collection with clear and effective systems to ensure public, staff and object safety.

SMG museums demonstrate their commitment to managing collections effectively as Arts Council England accredited museums, and by following the SPECTRUM standard and PAS 197:2009, the code of practice for cultural collections management.

Records proving title or relating to the history of objects in the collections are managed in accordance with the requirements of the Public Records Act and SMG's status as a designated Place of Deposit.

Information relating to the history and management of objects in the collection is held within the collections management system. This constitutes the primary record of the collection and is subject to regular review.

Information relating to SMG's library and archive collections is held within local management systems. It is made accessible to the public subject to relevant legislation.

SMG will have secure title to all objects in the collection, hold basic data on every object so that it can be uniquely identified and the collection audited regularly, and ensure records relating to objects in the collection are enhanced and made available to audiences.

Further details of policies adopted by SMG in the management of its collections can be found at <http://group.sciencemuseum.org.uk/policy/group-policies>.

### Disposals

SMG actively manages its collection in order to ensure its long-term sustainability, significance and safety. The Group's museums have a long-term purpose, and except for sound curatorial (including collections management) reasons, there is a strong presumption against the disposal of any item in the collection. However, the breadth of the collection, and the ways in which it has been developed, mean that SMG is currently holding material that is duplicate, unsuitable or unusable.

Disposals will be guided by the National Heritage Act 1983 (as amended) and the Museums Association's Code of Ethics (as amended). SMG will dispose of material that is unsuitable for retention in the collection and can be disposed of without detriment to the interests of students or other members of the public.

Material may be unsuitable for retention if:

- It is a duplicate of another accessioned item in the collection, beyond the number of similar items that would reasonably be of interest and necessary for future use.
- It is more suitable for transfer to the collection of another national museum, other accredited museum or other organisation in the public domain that can improve access to or the use, care or context of the material.
- It is otherwise unsuitable for the collection, because it falls outside the scope and content of the SMG collection.

- It is useless for the purposes of the collection because it is in a poor or hazardous condition by reason of damage, physical deterioration or infestation by destructive organisms. All material that is in such poor condition as to render it unusable will be destroyed to remove the risk of contamination or infestation.

SMG recognises that financially motivated disposal risks damaging public confidence in museums and the principle that collections should not normally be regarded as financially negotiable assets.

SMG accepts the principle that sound curatorial reasons for disposal must be established before consideration is given to the disposal of any item in the collection. SMG will not undertake disposal principally for financial reasons, except in exceptional circumstances, when it can be demonstrated that:

- It will significantly improve the long-term public benefit derived from the remaining collection.
- It is not to generate short-term revenue (for example to meet a budget deficit).
- It is as a last resort after other sources of funding have been thoroughly explored.
- Extensive prior consultation with sector bodies has been undertaken.
- The material under consideration lies outside the museums' established core collection.

The proceeds of disposal through sale, if this exceptional circumstance arises, will be applied solely and directly for the benefit of the museums' collection. Money raised will be restricted to the long-term sustainability, use and development of the collection.

### 13.3 Heritage assets on the balance sheet

In the opinion of the Trustees, reliable information on cost or value is not available for SMG's collections prior to 2001. This is owing to the lack of information on purchase cost, the lack of comparable market values, the diverse nature of the objects and the volume of items held.

In the Trustees' opinion, conventional valuation approaches lack sufficient reliability and any valuation is likely to incur significant cost that is likely to be onerous. Even if valuations could be obtained this would not be at a cost commensurate with any benefits to SMG management, curatorial staff, the public or users of the financial statements.

For this reason the collections assembled up to the end of the 20th century (before 2001), large proportions of which were gifted to the museums at nil cost and are incomparable in nature, are not recognised as assets in SMG's balance sheet.

Prior to 1 April 2011 the Museum of Science and Industry did not recognise heritage assets in the balance sheet. The small number of objects acquired between 2002 and 2011 are of low value and it is not considered a sensible use of resources to attempt to determine their appropriate capital value.

