



# 95 years of the History of Science Museum

In 1683 the building on Broad Street, Oxford, which is now the History of Science Museum, opened as the home of a new institution, the Ashmolean Museum. Created to house the collection of Elias Ashmole, it was much more than just a display of objects. It became the centre of Oxford science in the late 1600s, with teaching in the entrance gallery and a chemical laboratory and anatomical theatre in the basement. By the time the Ashmolean Museum was built, experimental science was already flourishing in Oxford: in particular, Robert Boyle and Robert Hooke carried out their famous research on the air pump in a house on the High Street. Boyle and Hooke were leading lights in the early days of the Royal Society of London, founded in 1660.

In 1924 the Museum of the History of Science was founded in the same building. Like Noah's Ark, it was intended as a place of safety, preserving objects from the threat of destruction. Robert Gunther and Lewis Evans together were the driving force behind the new museum. Evans donated his collection of historic scientific instruments to the University in 1924. Gunther campaigned for them to be displayed in the building then known as the Old Ashmolean. A well-connected individual with an encyclopaedic knowledge of the history of science, Gunther rescued many historic scientific artefacts and transferred them to the Museum.

Lewis Evans's collection provided the nucleus around which the Museum grew. Subsequent acquisitions have come especially from Oxford colleges and departments as well as major donors such as J A Billmeir (1957), C F C Beeson (1966), the Royal Microscopical Society (1968) and the Marconi Corporation (2004). The Museum now holds an unrivalled collection of early astronomical and mathematical instruments from Europe and the Islamic world and an exceptionally rich set of microscopes. Complementing the wide range of objects are manuscripts and early printed books, early photographs, portraits of scientists and scientific prints.

“  
**The History of Science Museum must ensure it remains relevant, outward-looking and sustainable for the future.**”

## Vision 2024: Shining a light on the heritage of science

In today's world, where expectations of a museum have changed beyond recognition, it is not enough to have a breath-taking world-class collection. The History of Science Museum must ensure it remains relevant, outward-looking and sustainable for the future.

As science and expertise are contested, our objects offer stories and perspectives from the past to make sense of the present. The Museum's remarkable collection has the power to illuminate ideas crossing faiths, cultures and time, illustrating what we have in common rather than what divides us – a need ever more important in a post-9/11 world.

We are passionate about these stories and want to share them as widely as possible in a fully accessible way, in stunning displays that are relevant for audiences of today, supported by technology and tools that enhance visitor experience, and accompanied by an ever-changing inclusive programme of learning and participation.

*Vision 2024* encompasses the ambitious plans to 'Revolutionise' the History of Science Museum in time for its first centenary, and will include sensitive refurbishment of its landmark building.

**Be part of making the History of Science Museum a museum for the future.**

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## From the Director

2018-19 has been a hugely exciting year for our Museum, a time of change and first steps towards the realisation of *Vision 2024*, the ambitious strategy for our centenary. *Vision 2024* is a complete review of who we are, what we do and how we wish to do it, summarised by one word: Revolutionise.

Who we are and what we stand for is behind our change of name and logo – it may seem a small step at first glance, but as our Pro-Vice-Chancellor is reflecting in the following pages, a huge leap for us.

Hand in hand with name and logo changes we developed a brand-new website: sleek, stylish, and much lauded - please have a look yourself at [www.hsm.ox.ac.uk](http://www.hsm.ox.ac.uk).

I spoke about our first ever business review in last year's Review and I am delighted and hugely proud to be able to look back on twelve months during which we have very successfully implemented a change in mindset. A mindset that underpins the realisation that in the current day and age the Museum needs to operate like a business with a strong commercial performance that supports and enables many of the successes that we are very proud to share with you in the following pages. We have pushed the boundaries beyond anything our bijou Museum was believed to be capable of and we are determined that this is only the beginning.

None of this would have been possible without the phenomenal team that I am very proud to be part of, our committed volunteers who never cease to amaze us, our Visitors under the dynamic leadership of Professor Roger Davies, our outstanding colleagues within our Division and across the University, our generous supporters, and our audiences who continue to challenge us to reach for the stars.

THANK YOU!

**Dr Silke Ackermann FSA**  
*Director*

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***I am delighted and hugely proud to be able to look back on twelve months during which we have very successfully implemented a change in mindset.***



## From the Pro-Vice-Chancellor

It was Juliet in that famous tale of star-crossed lovers who asked “What’s in a name?”. The observant reader might spot that this year the annual report is not of “The Museum of the History of Science” but “The History of Science Museum”. This change of name reflects a rethinking of the Museum and perhaps more than the name itself might indicate. Together with the new logo of the swirling colourful interpretation of an astrolabe, which draws in both those who recognise what it represents and those for whom it is simply attractive, the name captures beautifully that the Museum is one of history, of an integration of cultures and time, told through scientific instruments and technology.

In previous Annual Reviews we have spoken about the collections of the Museum, the exhibitions based around those collections and the curiosity that has been ignited in young people having experienced the Museum. We have referred to the cultural importance of the collections and the scientific and technological advances that they represent. This year, in my view, more than ever the Museum is the embodiment of bringing together cultures, history and magnificent scientific collections. It has truly become the meeting point,

*Multaka*, in many ways. And for me this is exemplified not only by its award-winning *Multaka-Oxford* programme of activities, but also the many learning, public, and private events that are taking place in the Museum.

The *Multaka* programme has brought to life the fact that the Museum is a meeting point for culture in its broadest sense. It has operated in collaboration with local organisations Asylum Welcome, Connection Support, Syrian Vulnerable Persons Relocation Scheme and Refugee Resource and through those partners has brought in to the Museum individuals who find themselves in Oxford having had to leave their homes in other parts of the world. Those individuals come to the Museum and its collections with a very different understanding and cultural interpretation of the objects. Their sharing of that understanding does much more for the listener than educate them about an object, it opens up a window into a completely different way of life and provides a context that takes the object, and themselves, out of the Museum and into a new world. Having been fortunate to take part in a *Multaka* tour myself, and having listened to volunteers speak about the collections from their own cultural and experiential point of view, I can say how poignant and expanding an experience it was. No wonder the programme is also attracting the attention of the awards committees.

This reinterpretation of the collections can also be seen in the way that the Young Producers voluntary group have turned their hand to refreshing displays – bringing together the historical artefacts with more contemporary objects, art and design and related religious text to create an engaging display that offers a much more accessible interpretation of the scientific objects. A different but equally important cultural meeting point.

The various learning programmes from school children to degree students offer another meeting point, helping children identify mathematics in the everyday, and degree students experience the bringing together of mathematics, art and religion – something that perhaps the History of Science Museum is most uniquely positioned to do.

As ever the funding of museums, and all they contribute, is constrained and the team at the Museum have worked hard this year to improve the various streams of income, attracting donations, increasing public giving and opening the Museum to host public and private events. They are to be congratulated on these efforts which are clearly leading to an improved financial position for the institution.

I cannot finish without noting the birthday celebrated this year. Ninety-five years ago this March the University passed a decree to accept Lewis Evans’ donation of scientific instruments and books. This marked the foundation of the Museum, which opened to the public in 1925. It is wonderful to be able to report on the great successes of this small museum ninety-five years later.

My congratulations to Silke, as Director, and her team for all they have achieved this year.

**Professor Anne Trefethen FBCS FEng**

*Pro-Vice-Chancellor for People and Gardens, Libraries and Museums (GLAM)*

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***This year, in my view, more than ever the Museum is the embodiment of bringing together cultures, history and magnificent scientific collections.***

# Headlines 2018/19

## HISTORY OF SCIENCE MUSEUM

### Website and rebranding

2018 saw the creation of a new museum identity. The Museum worked closely with external design experts to create a vibrant new logo and corporate identity. The multi-colour logo, new fonts and styles can be seen throughout the Museum, on print branding and across the new website. The creation of a new website on the Mosaic platform was successfully delivered, on time and in budget, resulting in improved user numbers, new users and page views.

### Financial sustainability

In an ever-challenging climate the Museum continues to deliver a strong financial performance. An enhanced commercial offering, improved visitor giving and careful expenditure planning meant that the Museum closed the financial year without draining its trust-fund resources to offset operating costs.

### Multaka-Oxford

This multi-award-winning project has introduced new ways of working across an excellent partnership between the History of Science and Pitt Rivers Museums, and local community organisations, and shared learning across wider networks. Volunteers from refugee communities have been at the heart of new Museum displays, bilingual tours and object handling, and events – an incredible 1,025 people attended the *Multaka*-led event for Oxford's Christmas Light Festival over three hours.



