

OUR LIVES IN DATA_

Now available for hire

**Big data's invisible revolution has begun! What are the benefits?
What about privacy?**

Our Lives in Data explores how
'big data' is changing the way we live.



Introduction

From mobile phone records and social media posts, to commuting to work and CCTV feeds, you are always transmitting data. In fact, over 90% of all available human data has been recorded in the last two years, and it is already being used to transform the world around us. Your data is combined with millions of other people's to show patterns and insights that lead to technological innovation and improvements in infrastructure and public services.

Our Lives in Data uncovers some of the diverse ways our data is being collected, analysed and used. Innovations include toys that understand a child's personality, smarter public transport planning and new

genomic technology that is helping uncover the causes of rare diseases and cancer. Through a combination of objects, images, interactives and films, the exhibition highlights how patterns found in aggregated data are changing the world around us.

As the amount of data collected grows so does the debate around data ownership. *Our Lives in Data* looks to the future and asks how we can balance these benefits and concerns. Some are embracing data, while others are fighting to protect their privacy. Where do you stand?

Our Lives in Data brings this fascinating world into your venue.



Exhibition overview

Built around an array of interesting objects, videos, human stories and interactive displays, *Our Lives in Data* covers five key themes, each exploring the potential for big data to affect our daily lives:

- You in data
- Infrastructure: Transport for London
- Public service: the 100,000 Genomes Project
- Private sector: Facebook
- The big data debate

The stories we uncovered focus on the ways data is collected and used to contribute to smarter cities, medical breakthroughs and a better understanding of public opinion. Digital assets for replicating this exhibition are included in an Exhibition Blueprint Pack.

You in data

'You in data' introduces visitors to the concept of 'big data' and challenges them to think about how their everyday interactions with objects such as e-readers and Fitbits contribute to a huge data capturing system that is changing the world around them.

Assets in this section include digital mirror software designed by the Science Museum. When connected to a Mac Mini, webcam, screen and two-way mirror, this interactive recognises people as they walk up to it and guesses their age, gender and emotional state. It then compares the results of everyone it has interacted with, and offers



answers to questions such as what is the happiest day of the week, or are men typically happier than women?

Infrastructure: Transport for London

The London Underground is over 150 years old and was built for only 2 million commuters. Transport for London (TfL) currently logs 19 million journeys every day, 4 million of which are on the Underground. TfL carefully stores and records each of the journeys made throughout its system in order to understand travel patterns and improve services. Although TfL has to work with the existing physical system, it can still change how it is used and make plans for future growth. By knowing how travellers move through the city, TfL can ensure the right services are provided in the right places and reduce travel time for millions of Londoners and visitors moving around the city.

The Exhibition Blueprint Pack includes specially commissioned videos revealing how a city's rhythm can be seen using commuter data – people pouring in and out of the centre at peak times of the working day, compared with the rush of football



fans arriving for a match. Also included is a bold graphic displaying the anonymous travel patterns of 90,000 Londoners. Can you identify the teachers, parents, office workers and retired people? Looking into the future, 'Infrastructure' features the fascinating animation of how commuters are predicted to move through new stations in 2050.

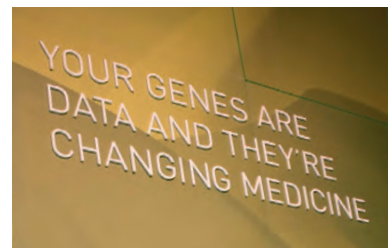
Public service: the 100,000 Genomes Project

'Public service' includes content showing how public life is evolving by harnessing the power of big data. Big data enables scientific breakthroughs that were impossible 10 years ago. In 2001, the Human Genome Project completed the sequencing for one person's DNA – it took 13 years, cost £2 billion and required dozens of sites worldwide to share the computing load. The same process can now be completed in about 10 hours using a single machine for less than £1000.

The 100,000 Genomes Project is currently sequencing thousands of complete genomes to identify genetic disorders. The project's eventual goal is to build capacity

and infrastructure so that anyone can have his or her genome sequenced at a doctor's surgery and receive an immediate diagnosis. This new development, only possible through big data, is revolutionising medicine by using collective genetic information to diagnose individual patients.

The Exhibition Blueprint Pack contains a film about Jessica, the first child to be diagnosed through the 100,000 Genomes Project. It also contains examples of how the National Health Service employs video game designers to visualise massive amounts of data in virtual reality and two 3D fly-through videos of how human DNA appears to data analysts.



Private sector: Facebook

While big data is influencing public services, the private sector is also using it to adapt and develop new tools. The Centre for Disease Control works with Google to map the spread of flu using searches for symptoms. Fitbit has become an unlikely expert in earthquake tracking by using data from lots of people's simultaneous vibrations. Facebook has become the world leader in social psychology by analysing data from its 1.7 billion regular users.

