# HUXLEY SUMMIT

The will of the people? Science and innovation in a post-truth world

29 November 2017

### 3

# Chapters

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We encourage attendees to use Twitter during the Summit, and we recommend you use the hashtag **#HuxleySummit** to follow the conversation.

A film crew and photographer will be present at the Huxley Summit. If you do not wish to be filmed or photographed, please speak to a member of the team at the British Science Association.

# Agenda

11.00	Registration and networking
12.00	<b>Chapter 1</b> : Learning from the past - what can society learn from GM?
13.20	Roundtable discussions and lunch
14.50	<b>Chapter 2</b> : Current challenges - the data explosion and the commercial imperative
16.10	Coffee and networking
16.50	<b>Chapter 3</b> : Future challenges - preparing for artificial intelligence
18.30	Drinks reception

All content and information correct at the time of going to print.

Today, the Huxley Summit will bring together business leaders, scientists, senior policy-makers and opinion-formers to discuss the challenges of creating innovations that are accepted and trusted by the public. We will look at how learnings from the GM crisis should inform companies, institutions, government, and public responses. The Summit will also look at how these learnings can be applied to the current challenge of data ethics and explore the impact of artificial intelligence on society. There will be provocations and debates, plus time for networking and focussed discussions about how we navigate the future.

### Chapter 1:

### Learning from the past - what can society learn from GM?

Despite a huge amount of scientific research into GM crops and their impact on human health and the environment, the public remain resistant to their widespread introduction to agriculture and industry. What learnings can be gleaned from this story? And what does this mean for the public, business leaders, scientists and policymakers in relation to new technologies and scientific advances in the future?

### Chapter 2:

# Current challenges - the data explosion and the commercial imperative

Just over 10 years since the phrase 'data is the new oil' was coined, the new oil rush is gaining momentum. Enabled by the exponential growth of data and AI capabilities we are seeing the creation of markets, business models and data assets as a source of unique commercial value.

However, these opportunities can come with ethical risks, and misjudging the use of data in business or policy could lead to long-term reputational damage and stakeholder mistrust. What opportunities are there for organisations and society to gain extra value from data? What role does compliance play in safeguarding consumer and stakeholder trust? How will decisions organisations make today impact future technologies that utilise data?

### Chapter 3:

### Future challenges - preparing for artificial intelligence

How does society overcome the challenges of the 'Fourth Industrial Revolution' and a potential breakdown of trust in technology from the public? New technologies – such as AI, driverless cars and gene editing – are challenging the relationship between the public and the physical, digital and biological worlds.

# Welcome



**Rt Hon. the Lord David Willetts** Chair of the British Science Association

Welcome to the British Science Association's 2017 Huxley Summit. After a successful pilot event last year, we are pleased to once again be bringing together business leaders, policy makers and scientists to discuss and debate some key issues facing science and society.

Today's event will explore the public's relationship with emerging technologies; the role that societal acceptance plays in the success of cutting-edge innovation.

We are delighted to once again have a stellar line up of speakers for today. The Huxley Summit is as much about your contribution as it is about our speakers. The agenda, we hope, allows plenty of time for you to have your say – both via the Q&A sessions that conclude each of our three 'Chapters' and over roundtable discussions at lunch – and network with fellow attendees, during the breaks and at this evening's drinks reception.

The Summit's speakers and attendees deliberately represent a broad range of industries and sectors, but we all have something in common. We are all interested, in some shape or form, in the interface between innovation, regulation, and public opinion. As the UK prepares to leave the EU, how can we ensure the UK is a leading force in creating innovative solutions to the 21st century challenges the world faces, such as developing ethical A.I, harnessing the power of big data, combatting the spread of microbial diseases and tackling climate change?

The British Science Association's view is that only when we take a step back and look at the bigger picture, and have discussions at a broad, strategic level – involving representatives from within and, crucially, beyond science – will we be able to create a successful future for the UK where research and innovation thrive and where science and its applications are understood and owned by society.

I would like to thank our sponsors and supporters – EY, Diageo, SCI, the London Chamber of Commerce and Industry – and our partner and host, the Royal Institution. I would also like to thank you all for coming. I hope you enjoy this event and together we can come up with some solutions to the challenges of engaging with and responding to attitudes to technological change.