### New Penicillin case

The Museum's award-winning *Back from the Dead* exhibition now has a permanent legacy in a high-spec showcase in the Basement Gallery. The dramatic Oxford story of penicillin is told through the new display, which includes a Nobel Prize medal, other newly-uncovered objects and an animation.



### OPS Move Project completion

The Museum's largest ever collections project was successfully completed on schedule at the end of October. A total of 79,000 individual items were moved and 43,000 photographs taken while vacating the Museum's main offsite store.



### New Handrails

Our grand central staircase has presented challenges for many people, in particular those with mobility issues. With the expert support of Aric Barcena in Estates Services and the approval of Conservation Officers, Colbalt Blacksmiths created and installed bespoke handrails on both sides of the staircase. These look like they have been in place for centuries and were immediately put into use by visitors and staff of all ages and abilities.



### Maths through History

The excitement of maths is shared with children through this 18-month project using the Museum's collection of mathematical instruments. Children were inspired through 'real world' problem-solving in workshops for schools, from Early Years to Key Stage 4.



### Tomorrow's Oxford Heads

Eye-catching artistic diversity was added to the 350 year - old stone heads fronting the Museum and the Sheldonian with newly commissioned temporary sculptures displayed outside the Museum during the summer. These opened a rich dialogue on how public sculpture could be diversified in the future to better represent today's Oxford community.



## Facts and Figures

**1683**  
Building opened as a museum

**1924**  
Established as History of Science Museum (formerly Museum of the History of Science)

**103** volunteers gave **1,874** hours  
(Tour guides, Welcome Hosts, Collections Move projects, school and public events)

**30** Staff at 31 July 2019 (including part time and short term contracted)

## Engagement

**208** free drop in highlight guided tours of HSM by our volunteer tour guide team

**200+**

written responses to Tomorrow's Oxford Heads delivered into the plinths beneath the temporary sculptures



**1,000+** written responses on the Pink Head

**159,275**

Museum visitors welcomed

**6** art commissions - dance, drama, music, poetry and sculpture

**1,700** visitors over 3 hours to Lovelace's Labyrinth public event in March 2019



## Research, Teaching & Collections

**2** Masters teaching modules drawing on collections  
**250** research enquiries  
**15** new acquisitions

**79** research visits  
**1** new permanent display case (Penicillin)  
**2** new displays in the Islamic World cabinet by the Young Producers group

## Operations & Planning

**£41,000**

from visitor donations: average 26p per visitor, increase of 73% per visitor

**2,000** tours delivered in 7 languages; 18,000 audio clips played  
**£3,000** profit from 14 venue hire events

**£14,000**

shop profit; 39p average spend per visitor; increase of 30% in average spend



## Learning and Participation

**636** students in facilitated primary school sessions  
**20%** increase in take up of the primary school taught programme

**151** student teachers (PGCE) in sessions at the Museum

**1,067** students in facilitated secondary school and post-16 sessions

**1,703** school age (5-18) students in facilitated sessions  
**61** students in HE and training in facilitated sessions

**2,219** adults at family events, independently and with children

**28** children and adults engaged in offsite outreach activities



**54** volunteering opportunities created in family events

**1,103** children (0-16) participating in family activities at the Museum

**129** children and adults involved in other events and special projects

## Social Media

### Instagram

Audience (Followers):  
September 2018 - 1668 /  
September 2019 - 1963  
**18%** increase

Engagement:  
September 2018 - 500 /  
September 2019 - 623  
**24%** increase

Impressions:  
September 2018 - 5117 /  
September 2019 - 11481  
**124%** increase

### Twitter

Audience (Followers):  
September 2018 - 8664 /  
September 2019 - 10994  
**27%** increase

Engagement:  
September 2018 - 226 /  
September 2019 - 819  
**262%** increase

Impressions:  
September 2018 - 25100 /  
September 2019 - 92400  
**268%** increase

### Facebook

Audience (Page Likes):  
September 2018 - 6870 /  
September 2019 - 7461  
**8%** increase

Impressions:  
September 2018 - 50659 /  
September 2019 - 10270  
(big decrease)

Website visitors for the year  
2017/18 - 122,180  
2018/19 - 142,112

Increase in website users between 31 July 2018 and 31 July 2019

**14.8%** increase

Increase in new website users over the year

**15.4%** increase



## Collections

### New Display

The Museum's award-winning *Back from the Dead* exhibition now has a permanent legacy in a high-specification showcase in the Basement Gallery. This follows the model of developing a temporary exhibition into a permanent display pioneered by the previous *Dear Harry* exhibition. The dramatic Oxford story of penicillin is told through the new display, which includes Howard Florey's Nobel Prize medal. The medal only came to our attention as a result of the exhibition, and was generously lent by the Ashmolean Museum. The display also includes an animation and other newly-uncovered objects – such as a remarkable painting by one of the technicians of the Dunn School of Pathology, where Oxford's penicillin research was conducted.

### Collections Projects

The Museum's largest ever collections project was successfully completed on schedule at the end of October. A total of 79,000 individual items were moved from the Old Power Station at Osney in advance of redevelopment of the site by the Saïd Business School. With the help of volunteers, the Move team took 43,000 object photographs during the project. The objects have been moved to commercial collections storage while the new GLAM Collections Teaching and Research Centre is being developed.

“The dramatic Oxford story of penicillin is told through the new display, which includes Howard Florey's Nobel Prize medal.”

### Acquisitions

The following objects were acquired by the Museum:

#### British Army Heliograph, in case and with tripod

Inv. 15747

Presented by Peter McMaster

#### Four instruments for forestry measurement and management: Abney Level

by Keuffel & Esser, New York, c. 1910  
Inv. 15758

#### 'Auto Simplex' Hypsometer

by J. H. Steward Ltd., London, c. 1910  
Inv. 15757

#### 'Vade-Mecum' Timber Trade Slide Rule

by George Bousfield, Grimsby, c. 1900  
Inv. 15759

#### Service Pattern Clinometer

by Short & Mason Ltd., London, 1910  
Inv. 15760

Presented by Toby Garfitt



#### Three Incorrectly Printed Semicircular Protractors

Chinese, c. 1995  
Inv. 15761-15763

#### 'Grafix' Geometry Set

Chinese, c. 1995  
Inv. 15765

#### School Drawing Set

Chinese, c. 1995  
Inv. 15766

#### School Geometry Set

Chinese, c. 1995  
Inv. 15767

#### School Geometry Set

Chinese, c. 1995  
Inv. 15768

#### Correspondence on Faulty Protractors

by Peter Bailey, 1995-1999  
Inv. 15769

Presented by Peter Bailey

#### A group of modern school drawing sets, collected to document faulty manufacture: 'Woolworths' Geometry Set

Chinese?, c. 1995  
Inv. 15764

#### Carton of Twelve (Empty) Penicillin Boxes

by Commercial Solvents Corporation, Terre Haute, Indiana, USA, 1944

Inv. 15779

Presented by Polly Fengou on behalf of the Microbiology Department, John Radcliffe Hospital, Oxford



#### Brochure Describing Photographs of the Moon by Warren De La Rue

printed by Taylor & Francis, London, 1862

Inv. 15781

Presented by Frank Manasek

#### Four Letters from Dr Lewis Evans (History of Science Museum's founding donor), 1911-1914

To be catalogued with the Lewis Evans manuscripts as MS Evans 121

Presented by Sue Pocock



“ Our Research Facilitator has processed 250 research enquiries and hosted 79 research visits.



### Conservation

Extensive work was done during the final few months of the Old Power Station Move project, especially on preparing and packing the physics glassware collection, and dealing with hazardous materials such as mercurial barometers and asbestos-containing objects. Subsequent work has been carried out at the interim storage facility throughout the year, ensuring the hazardous objects were safely stored and located. This was done alongside two members of the Move team, retained for this follow-on work.

After two and a half years of the Move project, our conservator was

able to switch focus to the backlog of conservation documentation. Other activity included the installation of the new penicillin display, the condition assessment of new acquisitions and preparation of objects for loan out to various institutions both nationally and internationally – all of which required conservation treatment, detailed condition loan out reports and packing for transit. A number of research visits was also facilitated by assessing the condition of the requested objects and passing on the relevant information to the Collections Manager and Research Facilitator.

The GLAM (Gardens, Libraries and Museums) Conservation departments

have come together to use a single upgraded environmental monitoring platform which gives greater resilience and skill-sharing across the Division.