### Summary of heritage assets on balance sheet

	Purchased		Donated		Total	
	£'000	No.	£'000	No.	£'000	No.
2002–12	7,850	40	6,991	34	14,841	74
2012–13	391	5	2,835	26	3,226	31
2013–14	7	1	672	12	679	13
2014–15	111	7	131	6	242	13
2015–16	134	8	3,708	13	3,842	21
2016–17	1,169	12	2,247	21	3,416	33
<b>At 31 March 2017</b>	<b>9,662</b>	<b>73</b>	<b>16,584</b>	<b>112</b>	<b>26,246</b>	<b>185</b>

### Analysis of heritage assets

	Basis of capitalisation		
	Cost £'000	Valuation £'000	Total £'000
Carrying amount at the beginning of the reporting period	8,493	14,942	23,435
Additions	1,169	2,247	3,416
Disposals	-	(605)	(605)
<b>Carrying amount at the reporting date</b>	<b>9,662</b>	<b>16,584</b>	<b>26,246</b>

### Summary analysis of heritage asset transactions

	2017 £'000	2016 £'000	2015 £'000	2014 £'000	2013 £'000
Purchases	1,169	134	111	7	391
Donations	2,247	3,708	131	672	2,835
<b>At 31 March 2017</b>	<b>3,416</b>	<b>3,842</b>	<b>242</b>	<b>679</b>	<b>3,226</b>

Disposals\* 605 – – – –

\*During 2016–17, it was identified that four collection items had been disposed of in previous years but not removed from the heritage asset register. This was corrected in the adjustment line above.

### 13.4 Collection subcategories

	Estimated number of items at 31/03/2017	Number of items capitalised at 31/03/2017
<b>Science Museum</b>		
Scientific instruments	25,851	14
Commerce and Industry	43,657	51
Medical	19,059	8
Art	7,307	6
Coins and medals	903	1
Library and archive collections	707,173	8
<b>Museum of Science and Industry</b>		
Science	2,859	3
Industry	5,369	5
Transport	1,351	–
Communications	2,842	–
Energy	5,013	–
Community history	7,127	–
<b>National Railway Museum</b>		
Railway origins	5,166	1
Locomotives and rolling stock	20,297	20
Railway life and work	18,114	1
Railway image and sound collections	4,340	–
Railways and culture	2,962,244	2
Library and archive collections	2,976	3
Handling collections	226	–
<b>National Science and Media Museum</b>		
Photographic collections	10,801	31
Printed materials and ephemera	352	–
Cinematography	2,943	4
Photographic technology	11,325	–
Television and new media	2,856	25
Library and archive collections	3,485,075	2
	<b>7,355,226</b>	<b>185</b>

N.B. The estimated number of total items includes individual figures for collections of objects which are split into parts, e.g. archive or photographic collections. The number of capitalised items includes those collections as one object with a combined total value.

### 14 Intangible assets (consolidated and Museum)

All intangible assets represent capitalised database development costs.

	Total £000
<b>Current cost</b>	
At 1 April 2016	–
Additions	597
Transfers	45
At 31 March 2017	642
<b>Amortisation</b>	
At 1 April 2016	–
Charge for the year	(117)
At 31 March 2017	(117)
<b>Net book value</b>	
<b>At 31 March 2017</b>	<b>525</b>
At 31 March 2016	–

### 15 Investments

In accordance with the investment policy, the following investments were made during the year:

#### Fixed asset investments

	2017 £'000	2016 £'000
International equities	7,515	5,651
UK equities	6,543	5,432
Sterling-denominated corporate bonds	2,749	2,537
	<b>16,807</b>	<b>13,620</b>

All investments are stated at fair value.

	2017 £'000	2016 £'000
Opening balance	13,620	–
Purchases	–	13,000
Accumulated, reinvested dividends <sup>[A]</sup>	378	–
Disposals	(50)	–
Unrealised net investment income <sup>[B]</sup>	2,859	620
	<b>16,807</b>	<b>13,620</b>

#### Current assets

	2017 £'000	2016 £'000
Cash fund investments of short duration	7,598	11,253
Cash holdings	15,520	16,910
	23,118	28,163
Short-term cash deposits	1,003	5,750
	<b>24,121</b>	<b>33,913</b>

[A] Interest of £35k (2015–16: £3k) received from the cash-fund investments and reclaimed Income Tax of £13k are shown in the £426k income from investments on the Statement of Financial Activities.

[B] The funds in which these investments are held also contributed £7k to the net investment income of £2,866k shown on the SOFA through upward revaluation.

## 16 Trading subsidiary

### Subsidiary company

The Board of Trustees of the Science Museum owns the single share which is the entire issued share capital of SCMG Enterprises Ltd, a company registered in England and Wales. The company's principal activities are retailing, catering, corporate hire, corporate partnership, temporary exhibitions and interactive production, and providing a range of services to the museums.