# The will of the people? Science and innovation in a post-truth world



Katherine Mathieson Chief Executive of the British Science Association

Last year, on the eve of the US Presidential election, the British Science Association's inaugural Huxley Summit discussed and debated the role of trust in the 21st century. We wanted to know: do we really not trust experts anymore? We delved into topics as diverse as why the public are happy to hand over their credit card details on the internet, but stopped short of feeling comfortable about ID cards; how our memories can trick us and what we can do to tackle our own biases before they affect our work; and how to not only win the trust of your customers, but then to keep it.

This year, with the UK Government in the midst of Brexit negotiations, our theme focuses on how to ensure that the UK can continue to be a leader in science and innovation, while being mindful of the public's concerns about emerging technologies.

Trump and Brexit are frequently explained in political discourse as a result of "the will of the people" despite being hugely divisive - with one not winning the popular vote, and the other just shading it by a few percentage points, Politics is not alone in this regard. In business, customers vote with their feet. And science is not immune to dividing public opinion. As we approach the end of 2017, looking back on a year that has shone a light on huge divisions in societies all across the globe, I wonder what we can learn to help move us forward? Trust, acceptance and consensus all go hand in hand.

Technology advances. Our lives change. We weave in new ideas and surrender old ones. It's human nature to continue tirelessly with discovery and innovation, but the stakes are high, and many of the consequences are unforeseeable. Consider how vaccinations have stopped diseases in their tracks, and the positive impact this has had on global health, or how computers have connected and educated us beyond imagination, or how air travel has accelerated our efforts to explore and trade. But also consider how, after decades of use, we realised the lethal effects of asbestos, or how diesel engines are polluting our cities and shortening thousands of lives. Take antibiotics, for example: they have saved millions, but the rise of antimicrobial resistance will be. according to Paul Cosford at Public Health England, "one of the most dangerous global crises facing the modern world".

Technological and scientific innovation impact society in endless ways, both for good and bad. While they offer immeasurable benefits, they also introduce new risk. Outcomes are complex and interconnected, and the effects are too widespread for the decisions to be left to any scientists, governments or businesses alone. Ultimately, the destiny of technology relies on the society in which it's administered.

What are the consequences when technologies are not accepted? What happens when they are protested or outright prohibited? The attempt to introduce GM crops into the food chain was disastrous in terms of commercial success and public acceptance. As a technology, GM crops have the potential to end hunger for millions of people worldwide and would mean the need for fewer pesticides, but what wasn't considered at the time were the fears of the public, or how small businesses would keep up with the fast pace of the technological advances. Public pressure culminated in the EU issuing a moratorium on the growth and sale of GM foods at the time. Not only did the sudden change halt any potential benefits, it also absorbed a great deal of research, commercial and civic society resource.

Technological and scientific innovation impact society in endless ways, both for good and bad. While they offer immeasurable benefits, they also introduce new risk

So, what can we learn from the past? GM crops provide an ideal case study from which to better our practices. We can study what went wrong, why people rejected them, and how we can gain knowledge, trust and ultimately, acceptance from the public.

That is why we want to explore the topic of public acceptance of science and innovation at this year's Huxley Summit. Without the support of society, we all risk losing the lasting positive effects that innovation has on health, politics, ideas, values, the environment, and so much more. While the debate over GM crops is no longer top of the agenda, we're now on the cusp of an AI and data revolution. They will be transformational for a wide range of sectors, and we need to tread carefully. These emerging technologies draw many parallels with GM crops. They are largely developed or controlled by small and homogeneous groups of people, often within commercial settings where the regulation framework is still being shaped. For some, these new technologies carry an uneasy sense that the genie has already been released from the bottle, and can't be stuffed back in.

Take Facebook: for many of us, a new way to connect and share our lives, and for businesses and governments, an efficient way to reach customers and citizens. The number of ways this data can be repackaged and used has mushroomed. This has created a dialogue around privacy and data protection that's not just restricted to Facebook, but to anywhere that stores personal information: financial services, health providers, government agencies, retailers, the list goes on. Incidents like unauthorised hacking, data loss and data theft are all occurring with increasing regularity. The credit reporting firm Equifax was a recent target with 143 million people's information being stolen. Such events further erode public trust in business, science and government.

And what about AI? A glance at the films and literature of the past few decades shows us a reflection of our collective expectations and fears, as portrayed in a series of dystopian worlds, from the terrifying Terminator franchise to the introspective and claustrophobic Ex Machina.