### Library & Archives

Our Research Facilitator has continued to run the Library and Archives and has acted as a first point of contact for research enquiries. During the year 2018-2019, he has processed 250 research enquiries and hosted 79 research visits. The enquirers were from many parts of the world. They included students from undergraduate level upwards, academics at all levels of seniority and a considerable number of independent scholars.

## Digital

### New website

The Museum launched its new website, [hsm.ox.ac.uk](http://hsm.ox.ac.uk), on 20 January 2019, on the centrally hosted Mosaic platform, providing a more modern and responsive interface and sporting the new branding.

The project team, led by Georgina Brooke, worked across the University's Gardens and Museums on developing new websites, with brand cohesion across the different sites, reconfiguring the Mosaic platform to meet the needs of the commercial, public-facing sites.

Test users reported positively and the number of visitors to the Museum's website has increased significantly.

As an indication, there was a 147% increase in traffic to the Museum's online shop after the website went live.

### Digital projects

The GLAM Digital Strategy is delivering major investment in digital asset management and the improvement of collections databases.

The Museum is therefore engaging in a major overhaul of the way it manages its digital assets. After auditing items such as digital photographs of objects and scoping the project, the way has been cleared to begin migrating assets to ResourceSpace, a purpose-built digital asset management system.

Beyond collections images this will support a wide range of other Museum functions, particularly in programmes and public engagement.

Proof of concept has also been demonstrated for the cataloguing in EMu of manuscripts and archives. These are the last part of the collections outside modern digital management and when this project is complete next year, every area of the collections will be accessible online.

The Museum has also benefited from further IT infrastructure development and investment across the Museums and Gardens.



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History of Science Museum

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# Research and Teaching

“**Research-active Museum staff gave papers and keynote speeches nationally and internationally.**”

## Research

The Museum has been successful in an application to the Oxford University Museums' Arts and Humanities Research Council (AHRC) Collaborative Doctoral Partnership Programme. Jointly supervised by the Director Dr Silke Ackermann and Professor Michael Reiss (University College London), the successful candidate Mathilde Daussy Renaudin will begin research on “Science in the service of religion? A museum study” in October 2019.

Research-active Museum staff gave papers and keynote speeches nationally and internationally, focusing on topics ranging from the definition and role of ‘Islamic Science’ and religion in teaching and displays to Chinese visitors to 17th-century Oxford and digital projects.

In a collaboration with Oxford's Mathematical Institute Dr Macdonald produced a detailed catalogue of the Museum's MS Buxton 7, a volume of papers by Charles Babbage, the computer pioneer.

Additional academic service included Dr Johnston refereeing papers for *British Journal for the History of Science*, *Notes and Records of the Royal Society* and *International Journal of Nautical Archaeology*, while Dr Macdonald refereed for *Annals of Science* and the *British Journal for the History of Science*.

## Teaching

HSM staff continued to take an active part in the teaching of the History Faculty, particularly at postgraduate level through Masters courses in the History of Science, Medicine and Technology. The recently launched Advanced Paper within the MSc curriculum, “Astrology in the Medieval and Early Modern World” continues to be very popular. It ranges across both Europe and the Islamic world, and makes extensive use of artefacts at HSM.

In addition to the history of astrology course, Dr Johnston contributed to the teaching of “Methods and Themes in the History of Science” at postgraduate level. At undergraduate level, he provided the majority of lectures in the History Faculty Prelims

paper on “Nature and Art in the Renaissance”, given in the Museum. He supported teaching for science and history of art undergraduates through guided visits to the Museum. He acted as examiner for the MSc in History of Science, Technology and Medicine and served as internal examiner for an Oxford DPhil and external examiner for a Swansea University PhD.

Dr Macdonald taught the MSc Advanced Paper on “Science and Practice: Instruments, Collections and Museums, 1700-1900” supported by the Museum's collections, enabling students to learn about the history of science through direct engagement with objects. He also gave tutorials in the History and Philosophy of Science Supplementary Subject for science undergraduates. These tutorials took place in the HSM Library and Dr Macdonald used a small selection of our pre-1900 scientific books as props to support his teaching.

## Publications

### Silke Ackermann

(ed. with Josefina Rodríguez-Arribas, Charles Burnett and Ryan Szpiech): *Astrolabes in Medieval Cultures*. Brill: Leiden, Boston, 2019.

(with Elizabeth Bruton and Stephen Johnston): ‘Artefacts and Archives: Presenting Moseley in a Museum

Context’, in: Roy MacLeod, Russell G Egdell, Elizabeth Bruton (eds.): *For Science, King & Country: The Life and Legacy of Henry Moseley*, Unicorn Publishing Group: London, 2018, pp. 244-69.

(with Taha Yasin Arslan): ‘Instruments from Islamic Lands’, in: Anthony Turner, *Mathematical Instruments in the collections of the Bibliothèque National de France*, BNF Éditions / Brepols: London, Turnhout, 2018.

‘In the Service of Religion? “Islamic Science” in the Museum’, in: *Bulletin of the Scientific Instrument Society*, 139 (December 2018), pp. 2-6.

### Stephen Johnston

(with Silke Ackermann and Elizabeth Bruton): ‘Artefacts and Archives: Presenting Moseley in a Museum Context’, in: Roy MacLeod, Russell G Egdell, Elizabeth Bruton (eds.): *For Science, King & Country: The Life and Legacy of Henry Moseley*, Unicorn Publishing Group: London, 2018, pp. 244-69.

### Miranda Millward

(with Tim Procter-Legg): ‘If pupils can't go to a museum, bring the museum to them’, *Times Educational Supplement*, 12 April 2019, pp. 34-35.

# National and International Impact

## Loans

The Museum regularly supports exhibitions in the UK and abroad, requiring collections staff input on facilities and logistics as well as conservation and the preparation of detailed loan out condition reports and packing for transit. The following went out on new loans this year:

### Sandwich Guildhall Museum

November 2018 – November 2019 (with possibility of extension)

Inv. 14912: Zodiacal Ring, English?, c. 1400

### National Maritime Museum

#### The Moon

19 July 2019 – 5 January 2020

Inv. 48213: Astrolabe with geared calendar, by Muhammad B. Abi Bakr, Isfahan, 1221/2

Inv. 31528: Islamic lunar calendar on parchment, Turkey, 1795-6

### Science Museum, London

#### Top Secret: From Ciphers to Cybersecurity

10 July 2019 – 23 February 2020

Inv. 20815: Marconi Bellini-Tosi Direction Finder



### Bodleian Libraries S. T. Lee Gallery, Weston Library

#### Talking Maps

5 July 2019 – 8 March 2020

Inv. 34611: Astrolabe, Indo-Persian, c. 1600

Inv. 44055: Geomantic Compass with Cover, Chinese, before 1654, on long term loan to HSM from the Bodleian Libraries was returned to Bodleian temporarily for this exhibition



### Aga Khan Museum, Toronto, Ontario, Canada

#### Mirror of Time: The Moon in Islamic Art

9 March – 18 August 2019

Inv. 33411: Astrolabe, Indo-Persian, 17th Century

Inv. 33474: Astrolabe, by Muhammad Salih Tatawi, Indo-Persian, Thatta, 1666/7

Inv. 33739: Astrolabe, by Khalil Muhammad ibn Hasan `Ali and `Abd al-A'imma, Persian, Early 18th Century

Inv. 52473: Astrolabe, by Muhammad ibn Sa'id as-Sabban, Guadalajara, 1081/2



### Bodleian Libraries S. T. Lee Gallery, Weston Library

#### Babel: Adventures in Translation

15 February – 2 June 2019

MS Buxton 4: bound collection of printed papers by and relating to Charles Babbage and Ada Lovelace.

### Bildmuseet, Umeå University, Sweden

#### Entangle / Physics and the Artistic Imagination

16 November 2018 – 21 April 2019

Inv. 11714: Einstein Blackboard No.2, 1931

### Ashmolean Museum

#### Spellbound: Thinking Magically, Past and Present

6 September 2018 – 6 January 2019

Inv. 46378: Magical Sigil, found in Devil's Dyke, English, 16th century

Inv. 51476: Crystal Ball, 17th century

Two long term loans to Royal Museums Greenwich and the Museum of Oxford came to an end.

## Advisory bodies

The Director, Dr Silke Ackermann, served as follows:

Member of the Research Advisory Boards of Deutsches Museum Munich, Staatliche Kunstsammlungen Dresden, the Centre for History of Science at the Royal Swedish Academy of Sciences Stockholm, and UNIVERSEUM The European Academic Heritage Network.

External Advisor for Eton College Collections Committee on outreach and access.