The carrying value of SMG's investment in SCMG Enterprises Ltd, which is held at historic cost in the parent's balance sheet, is £411k (2015–16: £411k).

### SCMG Enterprises Profit and Loss

	2016–17			2015–16 <i>restated</i>		
	SCMGE £'000	Intra-Group adjustment £'000	Total £'000	SCMGE £'000	Intra-Group adjustment £'000	Total £'000
Turnover	16,190	–	16,190	17,106	–	17,106
Cost of sales	(5,788)	–	(5,788)	(6,420)	–	(6,420)
Gross profit	10,402	–	10,402	10,686	–	10,686
Administrative expenses	(21,872)	14,386	(7,486)	(19,780)	11,633	(8,147)
Rental income	108	–	108	320	–	320
Other operating income	19,535	(14,167)	5,368	13,284	(11,442)	1,842
Operating profit	8,173	219	8,392	4,510	191	4,701
Interest receivable	–	–	–	4	–	4
Interest payable	(18)	17	(1)	(23)	19	(4)
Profit on ordinary activities	8,155	236	8,391	4,491	210	4,701

### SCMG Enterprises Balance Sheet

	2016–17			2015–16 <i>restated</i>		
	SCMGE £'000	Intra-Group adjustment £'000	Total £'000	SCMGE £'000	Intra-Group adjustment £'000	Total £'000
Fixed assets	1,778	–	1,778	1,719	60	1,779
Stocks	1,212	–	1,212	1,309	–	1,309
Debtors	4,389	–	4,389	2,941	–	2,941
Cash at bank and in hand	2,237	–	2,237	5,267	–	5,267
Creditors within one year	(7,706)	3,684	(4,022)	(9,428)	4,334	(5,094)
	1,910	3,684	5,594	1,808	4,394	6,202
Creditors over one year	(1,293)	1,293	–	(1,293)	1,293	–
Provisions	(277)	277	–	(363)	363	–
	<b>340</b>	<b>5,254</b>	<b>5,594</b>	<b>152</b>	<b>6,050</b>	<b>6,202</b>
Share capital	–	–	–	–	–	–
Profit and loss account	83	4,977	5,060	71	5,627	5,698
Capital reserves	–	277	277	–	363	363
Revaluation reserve	257	–	257	81	60	141
	<b>340</b>	<b>5,254</b>	<b>5,594</b>	<b>152</b>	<b>6,050</b>	<b>6,202</b>

## 17 Debtors

	Group 2017 £'000	Group 2016 £'000	Museum 2017 £'000	Museum 2016 £'000
<i>Current debtors</i>				
Trade debtors	1,825	3,262	347	1,010
Provision for bad debts	(83)	(14)	(31)	(2)
Other debtors	232	207	135	103
Prepayments and accrued income	3,337	1,692	1,991	1,095
Taxation and social security	927	953	1,506	953
Intercompany current account	–	–	3,684	4,334
<i>Total current debtors</i>	<b>6,238</b>	<b>6,100</b>	<b>7,632</b>	<b>7,493</b>
<i>Non-current debtors</i>				
Accrued income	1,520	–	–	–
Loans to subsidiary	–	–	1,293	1,293
<i>Total non-current debtors</i>	<b>1,520</b>	<b>–</b>	<b>1,293</b>	<b>1,293</b>
<b>Total debtors</b>	<b>7,758</b>	<b>6,100</b>	<b>8,925</b>	<b>8,786</b>

### Ageing of debtors

Analysis of the ageing of the non-impaired trade debtors is shown below:

	Trade debtors £'000	Less than 30 days £'000	30-60 days old £'000	More than 60 days £'000
As at 31 March 2017	1,742	728	552	462
As at 31 March 2016	3,248	1,762	580	906

### Credit risk

SMG's principal exposure to credit risk is primarily attributable to trade debtors. The amounts presented in the balance sheet are net of provisions for doubtful receivables estimated by the Group's management based on prior experience and their assessment of the current economic value.

### Movement in the provision for bad and doubtful debts relating to trade debtors

	2017 £'000	2016 £'000
Provision at start of financial year	14	20
Utilised in the year	(15)	(17)
Increase in provision	95	17
Bad debts recovered	(9)	–
Reversal of provision	(2)	(6)
<b>Balance at 31 March</b>	<b>83</b>	<b>14</b>

### Loans to trading subsidiary

Purpose of loan	2017 £'000	2016 £'000	Interest payable
Purchase of land at Leeman Road, York.	1,293	1,293	1% above Bank of England base rate
	<b>1,293</b>	<b>1,293</b>	

The loan held by the trading subsidiary is repayable on demand and secured by a floating charge on all of the subsidiary's assets. The Museum has confirmed that it will not call for repayment of the loan until at the earliest 30 June 2018 and then subject to the ability of the subsidiary to make repayments.