Unacceptable and unintended problems are already emerging in real life: Flickr and Google came under criticism after pictures of black people in their photo apps were labelled as "apes" and "gorillas". Microsoft's Al Twitter chatbot, Tay, which learnt through interaction with users, was shut down after only 24 hours when a user community taught it to be racist. Extrapolate these cases to 50 years in the future, and you can only begin to imagine how new technologies may impact in a negative way, particularly to already marginalised groups, such as ethnic minorities or people from poor backgrounds.

So, how do we address these challenges? Firstly, we need discussions that are widespread and informed, among people representing as much diversity as society has to offer. This is why we're bringing you to the Huxley Summit today: to participate in this dialogue, and use what we've learned from past experience to enhance the world for the better. It's not an impossible task, but it is an important one.

# Advisory Board

# Building a better world



### About The British Science Association

The British Science Association is a charity that wants to see science at the heart of culture and society. Through our work in education, public engagement and collaboration with other sectors. we inspire people to get involved in all areas of science - whether it be natural. social, technological, or otherwise. We have established major campaigns and initiatives across the UK, including British Science Week, the British Science Festival, and the CREST Awards. Our UKwide network of volunteer-led branches run thousands of events each year and we bring together thought leaders, opinion formers and professionals from across industry and society, including business, politics, sport and the arts. Society's biggest issues cannot be solved by science alone. By unlocking the potential of a more diverse group of people, we increase our ability to tackle some of the world's most intractable challenges and shape our future for the better.

### Thanks

The British Science Association would like to thank our sponsors – EY, Diageo, SCI, London Chambers of Commerce and Industry, and the Royal Institution – for all their support.

### Advisory board

**Lord David Willetts** Chair of the British Science Association

**Professor Alice Roberts** Professor of Public Engagement in Science, University of Birmingham

### **Ed Whiting**

Chief of Staff and Director of Policy, Wellcome Trust

**Fiona Fox** Chief Executive, Science Media Centre

**Professor Jackie Hunter CBE** Chief Executive, BenevolentBio

### **Jamie Angus**

Deputy Director, BBC World Service Group

### **Baroness Onora O'Neill**

Professor of Philosophy, University of Cambridge

Rain Newton-Smith Chief Economist, CBI

**Rowena Ironside** Chair, Women on Boards UK

**Professor Uta Frith** President 2017/18, British Science Association

**Vinay Gupta** Technologist and Policy Analyst



### Ben Taylor

### EY UK&I Assurance Chief Innovation Officer

Ben leads a team which develops technologies and solutions to protect our clients' brand, people, and intellectual property.



EY's purpose is to build a better working world. We see that societal trust in business is at an all-time low, with

business is at an all-time low, with reputations and brands ever harder to protect. Our intent is to protect investors and society from future issues that will damage trust.

We are mindful of the need for standards and ethics that will influence the development and application of emerging technologies in a positive way, ensuring their optimum use and acceptance by all stakeholders. We are proud to be sponsoring this year's Huxley Summit and debate the ethical and practical challenges of creating publically acceptable technical innovations. We will consider how we might introduce greater transparency and auditability into the technologies now becoming an integral part of the way we work and live. We are delighted to be leading the Chapter 2 debate exploring the challenges of the data explosion and the commercial imperative.

In support of the Summit we have undertaken research which has shown that:

- An overwhelming majority of corporates agree trustworthiness is important, but most are having to work much harder to demonstrate it:
- Corporates say that they are aware of ethical issues, but that short-term decision making will drive the approach to data;
- Regulatory compliance is difficult and unlikely to be sufficient - only a small proportion are on track for GDPR deadline and less than half believe GDPR will be sufficient to keep their data safe and secure;
- There is emerging evidence supporting the commercial imperative around the ethics of data given how markets react.

# **Speakers**



### Samira Ahmed

Samira is a broadcaster and writer who presents Front Row on BBC Radio and Newswatch on the BBC News Channel. She

also presents The Proms on BBC4. Her documentaries for BBC Radio 3 and 4 include HG Wells and H Bomb and was previously a reporter on Newsnight, The Today Programme and a presenter of the Channel 4 News. She writes regularly for newspapers and magazines including The Guardian, the New Statesman, The Big Issue and The New European.