Research Facilitator, Dr Lee Macdonald, served on two Royal Astronomical Society committees: Chair of the Library Committee, and member of the Astronomical Heritage Committee, the latter responsible for the Society's historic astronomical artefacts (some of which are on long-term loan to HSM) and the history of astronomy generally.

## Rete

The Museum continues to administer Rete, the international mailing list on the history of scientific instruments. The list grew by a further 7% to 696 subscribers over the year, and the number of countries represented also rose from 35 to at least 39, from China to Mexico, Ecuador to Estonia. This increasingly global coverage underlines the Museum's role in serving and connecting a worldwide community of individual researchers, academics and museum professionals. The mailing list is also used as the principal means of communication by the Scientific Instrument Commission of the International Union of History and Philosophy of Science.

# Multaka-Oxford

*Multaka* (ملتقى), which means 'meeting point' in Arabic, creates volunteer opportunities that use the History of Science Museum and its collections to bring people together. The project is funded until September 2019 by the Esmée Fairbairn Collections Fund and takes its name and inspiration from *Multaka: Treffpunkt Museum*, a project in Berlin that aims to aid integration and cultural understanding.



*Multaka-Oxford* is a highly collaborative project, delivered jointly by the History of Science Museum and the Pitt Rivers Museum and in partnership with local organisations in Oxford: Asylum Welcome, Connection Support, Syrian Vulnerable Persons Relocation Scheme and Refugee Resource. The project is able to focus on the individual motivations of each person and supports a flexible programme that highlights transferable skills and signposts volunteers to other opportunities.

Volunteers are the centre of *Multaka-Oxford*: 56 volunteers have contributed their skills, knowledge and experience to the Museum and its visitors, giving over 1,200 hours of their time. The team is truly a 'meeting point' of cultures with people from all over the world – Albania, Burma, Egypt, Hungary, Iraq, Pakistan, Syria, Sudan, Turkey, the UK and Zimbabwe.

At the History of Science Museum, the *Multaka* team have been focusing on the Islamic scientific instruments collection. Many of the *Multaka* volunteers have experience and

“It's an opportunity to speak together, for learning together, for living together, for sharing our culture together,” *Multaka* volunteer

“It is my first time of understanding the acceptance of new cultures. Seeing this meant that me, as a newcomer, I can also be accepted. *Multaka* has been a second home for me. It is a place where I am not a foreigner.”

*Multaka* volunteer



knowledge of the faith and cultures where these objects were made. Their personal insights have been revealing new perspectives on the objects to the Museum's audiences and these insights have also been documented on the Museum database. *Multaka* volunteers have also supported the planning, delivery and communication of public events, tours and workshops.

Over the winter and spring 2018/19 *Multaka* volunteers have trained as tour guides. These tour guides have led 15 Arabic tours for 162 people, enthraling them with their own stories and perspectives.

In November 2018, a team of *Multaka* volunteers co-produced an evening event as part of the Oxford citywide 'Christmas Light Night'. With additional funding from the Oxford City Council, the team commissioned two artists: Oxford poet Azfa Awad and musician Bilal Alasali. The evening was a celebration of the Museum, faith and culture as Azfa Awad performed her commissioned work 'The Astrolabe' and the Museum was brought alive through performances of Islamic nasheed (a style of traditional vocal music) and the prayer call 'Al Azan'.

## Astrolabe (by Azfa Awad)

*I am an astrolabe, point me to the sun,  
A symbol of nobility from when the world began.  
I am an astrolabe, with me you will go far,  
I'll show you your destiny, hidden in the stars.  
I am an astrolabe, point me to the sky,  
On my throne are holy verses praising the Most High*

Extract from the poem commissioned by *Multaka-Oxford* for the 'Christmas Light Night' event, November 2018



58 volunteers gave  
1,200 hours



Simon-Callaghan-Photography



“ I didn't know there were these objects here from Islamic world...I find I was so happy and I feel so pleased when I show people these are from my country... Now I don't just want to listen now I want to speak and to show these things myself.” *Multaka volunteer*

Object Handling

**7,200** visitors  
trained volunteers



“ At the museum it changed my idea about work, if I work in a place that has understanding of people it can be ok, it made me feel relaxed about the future. Because of this I want to work in school.”

The volunteers also planned displays of artwork by Syrian artist Akram Abo Alfoz, Qur'anic verses about 'light and knowledge', lanterns made by Syrian families in Oxford, and gave tours in Arabic. An incredible 1,025 people attended the event.

Since March 2019, *Multaka* volunteers have been running events and activities to demonstrate the 'meeting point' between people and cultures in Oxford. To mark the Vernal Equinox, the volunteers planned and ran a family event to highlight cultural celebrations that mark the start of spring, including Kurdish Nowruz, Sham Ennessim in Egypt and dolls made by the csángó people.

Over the summer, *Multaka* volunteers have been running object handling sessions to extend the '*multaka*' (meeting-point) in the Museum. In the Upper Gallery, the volunteers have talked with visitors about Islamic astrolabes and Qibla indicators, linking these objects with their own personal



Jo Cox-Photography

objects. For example, volunteer Rukan shares a small square of the black curtain (al-Kiswah) of the al-Kaaba (the holy house) in Mecca (Makkah), the holiest place for Muslims in Saudi Arabia.

The project has been developing networks for change. In June 2019 the *Multaka* Cross-Sector Networking Day brought together 70 people from museums and other heritage organisations, support agencies and the voluntary sector to look at how partnership working can develop programmes with and for forced migrants. Internationally, *Multaka*-

Oxford is part of a larger network that is bringing together *Multaka* projects from around the world.

The *Multaka-Oxford* team are:

Abdullah, Abi, Ali, Basma, Chaitanya, Dhamyaa, Dilber, Dot, Eniko, Evi, Farida, Feng, Ghazala, Gihan, Hadi, Hussein, Khalil, Maggie, Mariam, Miranda, Mohamed, Mohammad, Nav, Nawar, Nicola, Niran, Nivin, Nuha, Rachel, Rana, Rawan, Richard, Rita, Roushin, Rukaia, Rukan, Sanda, Safaa, Safaa, Sarah, Shaimaa, Shom, Suffia, Suheer, Tammam, Thabo, Tom, Trish, Ursula, Waed and Wesal

Their dedication and contribution was nationally recognised when they won the Museum + Heritage Awards Best Volunteer Team 2019. The cross-sectoral partnership work was also awarded a 'Highly Commended for Partnership Working'.

**1,025** Visitors to Oxford Christmas Lights event produced by *Multaka-Oxford* over **3** hours

Tours in Arabic:

**10** volunteers gave 15 tours for

**162** people



# Tomorrow's Oxford Heads

## Oxford's Stone Heads

Outside the Museum sit four stone heads, continuing the line of heads around the front perimeter of the neighbouring Sheldonian Theatre. It is not known whether they are intended to represent emperors, philosophers or other mythical figures, but we can see that they all represent bearded men, and we know that they are the third generation of stone heads, the first having been installed 350 years ago. Earlier generations, from 1669 and 1868, were replaced because they were badly eroded and disfigured by rainfall and air pollution, despite conservation efforts.

2019 presented the opportunity to celebrate the 350th anniversary of the Heads, to share with the public investigations into what scientific analysis can tell us about the state of the Heads past and present, and to look to the future.

The Oxford Rock Breakdown Laboratory in the School of Geography and the Environment collaborated with the Bodleian Library to present an exhibition from May to July 2019 in the Weston Library, across the road from the Museum, about *Oxford's Stone Heads: History and Mysteries*.



## Future Heads?

Alongside this exhibition, the Museum partnered with the School of Geography and the Environment to open up a dialogue, asking artists and the public: how can we diversify public sculpture to better represent people in today's Oxford? We wanted to explore the possibility of new, more diverse representations of the Heads, which might lead to more permanent or long-standing additions to public art within the University and central Oxford areas



to complement, challenge and diversify the existing historic sculptures.

With support from the Oxford University's Diversity Fund and the Van Houten Fund, we put out an open call to artists for proposals for temporary sculptures to stimulate this dialogue. A panel including wide representation of groups and expertise within the University and city selected two proposals, consulted widely on their designs and worked with the artists to develop the plans.

The result was the installation from mid-June to mid-July 2019 of two artworks.

Outside the entrance to the Museum stone mason Alex Wenham's 'Work in Progress' was installed on temporary plinths. Just as the original heads are not thought to be portraits of actual people, so the two plaster of Paris heads did not represent individuals but were intended to represent demographics within Oxford's diverse community which are woefully underrepresented in the public sculpture of the city.