## 18 Creditors

### Amounts falling due within one year

	<b>Group</b> <b>2017</b> £'000	Group 2016 £'000	<b>Museum</b> <b>2017</b> £'000	Museum 2016 £'000
Trade creditors	<b>3,151</b>	2,796	<b>2,672</b>	2,360
Other creditors	<b>105</b>	144	<b>19</b>	19
Grant due to Science Museum Foundation	<b>–</b>	3,716	<b>–</b>	3,716
Accruals and deferred income	<b>6,260</b>	8,699	<b>3,785</b>	4,758
Taxation and social security	<b>546</b>	741	<b>143</b>	149
Loans from DCMS	<b>1,093</b>	244	<b>1,093</b>	244
	<b>11,155</b>	16,340	<b>7,712</b>	11,246

### Amounts falling due after one year

	<b>Group</b> <b>2017</b> £'000	Group 2016 £'000	<b>Museum</b> <b>2017</b> £'000	Museum 2016 £'000
Deferred income (advance rent)	<b>33</b>	83	<b>33</b>	83
Loans from DCMS	<b>3,640</b>	4,664	<b>3,640</b>	4,664
	<b>3,673</b>	4,747	<b>3,673</b>	4,747

The loan balance from DCMS comprises three loans for commercial activities at SM, NRM and NSMM. The total agreed facility is £8.535m, of which £4.849m has been drawn down to date. The loans are repayable in equal instalments over periods of three to ten years, with the first repayment on 1 April 2016 and the final on 1 April 2026. Interest on the outstanding principal is payable annually and is calculated for two of the loans at fixed rates and for the other at the relevant National Loans Fund Interest Rate prevailing at the date of drawdown. The interest rates payable on the loans range from 0.84% to 1.68% depending on the period of the loan and the date on which the agreement was entered into.

Deferred income balances comprise rental income received in advance and recognised over the lease term, income received in advance for events and rental contracts, and sponsorship for exhibitions or galleries not yet open. The table below summarised the movement in the year.

	<b>Group</b> <b>2017</b> £'000	Group 2016 £'000	<b>Museum</b> <b>2017</b> £'000	Museum 2016 £'000
<i>Current</i>				
Opening balance	<b>3,742</b>	2,014	<b>435</b>	303
Additions	<b>1,469</b>	3,541	<b>256</b>	385
Reclassification from non-current	<b>50</b>	50	<b>50</b>	50
Released to income	<b>(2,954)</b>	(1,863)	<b>(428)</b>	(303)
<i>Total current deferred income</i>	<b>2,307</b>	3,742	<b>313</b>	435
<i>Non-current</i>				
Opening balance	<b>83</b>	133	<b>83</b>	133
Additions	<b>–</b>	–	<b>–</b>	–
Reclassification to current	<b>(50)</b>	(50)	<b>(50)</b>	(50)
<i>Total non-current deferred income</i>	<b>33</b>	83	<b>33</b>	83
<b>Total deferred income</b>	<b>2,340</b>	<b>3,825</b>	<b>346</b>	<b>518</b>



## 19 Provisions (consolidated and Museum)

2017	Dilapidations £'000	Restructuring costs £'000	Added years pensions £'000	Total £'000
Balance brought forward	43	26	59	128
Utilised	–	(26)	(7)	(33)
Reversed	–	–	–	–
Provision made in year	–	43	3	46
Balance carried forward	43	43	55	141
Due within one year	43	43	7	93
Due after one year	–	–	48	48

### Dilapidations

The balance represents the best estimate of the cost of making good dilapidations or other damage to properties that that group previously leased for collections storage, but has now exited.

### Restructuring costs

The balance reflects the best estimate of costs arising from two (2015–16: three) change programmes being undertaken by the Group at the year end.

### Added-years pension costs

In accordance with FRS 102 the sum provided is equivalent to the present value of expenditures expected to be required to settle the obligation to pay for the added-years benefits gifted to two former MSI employees. The amount of the provision anticipates annual increases of 2.20% (2015–16: 2.20%). In accordance with Treasury guidance the discount factor applied is 0.24% (2015–16: 1.37%).