### Evan Davis

Evan is the main presenter of the BBC2 show, Newsnight, the host of Dragons' Den and the Radio 4 business discussion programme

Bottom Line. Before Newsnight, Evan was a presenter of the Today programme on BBC Radio 4, in addition to spending seven years as the Economics Editor of the BBC. His latest book is called 'Post Truth: Why we have reached Peak Bullshit and what we can do about it'

### Lord Chris Holmes MBE

Chris is a Conservative member of the House of Lords Select Committee on Artificial Intelligence and

co-chair of the Parliamentary Groups on Assistive Technology and Fintech. Chris is also a Diversity Adviser to the Civil Service and is non-executive director at Channel 4. Chris was Director of Paralympic Integration at the London 2012 Organising Committee (LOCOG) and is a former Paralympic swimmer who won nine gold, five silver and one bronze medal across four Games, including a record haul of six golds at Barcelona 1992.

### **Professor Dame Ottoline Leyser**



Ottoline is a Professor of Plant Development and Director of the Sainsbury Laboratory at the University of Cambridge.

Her research uses control of shoot branching in Arabidopsis as a model system to understand aspects of plant development. She currently serves on the Prime Minister's Committee on Science and Technology, and Chairs the Roval Society's Science Policy Advisory Group. In 2017 she was appointed Dame Commander of the Order of the British Empire for services to plant science, science in society and equality and diversity in science.

### Dr Pippa Malmgren



Dr Malmgren is the Founder of H Robotics, which makes HiSight - a military grade, aerial robotic platform (drone) with deep data

management for commercial enterprises. She is a Presidential advisor who served in the White House for President George W. Bush. She is now a Non-Executive Board Member of the British Department of International Trade, chairs the Lewis Media Advisory Board, and is on Indiana University's School of Public Policy and Environmental Affairs. She is ranked in the top 20 Most Influential Economists in the World, the 10th Most Influential in Geopolitics and in the top Women in Finance Power List in 2017.

# Kenneth Cukier



Times bestselling author, the Senior Editor for Digital at The Economist in London and a trustee of Chatham

House. He is the co-author of "Big Data: A Revolution That Transforms How We Live, Work and Think," an award-winning book translated in over 20 languages. His TED Talk on AI, data and society has over 1 million views. Previously, Kenn was a foreign correspondent for two decades in Europe, America and Asia.

### Sarah Drinkwater

Sarah heads up Campus London, Google's first physical start-up hub, providing founders with work and event space,

mentorship and innovative educational programs as well as access to a vibrant start-up community. Her previous role at Google was launching a global Google Maps community team. Before Google, she worked in content and community for startups in the UK and Germany. advised brands such as Nokia on their social strategy and was a journalist for the Guardian.



# Justin is vice-chair of private

Justin King CBE

equity firm Terra Firma overseeing a portfolio that stretches from cinema chains to garden centres.

Previously he served as CEO of J Sainsbury for a decade, at the time one of the youngest CEOs in FTSE 100 history, Justin's time in charge is seen as a success story of modern British business. Justin led Sainsbury's during huge shifts including diversifying into general merchandise, the rise of online shopping and discount retailers the move into smaller, convenience stores, and a cutthroat price war between rivals.

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# **Speakers**



### Chi Onwurah MP

Chi is the MP for Newcastle upon Tyne Central and is also Shadow Minister for Industrial Strategy Science & Innovation for Labour.

Prior to Chi's election to Parliament in May 2010 she worked as Head of Telecom's Technology at the UK regulator Ofcom focussing on the implications for competition and regulation of the services and technologies associated with Next Generation Networks. Chi is a Chartered Engineer with a BEng in Electrical Engineering from Imperial College London and an MBA from Manchester Business School.

### Professor Sophie Scott

Sophie is Deputy Director and Head of the Speech Communications Group at UCL's Institute of Cognitive Neuroscience. Sophie's

research investigates the neural basis of vocal communication – how our brains process the information in speech, voices, and laughter. She was elected a Fellow of the Academy of Medical Sciences in 2012 and a Fellow of the British Academy in 2016. Her work was featured in a September 2013 edition of the BBC Radio Four Programme The Life Scientific. In December 2017 Sophie will deliver the Royal Institution's annual CHRISTMAS LECTURES.



Ben is the EY UK's Chief Innovation Officer for the Assurance business. Ben runs a team developing technologies and

solutions to help clients protect their strategic assets such as people, brand and intellectual property. As part of this, Ben is researching the risks and ethical and trust issues relating to emerging technologies such as artificial intelligence, robotics and blockchain. Ben has worked with global multi-nationals, including Vodafone, Shell and Centrica, helping them to develop data strategies, technologies and skills.