On the cobbles outside the Museum artists Naomi Lawrence and Patricia Scherer constructed, in public view, a giant Pink Head, and invited public interaction and contributions through writing or drawing their answers to the question of how to diversify public sculpture in Oxford. For the second



**This is an amazing and long overdue idea. Future heads should be specific women whose contributions have been overlooked by history – there are plenty to choose from!... Get local communities involved!**

phase of the installation, without the artists present, the Pink Head was moved into the Sheldonian yard near to the stone heads there and within view of the Museum.



Over 200 people wrote or drew their responses to the new sculptures or their ideas for future public sculptures to post into the plinths, and well over 1,000 people added their marks and suggestions to the Pink Head. Public response was overwhelmingly positive and interested, with a few less positive but searching comments opening up interesting discussion.

## Public Engagement

The art installations were accompanied by a public engagement programme, including:

17/18 May: A science and art weekend, in collaboration with the Weston Library, when the Mobile Heritage Lab from SEAHA (the EPSRC-funded Centre for Doctoral Training in Science and Engineering for Art, Heritage and Archaeology) was stationed outside the Museum, inviting the public to talk

with conservation scientists and see some of the equipment and techniques they use to investigate stone decay and environmental impacts. During a Museum late opening, the public were invited to hear what archivists have discovered about the history and mysteries of the stone heads, and to imagine heads for the future with artist Kay Sentance. Kay's source of inspiration, the brain which lies beneath the exterior head, was on temporary display in the Basement Gallery.

22 June: Museum visitors responded to the question of diversifying sculpture by shaping their own heads in clay. People of all ages were fully engaged to produce 49 very different, thoughtful, touching, and sometimes funny heads. These were displayed in the Basement Gallery while the temporary heads remained outside, and have been documented digitally for future reference.



## Outcomes

Evaluation of the public responses will inform future proposals for public sculpture. This project is feeding into *Urban Culture Dose*, an associated research project looking into the impact of the urban environment, including public sculpture, on mental health and wellbeing.



**The installations excluded various layers of ethnicities, religion, gender, etc. yet this intentional exclusion made people stop, evaluate and discuss."**

# Events

## Multaka-Oxford

Public programming with the *Multaka-Oxford* team included tours in Arabic and English, object handling sessions, and a special evening event for Oxford's Christmas Light Festival.

The night was co-curated by the *Multaka-Oxford* volunteers. Working

with them, we were able to reach audiences who would not otherwise have visited the Museum, in particular from local Islamic communities. For many it was the first time that they were able to enjoy the Museum space and experience being part of this annual Oxford festival.

“Wonderful! So great to be guided in Arabic + English around astrolabes from the Muslim world – Fabulous.”

“Thank you to all for the Welcome and the work involved. Lovely to be “transported”, see the enthusiasm and hear the range of the human voice & ingenuity.”



## IF Oxford Science & Ideas Festival 2018

The Museum was part of the new *IF Oxford Science & Ideas Festival* in 2018 with three events.

200 years of the publication of Mary Shelley's *Frankenstein* was celebrated through public performances of the specially commissioned drama *Frankenstein Reconstructed*, by *I Swear I Saw This* theatre / documentary collective, alongside flash talks on 18<sup>th</sup>-century science.

*Lovelace's Labyrinth* brought Ada Lovelace alive in the Museum for a family event exploring mathematical puzzles and problem-solving activities.

*Victorian Speed* was an event developed with the *Diseases of Modern Life* research team. This immersive late night event showed people that the fear that modern life moves too fast was shared by our Victorian ancestors. Activities included a photo-booth, first aid trivia, and a sexual health tombola.

“Excellent performance, a real treat. Drama and science go well together.”

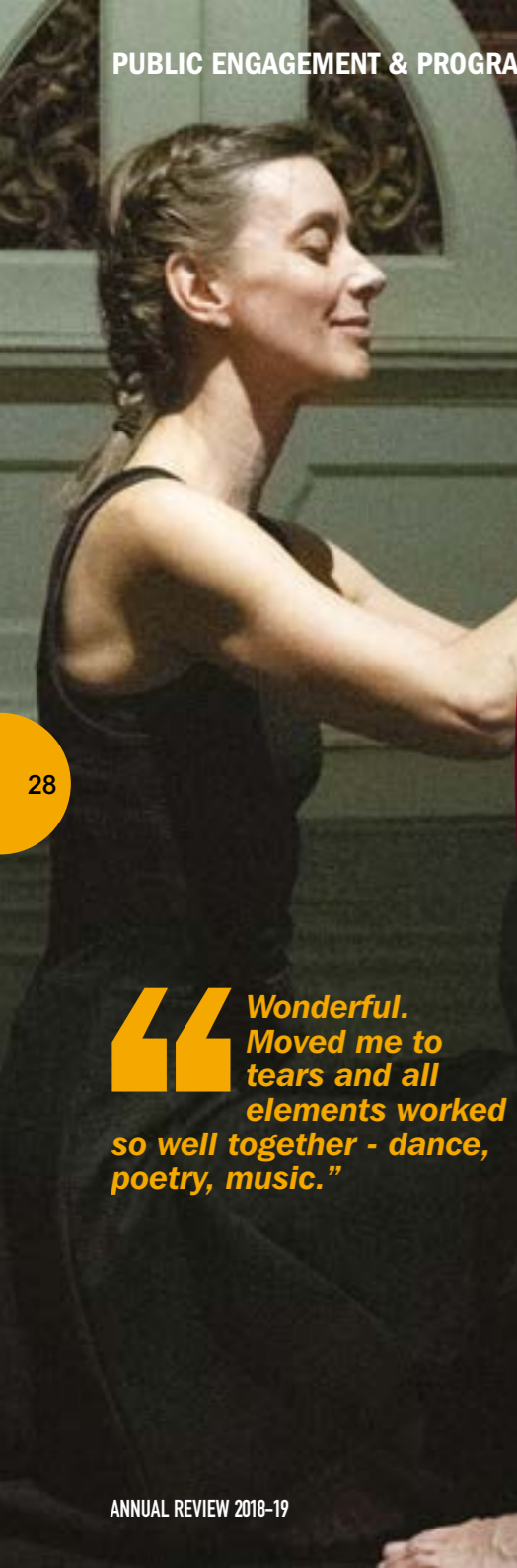


## A Knight in the Museum

A new initiative, a Dungeons and Dragons evening event, offered a *Student Stress Soother* in May, attracting a very high proportion of new visitors, both student and public, with excellent feedback.

The bespoke campaign, featuring objects from the Museum's collections and the building itself, was written by Museum volunteer Alex. Players defeated goblins, puzzled out devious traps and searched for the elixir of life. The night was a huge success and welcomed a new, younger audience to the Museum, 95% of whom had never been to an event at the Museum before.

“Really fun event, I loved the setting.”



### A Million Memories

Brain Awareness Week was marked by a sold-out performance of dance and poetry with live music. The *Dance Creative* group adapted their piece for the Museum space. *A Million Memories* was based on their personal experience of and research into early onset dementia and explored the poignant story of a mother with early onset dementia and her daughter. Emeritus Professor Chris Kennard, from the University's Medical Sciences Division, and Anna Eden, from charity Young Dementia UK, participated with the dancers in an informative Q&A following the performance.

The performance was part of the city-wide *Dancin' Oxford* festival, and was supported by Oxford City Council.

“Thought provoking and creative. Beautifully presented.”

### Regular events and Talks

*Marconi Day* returned with the support of Oxford and District Amateur Radio Society. In addition to establishing our amateur radio station in the Basement Gallery, we set up Morse code stations in the Top Gallery so people could write their own messages and experiment with code.



“Wonderful. Moved me to tears and all elements worked so well together - dance, poetry, music.”