## 20 Pensions

For details of the Civil Service and SCMG Enterprises Ltd pension schemes, see Note 11.

### Greater Manchester Pension Fund

SMG is an admitting body of the Greater Manchester Pension Fund ('the fund') which is part of the Local Government Pension Scheme ('the LGPS'). A defined benefit statutory scheme, administered in accordance with the Local Government Pension Scheme Regulations, it was contracted out of the State Second Pension until 6 April 2016. The last formal completed triennial valuation of the fund was carried out at 31 March 2013. The results of this valuation have been projected forward to 31 March 2017 using approximate methods. Results schedules were prepared by qualified independent actuaries Hymans Robertson LLP for 31 March 2017. The actuarial calculations are based on individual membership data submitted at 31 March 2016 for the purposes of the formal funding valuation at that date.

### Major assumptions

The major assumptions used by the actuary were:

	2017	2016
Rate of increase in salaries	3.2%	3.5%
Rate of increase in pension	2.4%	2.2%
Discount rate	2.5%	3.5%

Mortality assumptions are identical to those used in the previous accounting period. The average life expectancies at age 65 are summarised below:

	Males	Females
Current pensioners	21.5 years	24.1 years
Future pensioners *	23.7 years	26.2 years

\* Figures assume members aged 45 as at the last formal valuation date.

### Fair value of employer's assets

	2017		2016	
	Fair value £'000	Proportion	Fair value £'000	Proportion
Equities	9,944	75%	8,317	73%
Bonds	2,121	16%	1,937	17%
Property	663	5%	684	6%
Cash	530	4%	455	4%
<b>Total of net assets</b>	<b>13,258</b>	<b>100%</b>	<b>11,393</b>	<b>100%</b>

### Balance sheet liability

	£'000	£'000
	2017	2016
Fair value of employer's assets	13,258	11,393
Present value of scheme liabilities	(19,141)	(14,615)
<b>Net pension liability recognised on the balance sheet</b>	<b>(5,883)</b>	<b>(3,222)</b>

## Statement of Financial Activities

	2017 £'000	2016 £'000
Service cost		
Current service cost	219	241
Past service cost (including curtailments)	–	40
Total service cost	219	281
Net interest		
Interest income on plan assets	(396)	(369)
Interest cost on defined benefit obligation	509	509
Total net interest	113	140
<b>Total defined benefit cost recognised in Statement of Financial Activities</b>	<b>332</b>	<b>421</b>

## Other comprehensive income

	2017 £'000	2016 £'000
Re-measurements		
Changes in demographic assumptions	25	–
Changes in financial assumptions	(4,548)	1,533
Other experience	353	226
Return on assets excluding amounts included in net interest	1,622	(437)
<b>Total re-measurements recognised in other comprehensive income</b>	<b>(2,548)</b>	<b>1,322</b>

## Movement in scheme obligation during the year

	2017 £'000	2016 £'000
Opening defined benefit obligation	14,615	15,920
Current service cost	219	241
Past service cost (including curtailments)	–	40
Interest on scheme liabilities	509	509
Contributions by scheme participants	11	57
Benefits paid	(383)	(393)
Actuarial losses/(gains)	4,170	(1,759)
<b>Closing defined benefit obligation</b>	<b>19,141</b>	<b>14,615</b>

## Changes in the fair value of scheme assets during the year

	2017 £'000	2016 £'000
Opening fair value of employer's assets	11,393	11,594
Interest income on plan assets	396	369
Contributions by members	11	57
Contributions by employer	219	203
Benefits paid	(383)	(393)
Return on assets, excluding amounts in net interest income	1,622	(437)
<b>Closing fair value of employer's assets</b>	<b>13,258</b>	<b>11,393</b>

## Projected pension expense for the year to 31 March 2018

	£'000	% of pay
Projected current service cost	303	30.9
Past service cost including curtailments	–	–
Effect of settlements	–	–
Interest income on plan assets	(333)	(33.9)
Interest on obligation	477	48.6
<b>Total</b>	<b>447</b>	<b>45.6</b>

The estimate of the employer's contributions in the year to 31 March 2018 is approximately £539k.

## Sensitivities

The sensitivities regarding the principal assumptions used to measure the scheme liabilities are set out below:

	Approximate % increase to the employer liability	Approximate monetary amount £'000
0.5% decrease in real discount rate	13	2,541
0.5% increase in salary increase rate	2	362
0.5% increase in pension increase rate	11	2,142
One-year increase in member life expectancy	3–5	–

## 21 Commitments under operating leases

At the balance sheet date total minimum lease payments due under operating leases were as follows.