Through a combination of a digital interactive, a video and a visual design piece, visitors will learn about how data from social media platforms can be accessed and used to draw conclusions about human preferences and relationships. This section shows how the

private sector uses patterns seen in our everyday activities to predict customers' preferences and personalise services such as advertising. This raises the issue of how social media and data-mining have radically changed our perception of privacy.



The big data debate

Public organisations and private companies are using the patterns seen in information compiled from users to improve infrastructure, drive medical breakthroughs and find out more about how people think. While this represents a fantastic opportunity for researchers and huge advantages for advertisers, it also raises big concerns for privacy advocates.

This section features a video debate between big data experts from different fields around the benefits and privacy risks presented by the growing collection and use of big data. Also on display are objects that were created to embrace – or reject – big data and interconnectivity, including a Cryptophone and a thermostat that learns your habits and preferences and changes the temperature of your home without your input.

After demonstrating the potential applications of big data in the real world, this section encourages visitors to form their own opinions about what big data means to them. Visitors gauge their personal preferences about the regulation of big data using an interactive digital polling station. Should schools scan social media profiles of students to see who needs counselling? Should you surrender your DNA to the police in case you are ever involved in a crime? You be the judge!





What is an Exhibition Blueprint Pack?

Introducing a new way to hire a Science Museum exhibition... The digital **Exhibition Blueprint Pack** lets you produce your own *Our Lives in Data* exhibition.

By taking our blueprints and developing them into your own exhibition, you can feature new or local stories building on the high-quality core of the Science Museum's exhibition.

Contemporary science exhibitions, which traditionally do not showcase one-of-a-kind objects, offer an opportunity for this light-touch exhibition hire. This allows greater flexibility for the host venue to create an exhibition that really works for your space.

The Pack provides our content, concept, designs and meticulously researched IP to allow you to reproduce the exhibition in a way that takes our research and ideas in new and exciting directions.

We send all of this information digitally, along with our contacts for sourcing objects, enabling you to produce or source all the

physical elements for the exhibition. By borrowing, purchasing or creating objects yourselves, you will develop contacts in local industry, build partnerships and uncover unique sponsorship opportunities.

The Pack includes the designs, research content, videos, interviews and programming ideas for you to produce your very own *Our Lives in Data* display with no expensive shipping, no insurance costs and no environmental constraints.

Our Exhibition Blueprint Pack allows you to create a bespoke exhibition for your space, tailored to the locality and customised to resonate with your audience. You could choose to replicate the Science Museum's display or use elements of it to create a dramatic departure from the original, as your space allows.

Work in partnership with the Science Museum in London to create a unique exhibition never before seen and never again repeated!

What the Exhibition Blueprint Pack includes

The Pack contains £220,000-worth of research, development, design and digital assets, including:

- Exhibition overview and content hierarchy explanation
- Example floor plans and design layout
- Object list and sources
- Image files
- Exhibition text, content and research from the Science Museum Contemporary Science team
- Graphic files in editable format
- Contacts list for companies highlighted in the exhibition and introductions where appropriate
- Press and marketing material
- Specially commissioned videos and accompanying transcripts
- Additional supplementary material for web or display use
- Event suggestions with methodology
- Retail product suggestions
- Inclusion in an active social media network of *Our Lives in Data* host venues
- Educational material and learning outcomes information
- Science Museum staff time to talk you through the Pack, assist with fact-checking and act as a general contact for queries and assistance
- Use of the Science Museum logo to highlight the collaboration and association

Exhibition delivery

Besides the hard drive and booklets included in the Pack, the Science Museum does not provide anything physical. Venues are responsible for the following:

- Designing and constructing the structure for the display including mounts and cases
- Print graphics
- Sourcing the objects for the display – some are available from online retailers, while others can be sourced from local manufacturers or the contacts provided in the Pack
- Providing hardware and proper licensing for software to display videos contained in the Pack
- Translating exhibition contents, graphics and videos from English
- Adjusting artwork to fit around the translated text
- Contacting the Science Museum to approve new or amended content

Learning outcomes

Every day, the media publish stories of a scientific nature, from space exploration to nanotechnology, requiring the reader or viewer to engage for a short period of time with an application of a scientific concept or make a judgment about the validity, safety or consequences of a particular process or product. *Our Lives in Data* allows the audience to enter and engage with the ongoing global dialogue of contemporary science.

The exhibition aims to:

- Communicate that big data is the process of finding patterns in huge amounts of information
- Demonstrate how big data affects the world in tangible ways
- Show how everyone is involved in big data, and encourage visitors to form their own opinions about its prevalence

Target audience

The exhibition content from the Science Museum is aimed at:

- Young adults (aged 14–30)
- Families
- Education groups and their teachers

Availability

Since the assets for this exhibition are provided digitally, the Exhibition Blueprint Pack is available for display at any time. As soon as you have purchased the Pack, you can begin work to open the exhibition in line with your desired timetable.

This exhibition will be available to hire from November 2016 until October 2021.

Pricing

Pricing is available on request.

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