### Monthly Thursday evening talks included:

*A Lab of One's Own*, by Dr Patricia Fara, about the pivotal role of women scientists during the First World War – part of the *Women in Science* celebrations

*Closing the Gap*, by Dr Vicky Neale, about breakthroughs in prime numbers

*Ada Lovelace: The Making of a Computer Scientist*, by Professor Ursula Martin; repeated later in the year due to popularity

*The Art of Old Age*, by Dr Maria del Pilar Blanco, exploring the art of geriatrics and degeneration in Spanish America in the late 1800s

*Science Fictions*, by Professor Rob Iliffe, about how the human imagination shaped science and scientists over the last 400 years

*Redefining Measurement*, by Professor Graham Machin, about why and how internationally defined units of measurement are changing

*250 Years of Weather in Oxford*, by Stephen Burt, based on weather observations at the Radcliffe Observatory in Oxford since 1772

### Blogs

The following blogs were published on the Museum website at <http://blogs.mhs.ox.ac.uk/insidemhs/>

*Young Producers Curating Prayer: A display in the Islamic World collection* by Ellie Martin and Sam Hudson

*One Giant Leap... a retrospective on the family friendly Apollo 11 celebration* by Lead Learning Officer Chris Parkin

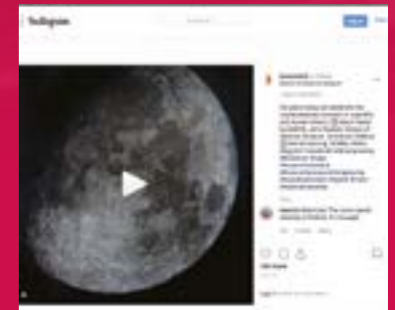
*Drawing the Moon* by artist Jo Lane

*The Search for Snoopy* by Peter Ells  
*My favourite object: an Islamic astrolabe* by Collections Projects Officer on the *Multaka-Oxford* project Rana Ibrahim

*My fortnight at the Museum* by intern Kelly Lau

*The Foundation of a Museum* by Public Engagement Officer Robyn Haggard

*My Favourite Object: an Earl's armillary sphere* by Primary Education Officer Helen Pooley



## Learning 2018-19



“ I went to 2 sessions at the History of Science museum as a child - making an escapement mechanism for a clock and an astrolabe. It made me decide to do a degree in mathematical engineering.”

A young woman completing a PGCE



The aim of the project was to encourage children to feel confident in accessing the Museum's collections and to foster a sense of ownership of the Museum's spaces. Initial visits out to the school were followed by return visits to the Museum to explore our objects over two sessions. The children were then invited to bring their families to the Museum to give them a tour and become 'expert explainers'.

“ The project has put museum-visiting on their radar which is brilliant.” Teaching Assistant from Wood Farm Primary School, Expert Explainer Project

“The children were really inspired by the sessions.” Teacher from St. Phillips and St. James' Primary School

### Secondary Schools

Engaging with the secondary and post-16 sectors, under the leadership of Chris Parkin, the Museum continued to deliver a wide range of taught sessions, and to develop the programme of themed study days which, in addition to curriculum enrichment, provide valuable opportunities for students to engage with academics and researchers from Oxford University.

Despite the challenging economic climate resulting in cuts to schools' budgets, we have maintained a lively and diverse learning programme engaging with new primary schools and experimenting with new collaborative study day events for secondary schools. The Maths Project has gained momentum, and there have been rewarding opportunities for the Young Producers to work with volunteers from the award-winning *Multaka-Oxford* project.

### Primary Schools

The redevelopment of the primary schools' programme, led by Helen Pooley, continued this year with a new session piloted on *Medicine through Time*; changes to the *House of Wisdom* session in response to schools working with the new National Curriculum specifications; and a new Key Stage 1 session, *The Measurers*, as part of the Maths Project. The primary programme has seen a 20% increase in the number of different schools subscribing to taught sessions.

*The Measurers* focuses on the collection of measuring instruments surrounding a delightful 16<sup>th</sup>-century Dutch painting of the same title,

and is very 'hands-on', encouraging children to consider aspects of maths in everyday life. The session on electricity, which features guest appearances by the Victorian inventor James Wimshurst creating sparks with the Wimshurst machine, is increasingly popular.

Extended reach included working on the *Expert Explainers* project with schools from The Headington Partnership, including Wood Farm and Bayards Hill, based in some of the most socio-economically deprived neighbourhoods in Oxford. The participating children had all been awarded Pupil Premium funding (a Government grant to help children from disadvantaged backgrounds).





## Frankenstein Bicentenary

The bicentenary of the publication of Mary Shelley's novel *Frankenstein* provided an opportunity for the Museum to stage events for the public and schools in partnership with the Bodleian Libraries, which hold an archive of materials related to Mary Shelley, including a manuscript draft of the novel.

A contemporary drama, *Frankenstein Reconstructed*, was commissioned from theatre / documentary collective *I Swear I Saw This* for public performances in the Museum on the evening of 12 October. The performances were complemented by short gallery talks around Museum objects from the time *Frankenstein* was written, and an evening programme of *Frankenstein* activities at the Weston Library. This was all part of the *IF Oxford Science + Ideas Festival 2018*, and was aimed at adult audiences.

The Museum and Weston Library collaborated to deliver three academic study day events for local schools: one for Key Stage 4 (GCSE), and two for Key Stage 5 (sixth-form) linked to the curriculum for English Literature and the gothic novel. Performances of *Frankenstein Reconstructed* were included in the study day programmes, alongside talks and workshops on aspects of literary interpretation and science. Feedback was very positive on all aspects.

**The Frankenstein sixth-form study days engaged with 91 students from 6 local secondary schools, and the GCSE study day engaged with 50 students from the Cherwell School.**

“Honestly today was such a pleasure and I enjoyed myself so much. It's given me a lot of contextual information as well as a better appreciation of Shelley and Science. Amazing. Really, really interesting and eye-opening.” Student

“I just wanted to thank you once again for such a brilliant day last Friday. I thought the day was very well put together - it was imaginative and varied, with a good balance of academic depth and entertainment. The activities were engaging and enjoyable, but also very useful for our Literature students.

**Many of them seldom benefit directly from living in Oxford, and this was one of those rare occasions where we all felt very lucky to be so close to the university and its extraordinary resources.”** Teacher, Cherwell School

## Women in Astronomy

Our partnership with the Physics Department continued this year with a new study day, *Women in Astronomy*, aimed at girls studying physics at GCSE. This was designed to highlight the role of women in astronomy and astrophysics, both past and present, and to encourage girls considering the possibility of a career in research. As well as hands-on workshops in the Museum and Physics Department, pupils were treated to an inspiring keynote address by Professor of Astrophysics, Katherine Blundell, and participated in an extremely useful Q&A session with a panel of female researchers and academics. Hearing the disarmingly honest responses to the many questions posed by the students was refreshing and inspiring. Feedback from teachers was very positive:

“I think students really enjoyed the visit – have had a couple talk to me in the days following to say they found it interesting and useful. I think it was good for the girls to see women in astronomy (what they do) and have a chance to talk to them.” Teacher

“The activities are pitched high but explained well and well worth offering to other students to see/meet female scientists and ask questions.” Teacher





## Lovelace's Labyrinth March event attracted over 1,700 visitors.

diversity in public sculpture; and *One Giant Leap*, a hugely successful Apollo 11 commemorative event on 20 July featuring activities related to the Moon, including drawing with Galilean telescopes and making Moon globes.

### Meet Me at the Museum

The Museum benefits from the ongoing support of the cross-GLAM Community Engagement team. This year with their support we delivered a series of events within the *Meet me at the Museum* programme for the elderly. Over five events at the Museum, the group expanded from 15 to 25 elderly participants who enjoyed object handling activities, and sharing stories relating to themes presented by the Museum and its collections. The project demonstrated the power of tactile activities in bringing memories and associations to life for elderly people, as well as the opportunity for new learning.

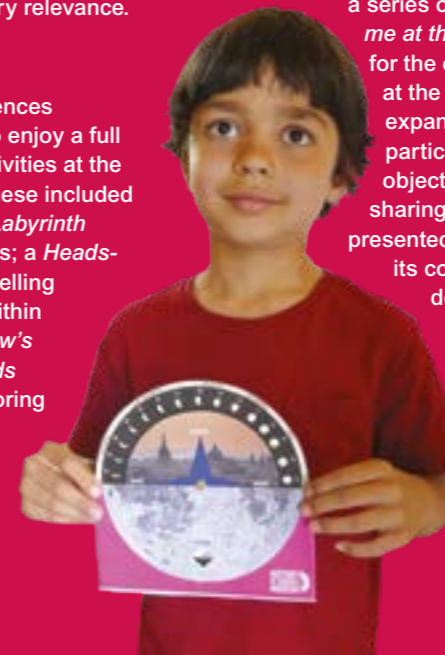
be working with the Iffley Academy, a school for special educational needs, in autumn 2019.

### Young Producers

The HSM Young Producers is now into its fourth year, and its membership has grown amongst the target group of young people (ages 18-30) with 12 active participants this year. The group has been involved in curatorial planning activities and its work has led to an innovative display in the *Islamic World* cabinet, featuring the theme of prayer in Islam, and another in development on the theme of craftsmanship. Young Producers benefited from consultation with volunteers from the *Multaka-Oxford* project who have also contributed to the displays, enhancing their contemporary relevance.