	Land and buildings		Vehicles		Equipment		Total	
	2017	<i>restated</i> 2016	2017	2016	2017	2016	2017	<i>restated</i> 2016
Leases which expire:								
Within one year	11	11	39	22	43	42	93	75
In the second to fifth year	44	44	55	26	2	–	101	70
After more than five years	478	489	–	–	–	–	478	489
	<b>533</b>	<b>544</b>	<b>94</b>	<b>48</b>	<b>45</b>	<b>42</b>	<b>672</b>	<b>634</b>

## 22 Capital commitments

At the balance sheet date contracted commitments totalled £1.91m for the Medicine Galleries (£983k), new lecture theatre (£329k) and new events space (£594k) at SM. At 31 March 2016, £5.76m existed for development of *Mathematics: The Winton Gallery* (£2.239m), *Wonderlab: The Statoil Gallery* (£2.500m) and the Medicine Galleries (£388k) at the SM, and for other capital projects across the Group.

## 23 Statement of funds (consolidated)

2016–17	Brought forward	Income	Expenditure	Investment income	Net income/ (exp.)	Revaluation	Transfers	Carried forward
<b>Restricted funds</b>								
Grants and donations fund	1,120	17,606	(5,007)	–	<b>12,599</b>	–	(11,157)	<b>2,562</b>
Collections purchase fund	–	2,378	–	–	<b>2,378</b>	–	(2,378)	<b>–</b>
Post Office Building sale fund	30,163	425	(523)	2,866	<b>2,768</b>	–	(3,220)	<b>29,711</b>
Capital asset fund	182,113	50	(6,587)	–	<b>(6,537)</b>	–	15,422	<b>190,998</b>
	<b>213,396</b>	<b>20,459</b>	<b>(12,117)</b>	<b>2,866</b>	<b>11,208</b>	<b>–</b>	<b>(1,333)</b>	<b>223,271</b>
<b>Endowment fund</b>	<b>78</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>78</b>
<b>Unrestricted funds</b>								
<i>Designated funds</i>								
Museum Improvement fund	1,924	–	(337)	–	<b>(337)</b>	–	3,985	<b>5,572</b>
Collections purchase fund	217	–	–	–	<b>–</b>	–	(217)	<b>–</b>
Capital asset fund	26,845	–	(2,719)	–	<b>(2,719)</b>	–	3,481	<b>27,607</b>
Capital asset revaluation fund	214,558	–	(7,121)	–	<b>(7,121)</b>	27,573	–	<b>235,010</b>
	243,544	–	(10,177)	–	<b>(10,177)</b>	27,573	7,249	<b>268,189</b>
<b>MSI defined benefit pension scheme deficit fund</b>	<b>(3,222)</b>	<b>–</b>	<b>(332)</b>	<b>–</b>	<b>(332)</b>	<b>(2,548)</b>	<b>219</b>	<b>(5,883)</b>
<b>General funds</b>	<b>1,500</b>	<b>65,058</b>	<b>(58,849)</b>	<b>–</b>	<b>6,209</b>	<b>–</b>	<b>(6,135)</b>	<b>1,574</b>
	<b>241,822</b>	<b>65,058</b>	<b>(69,358)</b>	<b>–</b>	<b>(4,300)</b>	<b>25,025</b>	<b>1,333</b>	<b>263,880</b>
<b>Total funds</b>	<b>455,296</b>	<b>85,517</b>	<b>(81,475)</b>	<b>2,866</b>	<b>6,908</b>	<b>25,025</b>	<b>–</b>	<b>487,229</b>

Fund	Description
Grants and donations fund	Funds where donors or grant-makers have specified the uses to which they may be put or have placed certain restrictions on the use of the funds.
Collection purchases funds	Amounts restricted (in the restricted fund) or designated (in the unrestricted fund) for purchase of collection items.
Post Office Building sale fund	Disposal proceeds over which there are specific conditions relating to their application to certain capital projects in London, Bradford and Wroughton.
Capital assets funds	Funds relating to capital assets on the balance sheet which are fully employed in the operation of SMG and are not available for any other purpose.
Capital asset revaluation fund	Unrestricted funds representing the revaluation of capital assets.
Museum Improvement fund	Unrestricted funds set aside by the Trustees for specific projects, both capital and revenue, principally expected to be expended within the next year.
MSI defined benefit pension scheme deficit fund	Funds related to the MSI defined benefit pension liability.
General funds	Expendable unrestricted funds.