### Jérôme Pesenti Jérôme is the C BenevolentTech technology divis BenevolentAl a

Jérôme is the CEO of BenevolentTech, the technology division of BenevolentAl, a British technology company using

artificial intelligence to accelerate scientific discovery. Jérôme is an expert in the commercialisation of Al. He co-founded Vivisimo, a tech firm specialising in text mining and enterprise search engines, which was acquired by IBM. At IBM he became chief scientist of big data, created and led the development of the Watson Platform - the first comprehensive cloud platform for artificial intelligence.

### Dr Tali Sharot

Tali is the author of 'The Influential Mind' and 'The Optimism Bias'. She is a Reader in Cognitive Neuroscientist at University

College London, where she is the director of the Affective Brain Lab. Her research focuses on how emotion, motivation and social factors influence our expectations, decisions and memories. Her papers have been published in top scientific journals including Nature, Science, Nature Neuroscience and Psychological Science. She was a speaker at TED's annual conference 2012 and her essays have been published in Time Magazine, The New York Times, CNN, The Guardian, Observer, BBC and more.



### Lord David Willetts

David is Chair of the British Science Association and the Executive Chair of the Resolution Foundation as well as a visiting Professor

at King's College London. He was Minister for Universities and Science and has served previous roles in the Government regarding parliament, policy and finance. He has also written widely on economic and social policy with his most recent book, 'A University Education', published in November 2017.

# Sponsors and partners

# Attendees

### Headline sponsor



EY is a global leader in assurance, tax, transaction and advisory services. The insights and quality services we deliver help build trust and confidence in the capital markets and in economies the world over. We develop outstanding leaders who team to deliver on our promises to all of our stakeholders. In so doing, we play a critical role in building a better working world for our people, for our clients and for our communities.

For more information about our organisation, please visit ey.com.

### Major partner



Diageo is a global leader in beverage alcohol, and our outstanding collection of brands are enjoyed in more than 180 countries around the world. We own 20 of the world's top 100 spirits brands among which Johnnie Walker, Smirnoff, J&B, Buchanan's, Cîroc, Captain Morgan, Tanqueray and Baileys.

We are a business built and sustained through innovation, and developing new ideas is crucial to our growth strategy. We aim to create a positive role for alcohol in society by reducing harmful drinking, building thriving communities and continuously reducing our environmental impact.

### **Supporters**



The Royal Institution is an independent charity dedicated to connecting people with the world of science and encouraging science education, discussion and debate. Its mission is to inspire everyone to think more deeply about the place of science in their lives.

For more information about the Royal Institution, please visit www.rigb.org.uk. The Royal Institution are a supporter and the host of the Huxley Summit 2017.



SCI is an inclusive, multi-disciplinary and multi-science forum connecting scientists and business people. SCI promotes innovation via its international network which advances the commercial application of science into industry for public benefit.

SCI works in crucial sectors as diverse as food and biorenewables, water, environment, energy, materials and manufacturing, and health and well-being.

### LONDON CHAMBER

London Chamber of Commerce and Industry (LCCI) is the capital's largest independent networking and business support organisation. Representing the interests of London businesses, we create thousands of connections every year and offer our members a wide range of practical and professional services.

### Leona Shepherd Tony Bellis

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Juliette Morgan Keith Ward Jonathan Brüün Amy MacLaren

Jon Fitzmaurice

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British Science Association

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## Attendees

### Gill Riches Katherine Mathieson Stephen Nuttall Matt Locke Professor Julia Buckingham Melanie Lee Sarah Atkinson Dr Owen Jackson Dr Tony Raven Sarah Main Rain Newton-Smith Subhash Thakrar Vicky Pryce **Keith Thompson** Aidan Courtney Susan Webster

### Nick Wells Dr Debbie Hopkins

Pawel Konzal Troy Preston Sarah Laessig Julie Ashworth Vasilis Tsolis Clara Durodié **David Coughtrie** Andy Richards Sitar Teli Alan Mak MP Stephen Metcalfe MP

Tony Smith Alison Nimmo Liz Brandt Adrianna Whish Lauren Walker Lord David Prior

Stephen Axford

### Joe Butler Sam Jones Professor Ian Boyd

Jo Bacon Professor Phil Blythe Dr Siobhan Campbell Jon Elliott Dan Enachescu Alan Butler Aileen Keyes Laurence Meehan Jill Ridlev Smith **Baroness Martha Lane Fox** 