### Families

Family audiences continued to enjoy a full range of activities at the Museum. These included *Lovelace's Labyrinth* maths events; a *Heads-up* clay modelling workshop within the *Tomorrow's Oxford Heads* project exploring



### Touch Tours

The Museum continued to offer quarterly hands-on tours for visitors who are blind or partially sighted. This year we welcomed 48 visitors (and several guide dogs) on four tours with topics ranging from the wonders of radio and the history of medicine, to a brief history of telling the time and the instruments we use for measurement. Tours were delivered in collaboration with Ken, Mary and Lucy, all Museum Highlight and History Volunteer Guides, who each helped research and deliver a tour.

### Volunteers

The Museum's learning programme has benefited from the contributions of an extraordinarily committed and diverse team of volunteers who have participated in both schools and public events, and from the ongoing support of the cross-GLAM Volunteering Team in promoting volunteering opportunities.

colleagues from the Department of Computer Science at Royal Holloway, University of London; hands-on activities with mechanical calculators and navigational instruments; trails and measuring activities.

We delivered a modified version of this event at Templars Square shopping centre in Cowley, East Oxford, as part of the May 2019 Maths Festival organised by the University's Mathematical Institute, enabling us to reach out to more socio-economically deprived areas of the city.

The Maths Project continues with generous support from individual donors and additional funding from the University's Van Houten Fund. We will

### Maths, Art, Religion and Science - MARS

The Museum's partnership with Oxford City College continued in supporting the MARS curriculum programme for students on art and design foundation and degree courses. We delivered a series of eight practical workshops involving science and art, including the printing workshop *Making Micrographia*; the workshop *Secret Knowledge* about the invention of linear perspective in art; and *Globe Makers*.

### Maths Project

This project has gathered momentum this year with the development of new workshop sessions for primary and secondary schools. These include: *The Measurers* session for Key Stage 1; and *Ingenious Geometers*, a revised workshop about geometry and navigation for Key Stage 3.

The Maths Project delivered two hugely successful public events entitled *Lovelace's Labyrinth*, with activities for adults and children, bringing to life different aspects of the Museum's extraordinary collection of mathematical instruments. These included demonstrations of a table-top working model of one of Babbage's difference engines, brought to us by

## Income

University funding	£552,000
Research England	£135,000
Arts Council England	£150,000
Research income	£1,000
<b>Donations:</b>	
Visitor Giving	£41,000
Other Donations	£23,000
<b>Trust &amp; Investment Income</b>	
Museum Trust Fund drawdown	£28,000
Van Houten Trust	£4,000
Trading income	£117,000
Other income	£41,000
<b>TOTAL INCOME</b>	<b>£1,092,000</b>

The Museum received just over half of its income from the University of Oxford. Additionally, in 2018-19 we continued to receive funding from both Research England and Arts Council England which supports the delivery of the Museum's core activities and roles.

Throughout 2018-19 the Museum worked tirelessly to generate more of its own income and reduce the reliance on our trust funds. The Museum delivered an enhanced programme of

trading activity, covering a number of new revenue streams. These included: Event & Venue Hire, Filming, Audio-guides and Group Bookings. We are aiming to generate up to 20% of our income via trading activity across various revenue streams.

The Museum improved its programme of driving visitor giving by utilising new training approaches and a contactless donation terminal.

## Expenditure

Payroll	£719,000
Consumables / Supplies	£12,000
Premises & Equipment Costs	£46,000
Staff Related Costs	£8,000
Publicity Related Costs	£18,000
Professional Fees	£12,000
Cost of Trading Activity (Goods/Services)	£45,000
University Recharges	£54,000
Capital & Infrastructure Costs	£188,000
<b>TOTAL EXPENDITURE</b>	<b>£1,102,000</b>

Museum expenditure continues to rise in line with generating surplus income and rising operating costs. The overall position (drawing down less on trust funds, delivering more, and operating more efficiently) shows an improvement from previous years. We have a Divisional agreement to close 2018-19 with a small (1%) deficit of around £11,000. This was due to the rebranding costs and is covered by the Museum's reserves.

The Museum continues to grow its staff resource in order to meet the demands of delivery and operation. Payroll in 2018-19 was the majority

of our operating costs (66%). Capital and Infrastructure costs have been significantly reduced (17%) thanks to a re-evaluation of space charges which took effect in 2018-19. We continue to operate with a lean premises, equipment and consumables budget, which can at times limit the Museum's ability to meet its key aims and grow its visitor numbers. The Museum continues to pay a recharge for a number of central University services but, in accordance with 2018-19 planning, these have been reduced and continue to be evaluated on a regular basis.

## Visitor Giving & Commercial Activity

**The Museum welcomed 159,275 daytime visitors. These visitors made an average donation of 26 pence, which means that we saw an increase in per-visitor-donations of 73%. This increase resulted in a record-breaking £41,000 of visitor giving income. This has grown our visitor income as a total cash value by 53%, despite a drop in visitor numbers over the year in common with other museums.**

### Visitor Giving

The Museum achieved the highest donations per visitor across the Gardens, Libraries and Museums (GLAM) Division in 2018-19. The Front of House (FOH) team continues to develop new and exciting ways of ensuring that we proactively encourage every visitor, every time, to support the Museum.

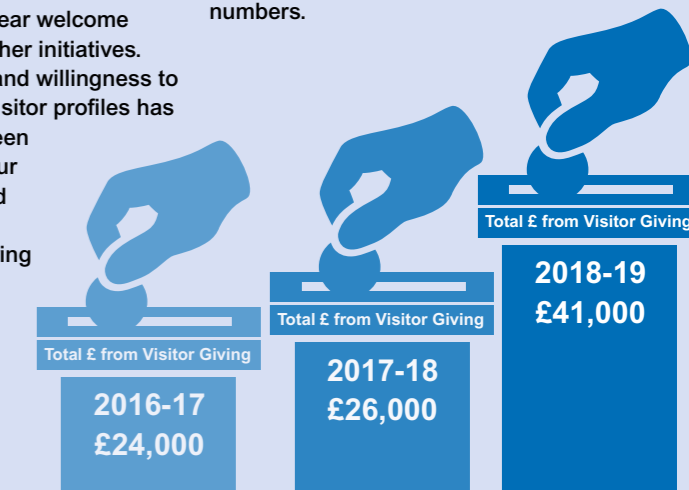
A number of key initiatives have helped support the exemplary performance of the Museum. In September 2018 our new FOH Manager, Cai Marshall, introduced the 'at-till-ask'. Every customer in the shop is presented with an opportunity to support the Museum by donating at their time of purchase. This initiative successfully added £3,818 of visitor giving income to the Museum's accounts and we saw a near 35% uptake rate from our visitors. We continue to grow this as a target for our retail and supervisory team in 2019-20.

Our Head of Operations & Planning, Kingston Myles, has been heavily involved in the roll-out of contactless donations terminals across GLAM. The devices were installed at the end of March 2019 and have contributed £2,081 to the visitor giving income. We continue to embed these as an alternative ask for visitors who don't necessarily have cash, and we hope to see a steady flow of income throughout 2019-20.

Our welcome and ask for visitors has been completely re-structured with the removal of our no backpacks policy, the introduction of our FOH Volunteer Visitor Hosts, and a clear welcome message alongside other initiatives. This agile innovation and willingness to adapt alongside our visitor profiles has meant that we have seen continued growth in our donations' income and a higher level of team engagement in delivering



the ask. We have worked hard to listen to visitor and team feedback and managed to "buck the trend" even with a decline in visitor numbers.