## Transfers of funds

	Restricted				Unrestricted							Total unrestricted	Total
	Grants and donations fund	Collection purchases fund	Post Office Building sale fund	Capital assets fund	Total restricted	Museum Improvement fund	Collection purchases fund	Capital assets fund	Capital asset revaluation fund	MSI defined benefit pension scheme deficit fund	General funds		
Collection fund income	-	-	-	-	-	-	125	-	-	-	(125)	-	-
Purchase of fixed assets	(11,132)	-	(3,220)	13,044	(1,308)	-	-	2,443	-	-	(1,135)	1,308	-
Purchase of heritage assets	-	(2,378)	-	2,378	-	-	(342)	1,038	-	-	(696)	-	-
Designation of funds for future expenditure	-	-	-	-	-	3,985	-	-	-	-	(3,985)	-	-
Release of spent restricted funds	(25)	-	-	-	(25)	-	-	-	-	-	25	25	-
Net pension costs incurred	-	-	-	-	-	-	-	-	-	219	(219)	-	-
After more than five years	478	489	-	-	-	-	478	489	489	489	489	489	489
<b>Net transfers of funds</b>	<b>(11,157)</b>	<b>(2,378)</b>	<b>(3,220)</b>	<b>15,422</b>	<b>(1,333)</b>	<b>3,985</b>	<b>(217)</b>	<b>3,481</b>	<b>-</b>	<b>219</b>	<b>(6,135)</b>	<b>1,333</b>	<b>-</b>

Transfer	Description
Collection fund income	Designation of £125k for collections purchases in 2016–17.
Purchase of fixed assets	Fixed assets purchased from restricted and unrestricted funds, including the Post Office Building fund – the transfer from restricted to unrestricted represents a change in the funding mix for specific assets.
Purchase of heritage assets	Heritage assets purchased from restricted and unrestricted funds.
Designation of funds for future expenditure	Designation of funds for future expenditure on capital infrastructure improvement works and on construction of an events space at SM in London.
Release of spent restricted funds	Accounting entries where expenditure was charged in previous periods to unrestricted funding instead of restricted funds.
Net pension costs incurred	Transfer of costs incurred in relation to the defined benefit pension scheme to the specific reserve.

## Analysis of group net assets between funds:

Fund balances at 31 March 2017 are represented by:

	Restricted £'000	Endowment £'000	Unrestricted £'000	Total £'000
Tangible assets	166,759	-	264,653	431,412
Heritage assets	24,322	-	1,924	26,246
Intangible assets	-	-	525	525
Investments	16,807	-	-	16,807
Current assets	15,572	78	17,441	33,091
Current liabilities	(156)	-	(10,999)	(11,155)
Long-term creditors	(33)	-	(3,640)	(3,673)
Provisions	-	-	(141)	(141)
Pensions liability	-	-	(5,883)	(5,883)
<b>Total of net assets</b>	<b>223,271</b>	<b>78</b>	<b>263,880</b>	<b>487,229</b>

## 24 Financial instruments

### Liquidity risk

Approximately 50% of SMG's income is provided by Grant in Aid from DCMS and 27% of SMG's income is from a wide range of commercial activities. As the cash requirements of the charity are met largely through Grant in Aid, financial instruments have less potential for creating risk than they would in a non-public-sector body of a similar size. The majority of financial instruments relate to contracts to buy non-financial items in line with SMG's purchase and usage requirements and SMG is therefore exposed to little credit, liquidity or market risk.

The foreign currency risk is negligible as substantially all income and expenditure and material assets and liabilities are denominated in sterling.

### Financial assets by category

	Note	2017 £'000	2016 £'000
Fixed asset investments	15	16,807	13,620
Trade debtors	17	1,742	3,248
Other debtors	17	232	207
Short-term deposits	15	1,003	5,750
Cash and cash equivalents	15	23,118	28,163

The above figures exclude statutory debtors which relate to VAT due from HM Revenue & Customs. None of the financial assets have been subject to impairment other than trade debtors in respect of provision for bad debts.

### Financial liabilities by category

	Note	2017 £'000	2016 £'000
Trade creditors	18	3,151	2,796
Other creditors	18	105	3,860
Accruals	18	4,475	4,958
Museum loan (from DCMS)	18	4,733	4,908

The above figures exclude statutory creditors, which relate to Tax and Social Security due to HM Revenue & Customs. With the exception of the DCMS loan to SMG, other liabilities are non-interest-bearing.