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Chief Executive Chief Data Officer EMEA Parliamentary Under-Secretary

Deputy Director, Science, Research & Innovation Funding Director

Principal Science Officer Chief Scientific Adviser

Head of Behavioural Insights Chief Scientific Adviser Deputy Chief Scientific Adviser Senior Strategy Advisor Head of Public Policy Europe Global Policy & Public Affairs Director Head of Alcohol in Society Head of Public Affairs Non Executive Director Founder & Executive Chair

Clancy Childs Francesca Warner Justin Westcott John Hutchins Louise Kingham OBE Mark Titterington Dr Glenn Watts Leanne Kemp Saniav Bhandari Jeanne Boillet Ariane Buescher Sam Davies Harry Gaskell Rahul Gautam Richard Goold Rhian Johns Julia Kriegler Vanessa Matiussi Amil Pasic Kim Pavkel Mike Rudberg John Simlett Ben Tavlor Ian Williamson Tanya Castell MBE **Robert Madelin** Helen Mundav Tim Rycroft Sam Myers Ann Tourle Adam Grodecki David Rouch Natasha Good Julian Pritchard Almira Cemmell

Jarmo Eskelinen Nicola Yates OBE Tamar Kasriel Pauline Egan Annette Nabavi Nigel Clarke Sir John Chisholm Sarah Matthew Alissa Davies

Helen Lamb

Sarah Drinkwater Mike Warriner Dr Sarah Gates **Oonagh Harpur Dr Rupert Lewis** Mary Daunt Natalie Bennett David O'Toole

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Director

Chief Product & Technology Officer Principal Managing Director Head of Connected Home Chief Executive Chief Executive Deputy Director of Research Founder & Chief Executive Partner Global Assurance Innovation Leader Blockchain Lead & Innovation Manager Assistant Director EMEIA Chief Innovation Officer & FSO Partner TMT Sector Leader & Head of TMT Advisory Services UK&I Head of Tech Law, Partner Marketing Lead - Assurance Marketing Manager Business Modelling & Analytics Manager Director (Innovation Lead) EYX Programme Director Assurance Partner Partner Chief Innovation Officer (Assurance) Director of Tech Law Independent Non-Executive Director Chairman Chief Scientific Officer Corporate Affairs & Sustainability Director Head of Global Economic Issues Head of Personnel Executive Director Partner Corporate TMT Partner Partner Managing Director Vice President, Strategic Pursuits Unit, Global Delivery Group Chief Innovation & Technology Officer Chief Executive Managing Director Client Experience Director Non Executive Director Chai Executive Chair Chair Public Policy and Government Relations Manager Head of Campus Director of Engineering Data Policy Advisor Non Executive Director Director Non-Executive Director Politician

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# Attendees

Jane Player

Jen Stebbing	Hawthorn Advisors	Associate Director
Mary Trainor	Health and Safety Laboratory	Head of Science Impact & Quality
Imelda Redmond CBE	Healthwatch	National Director
Dame Frances Cairncross	Heriot Watt University	Chair of the University Court
Chris Knight	hevnly	Chief Technology Officer
Vinay Gupta	Hexayurt	Founder
John O'Brien	Hitachi Consulting	Chief Strategy Officer  Executive Vice
		President
Professor Anthony Finkelstein	HM Government	Chief Scientific Adviser for National
-		Security
Dr Gillian Tully	HM Government	Forensic Science Regulator
Joanna Baldwin	HM Revenue & Customs,	3
	Aviva France and Starcount Insights	Portfolio Non-Executive Director
John Salmon	Hogan Lovells	Technology Partner
Darrin Disley	Horizon Discovery and BIA Board	Chief Executive
Professor Lord Robert Mair	House of Lords	Science and Technology
Professor Lord Robert Main		Select Committee
Baroness Sally Morgan	House of Lords	Science and Technology
Baroness Sany Morgan	House of Lorus	Select Committee
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Baroness Pauline Neville-Jones	House of Lords	Science and Technology
Land Free est Ordermuch	Linear of Londo	Select Committee
Lord Ernest Oxburgh	House of Lords	Science and Technology
		Select Committee
Lord Colin Renfrew	House of Lords	Science and Technology
		Select Committee
Baroness Barbara Young	House of Lords	Science and Technology
		Select Committee
Baroness Julia King DBE FREng	House of Lords	Committee on Climate Change Cross
		bench Peer   VC of CCC
Ruairidh Husband	HSBC	Head of Data Analytics, Global Risk
		Analytics
Sally Cheshire	Human Fertilisation and	
	Embryology Authority	Chair
Michael Izza	Icaew	Chief Executive
Dr Claire Thorne	Imperial College London	Executive Officer to the Vice-President
		(Innovation)
Walter Merricks CBE	IMPRESS	Chair
Kate Jack	innogy Consulting GmbH	Head of UK Innovation Hub
Dr Ruth McKernan CBE	Innovate UK	Chief Executive
Phil Smith	Innovate UK	Chair
Dr David Hardman MBE	Innovation Birmingham	Chief Executive
Mike Kennedy	Inogesis	Director
Tim McSweeney	Inogesis	Solutions Director
Dame Uta Frith	Institute of Cognitive Neuroscience	Emeritus Professor of Cognitive
	Ŭ	Development
Paul Hardaker	Institute of Physics	Chief Executive
Professor William Yule	Institute of Psychiatry,	
	Psychology & Neuroscience	Emeritus Professor of Applied Child
	5 55	Psychology
Andrew Wall	Intellectual Property Office	Head of Industrial Policy
Nigel Inkster	International Institute for	
	Strategic Studies	Senior Adviser
Tom Kibasi	IPPR	Director
Elizabeth Passey	J Stern Co	Senior Adviser
Tim Hanford	J.C. Flowers	Managing Director, Europe
	J.C. Flowers	