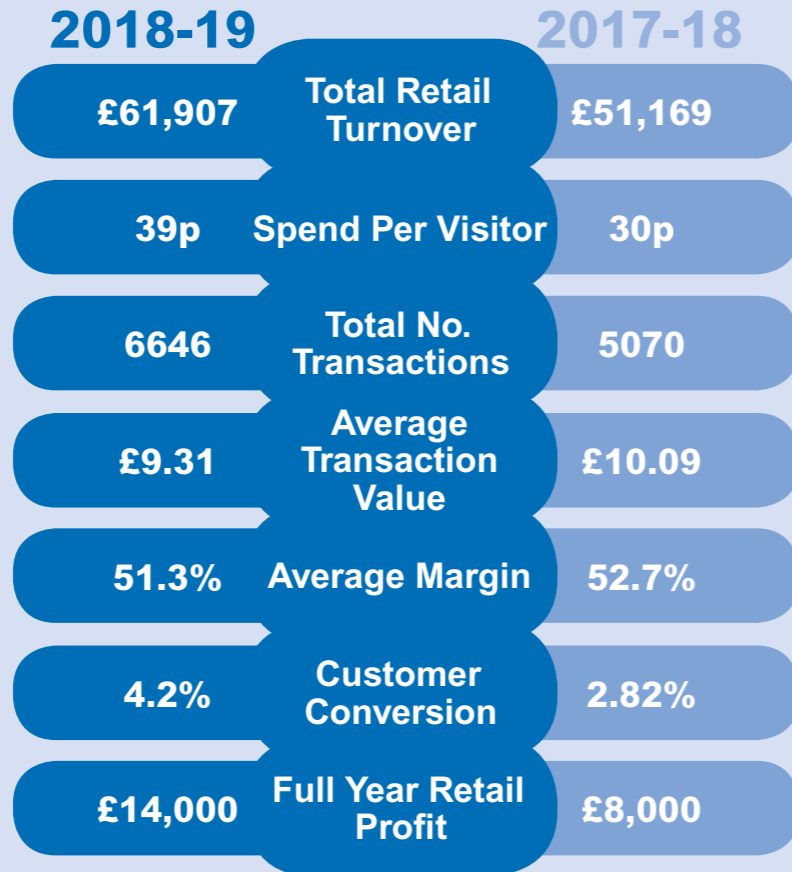


**The Museum's retail business continued to grow and in 2018-19 the shop saw an average spend of 39p per visitor. This is an increase of 30% and contributed to an overall growth in retail turnover of over £10,000. The shop had a final operating profit in 2018-19 of just over £14,000. The profitability of the shop has grown by 75% since 2017-18.**

**Retail**

During 2018-19 a number of dynamic changes ensured that the performance of the shop continued to grow and move from strength to strength. In 2017-18 the shop was relocated to the Entrance Gallery and throughout 2018-19 we continued to make changes, including a refurbishment with new shop units and display equipment. This and the re-positioning of the information desk and donation boxes opened up the gallery space and made the shop instantly more appealing. The ongoing support of our Collections team to re-locate objects and cases has ensured that the shop can grow around itself and attract more customers.

Changes to the team, including the appointment of the permanent FOH Manager, ensured that our retail operation was able to move from strength to strength, with the introduction of range plans and improved pricing to manage product margin.



**Events & Venue Hire**

When the Museum closed its accounts in 2017-18 we committed to developing a venue hire business that would contribute a profit to help support the general operating costs of the Museum. In early 2019 we introduced a venue hire offer and more recently piloted having a part-time post dedicated to delivering events and group bookings.

Our venue hire and events trading activity (c. £20,000 turnover) covered all of its own costs and generated an operating profit of just over £3,000. We are working hard to grow this business in 2019-20 and are aiming to achieve £80,000 of turnover in 2019-20.

**Group Bookings**

To support the pressure on staff time and Museum resources of a high number of group booking requests, we, along with the other University Museums, have been piloting a reservation charge for group bookings. This guarantees timed admission to the Museum, with a welcome for visiting self-guided groups. The charge does not apply to groups from primary, secondary and further education institutions using the collections as part of a formal learning programme.

Since January 2019 the Museum has received over 200 queries for group bookings and self-guided group visits. Since the introduction of the £50 per group charge in April 2019 the Museum has generated an additional £3,000 of turnover to support the Museum's offer.

**Audio Guides & Other Income**

In November 2018 the Museum agreed to introduce a new platform to deliver audio content and tours to visitors. We partnered with Guide ID to deliver a simple and effective platform to enhance our visitor experience. We worked with our Front of House team and other Museum staff to ensure we had a great selection of content.

Since launching the audio guide we delivered nearly 2,000 tours in seven languages for our visitors. We also launched a trial of a 'family friendly' audio tour.

The audio guides are part of a wider commercial strategy. They have contributed around £4,000 to our trading turnover, and have generated a profit which goes towards supporting the Museum's long-term financial sustainability and commercial growth plans.



# Museum Staff and Volunteers

## Directorate

Dr Silke Ackermann, Museum Director  
Danielle Battigelli, Executive Assistant  
Dr Laura Crossley, Head of Public Engagement and Programmes (from 01 October 2018 until 31 March 2019)  
Dr Stephen Johnston, Head of Research, Teaching and Collections  
Kingston Myles, Head of Operations and Planning

## Research, Teaching and Collections

Lucy Blaxland, Collections Manager  
Thomas Hopkins, Collections Management Assistant (until 17 December 2018)  
Rana Ibrahim, Collections Project Officer (*Multaka-Oxford* Project)  
Dr Lee Macdonald, Research Facilitator  
Dr Paul Trafford, Digital Projects Officer  
Cheryl Wolfe, Conservator

## OPS Move Project Team

Janine Fox, Team Leader (until 31 October 2018)  
Move Project Assistants:  
Maia Balint (until 31 January 2019)  
Laura Egginton (until 28 October 2018)  
Rowena Hartley (until 28 October 2018)  
Matthew Harrop (from 14 February 2018)  
Melanie Howard (from 14 February 2018)  
Amreet Kular (until 28 October 2018)  
Megan MacLean (until 31 January 2019)  
Jack Ord (until 08 August 2018)  
Paula Reyes Arce (until 28 October 2018)

## Public Engagement and Programmes

Robyn Haggard, Public Engagement Officer (until 19 June 2019)  
Rachel Harrison, Community Engagement and Volunteer Officer (*Multaka-Oxford* Project)  
Keiko Ikeuchi, Photographer/ Designer  
Chris Parkin, Lead Learning Officer  
Helen Pooley, Learning Officer  
Owen Shaw, Technician  
Sukie Trowles, Education Officer

## Operations and Planning

Samantha Evans, Events, Sales and Bookings Officer (from 7 May 2019)  
Veronica Ford, Gallery and Shop Supervisor (acting up until 31 December 2018)  
Sam Hudson, Front of House Supervisor (from 7 May 2019)  
Chris Humphrey, Front of House Supervisor (from 9 May 2019)  
Cai Marshall, Gallery and Shop Supervisor (until 31 March 2019), Front of House Manager (from 1 April 2019)  
Silvia Pinna, Gallery and Shop Supervisor (acting up until 31 May 2019)  
Asima Qayyum, Administrative Assistant  
Asima Qayyum, Administrative Assistant Supervisor (acting up until 31 May 2019)  
Sukie Trowles, Gallery and Shop Supervisor (acting up until 31 May 2019)

Nick Wicker, Caretaker  
Gallery Attendants: Marie Chapman, Manfred Driver, Bob Ellis, Peter Ells, Silvia Pinna, Rana Ibrahim, Anthony Lummis, Matthew Scott, Sukie Trowles, Sam Hudson, Cai Marshall

## Shared Services within GLAM (Gardens, Libraries and Museums)

Anjanesh Babu, Gardens & Museums IT  
Nicola Bird, Outreach  
Georgina Brooke, Project Lead & Web Content Manager  
Ruth Connor, Finance  
Antony Green, Development  
Susan Griffiths, Outreach  
Catherine House, Development  
Hayleigh Jutson, Volunteering  
Miranda Millward, Arts Engagement Officer  
Caroline Moreau, Volunteering  
Carl Parker, Gardens & Museums IT  
Joy Todd, Volunteering  
Spiro Vranjes, Gardens & Museums IT

## Honorary Research Fellow

Dr Elizabeth Bruton

## Volunteers on OPS Move Project

Dr Michael Heaton  
Yimin Ma  
Shomik Mukherjee  
And two others who wished to remain anonymous

## Volunteer Tour Guides

Chaitanya Chintaluri  
Graham Forbes  
Lucy Gasson  
Mary Lane  
Ken Taylor  
John Ward  
8 others who preferred not to be named

## Volunteer Visitor Hosts

Chris Humphrey  
Karen Humphrey  
Judith Williams  
2 others who preferred not to be named

## Public Engagement Volunteers

The Museum is very grateful to the many volunteers who helped run activities and events for families and the public throughout the year, without whom it would not be possible to engage with so many people.



## Thank you for your support

We are enormously grateful to all our donors, friends and volunteers who have so generously supported the History of Science Museum over the past 12 months. Our mission cannot be achieved without the donations and support of individuals, trusts and charitable foundations and other organisations who contribute to a wide variety of projects and activities.

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We are also deeply grateful to:

Our talented and knowledgeable volunteers who have helped our Collections Team, led free tours for the public, and assisted with learning and participation events and activities

Our many colleagues and partners across GLAM (Gardens, Libraries and Museums) and the wider University of Oxford, as well as other museums, universities, schools and collections.



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*If you would like to become involved in supporting the History of Science Museum, please contact:*

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## Board of Visitors

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