## 25 Cash flow information

### Reconciliation of net income/expenditure to net cash inflow from operating activities

	Note	2017 £'000	2016 £'000
Net income/(expenditure)		6,908	16,372
Adjustments for:			
– Net gains on investments	15	(2,866)	(623)
– Investment income	7/15	(487)	(121)
– Interest payable		69	63
– Release of deferred income	18	(50)	(50)
– Depreciation charge for the year	12/14	15,602	13,326
– Write-off of fixed assets		253	–
– Disposals of heritage assets		605	–
– Profit on sale of Post Office Building		–	(19,649)
– Donated fixed and heritage assets	13	(2,247)	(3,708)
– Net movement on provisions	19	13	(225)
– Greater Manchester Pension Scheme costs	20	113	218
– Decrease/(increase) in stocks		97	(245)
– Decrease/(increase) in debtors	17	(1,658)	42
– Increase/(decrease) in creditors <sup>[1]</sup>	18	(6,216)	6,917
<b>Net cash from operating activities</b>		<b>10,136</b>	<b>12,317</b>

[1] Excluding bank loans and capital accruals.

### Analysis of changes in net funds

	Notes	2016 £'000	Cash flows £'000	2017 £'000
Cash at bank and in hand	15	28,163	(5,045)	23,118
Current asset investments	15	5,750	(4,747)	1,003
Museum loan (from DCMS)	18	(4,908)	175	(4,733)
<b>Net funds</b>		<b>29,005</b>	<b>(9,617)</b>	<b>19,388</b>



## 26 Related-party transactions

The Science Museum Group is an executive non-departmental public body whose parent body is the Department for Culture, Media and Sport (DCMS). DCMS is regarded as a related party. During the year, SMG had a number of material transactions in the normal course of business with DCMS and with other entities for which DCMS is regarded as the parent department. This includes the Heritage Lottery Fund, which provided grant funding to SMG during the course of the year.

The Director of SMG acts as Accounting Officer for the National Coal Mining Museum for England, and SMG provided grant funding to that museum during the year.

SMG also entered into other material related-party transactions during the course of the year with bodies connected to Trustees, as follows:

Related party	Nature of relationship	Income £'000	Expenditure £'000	Outstanding balances due from / (due to) at year end £'000	Nature of transaction
British Science Association	Professor Dame Athene Donald served as President and Lord Willetts as Chair of the related party during the year.	41	1	–	Service charges for rental of office space in London.
King's College, London	Lord Willetts and Professor Dave Phoenix were visiting professors at the related party during the year.	1	–	–	Catering for object lessons day.
MathWorks Ltd	A relative of Professor Ludmilla Jordanova was employed by the related party during the year.	502	–	–	Sponsorship of a new gallery; event fees.
Network Rail	Ms Sharon Flood served as remunerated director of the related party during the year.	459	27	–	Rental of runway at Wroughton airfield; maintenance of and connection to UK railway network.
Resolution Foundation	Lord Willetts served as Executive Chair of the related party during the year.	1	–	–	Venue hire fees.
The Royal Society	Lord Willetts served as a member of the President's Advisory Committee of the related party during the year.	16	–	3	Catering and production fees for Scientists Meet the Media event; training fees.
Science Museum Foundation	Mr Andreas Goss served as a trustee of the related party during the year.	5,003	–	–	Grant funding and administration fee.
ThyssenKrupp Elevator UK Ltd	Mr Andreas Goss served as executive board member of ThyssenKrupp Steel Europe AG, parent of the related party, during the year.	–	172	–	Maintenance services.
University of Bradford	Professor Brian Cantor served as Vice-Chancellor of the related party during the year.	20	–	–	Sponsorship of events at the National Science and Media Museum.

## **27 Post balance sheet events**

The Annual Report and Accounts 2016–17 were authorised for issue by the Trustees and Accounting Officer on the date they were certified by the Comptroller and Auditor General.

On 24 April 2017 the Group completed an agreement to dispose of surplus land in York to the Homes and Communities Agency (HCA), but there are conditions attached to the agreement which enable either party to exercise different buy-back options under which the land and buildings would be transferred back to SMG and the consideration returned. Legal title has passed to the HCA, but the transaction will not complete until the conditions attached to buy-back provisions, under which the transaction can be reversed by either party, have been met. At this point the final transaction value will be determined. £5.73m of consideration is expected to be received in the financial year 2017–18.



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