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### Jan Hall Deborah Bull Sir David Omand GCB

Professor Karen Yeung Peter Williamson **James Stewart** Chi Onwurah MP

Daniel Zeichner MP Dr Derek Craston Helen Crooks Professor Richard Clegg Stuart Porter Angela Reed Sean Mckee **Colin Stanbridge** Professor Simon Tavaré Daniel Wong Jane Frost CBE Mike Cowen Nick Hoffman Sir Cyril Chantler GBE Chris Mollov Daniel Batts Daniel Kenyon-Smith Steven Trew Nigel Willson Sally Britton **Martin Fahev** Noriyuki Sato David Kelnar Jeremy Long Professor Gillian Leng CBE Professor David Haslam CBE

Ed Humperson Dr Tim Hill Geoff Mulgan Jeremy Vincent Stuart Calvert

Ali Harrison John Paul Maytum MBE Amanda Spielman Tony Jones Katherine Priestlev John Timothy Julia Grant Aimee Goldsmith Ted Fjällman Jonathan Garrett David Watson Dr Gill Samuels CBE

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# Attendees

Carolyn Stebbings David Cleevely CBE FREng Linda Zeilina Neil Murray Olav Hellobo Eddy Littler Susan Watts Professor Angela Karp

Philip Greenish Nigel Williams

Professor Gail Cardew Professor Alex Halliday Dr Robert Parker Christopher Lake

Stuart Dorman Ian Mulvanv Mark Howden Adam Preston **Christine Ashton** Dr Chris Francis Stuart Martin **Richard Goodfellow** Sharon Todd Ian Bradshaw **Fiona Fox Dame Mary Archer Roger Highfield** Carol Monaghan MP Azad Ootam Tracey Brown Nick Ross Andrew Hartshorn Takashi Takenoshita Professor Paul Beasley Angelica Anton Natasha Sayce-Zelem Zoe Cunningham Tim Edwards Elizabeth Varley Anthony Miller Julian David **Catherine Brien Roberto Hortal** Mark Aikman

Jonny Ohlson **Crispin Bolt Rebecca Endean** Graham Turnock Samantha Tucker-Samaras

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**Catherine Holloway** Professor Mark Maslin

Professor Dame Glynis Breakwell Sir Tom Blundell Dame Athene Donald

Baroness Onora O'Neill Lord Martin Rees

**Professor Joyce Tait** Professor Ian Wilmut

Professor Steve Beaumont OBE Dr Dave Richards Professor Natasha Merat

Dame Jocelyn Bell Burnell Professor Sarah Harper Professor Ursula Martin Professor Jim Al-Khalili OBE

Maziar Nekovee

Laurie Benson Jane Franses Rodolfo Rosini David Johnson Kurt Rowe Imran Khan Ed Whiting Audrey Mandela

Rowena Ironside Michael Maran Sally Duckworth Andv Morris Dr Charles Akle, BSc, MS, FRCS Tom Chatfield Alison Maitland

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