



AESIS

NETWORK FOR
ADVANCING & EVALUATING THE SOCIETAL IMPACT OF SCIENCE

National Museum of the American Indian - 17 & 18 October 2019

*Welcome to the third international **AESIS** conference on*

Impact of Social Sciences and Humanities on Society



A network diagram with red and black nodes and lines, representing social connections, is visible in the top left corner of the slide.

The Impact of Social Sciences and Humanities on Society

17-18 October 2019, Washington DC

Introduction of the second day by the conference chair

Alan Leshner

Interim CEO of the American Association for the Advancement of Science

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The Impact of Social Sciences and Humanities on Society

17-18 October 2019, Washington DC

Rasmuson Theater, 9.10 - 10.05am

Plenary opening

Ronald Kassimir

Síle Lane

Richard Chylla

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Ronald Kassimir

Vice President of Programs, Social Science Research Council

The long run is a misleading guide to current affairs. In the long run we are all dead. Economists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us that when the storm is past the ocean is flat again.

SCALE

Research Projects

Research Programs

Long-Term

Field Building

Short-Term

**TIME
FRAME**

Field Building:

Nurturing the infrastructure, or enabling conditions, that increase the probability that future research, and future researchers, have the broad imaginations, deep capacities, and intellectual and professional relationships – across disciplines – to contribute to scholarly understanding and problem solving for the public good.

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Síle Lane

*Head of international campaigns and policy,
Sense about Science, United Kingdom*



Evidence Week

Bringing researchers, the public
and policy makers together

Síle Lane

Head of international campaigns and policy

Sense about Science stands up for the public interest in sound science and evidence.



Evidence matters EU video



Evidence Week 2018

The first ever Evidence Week in the UK Parliament



“We are not living in a ‘post-truth’ society. We only need to look around at the many people and groups from all walks of life who are investigating claims and marshalling evidence to work out the nature of problems and how to tackle them. They expect parliament to be doing the same.”

Tracey Brown, director
of **Sense about Science**

Read more at
theguardian.com

From 25th to 28th June MPs joined with communities and researchers to look at how to use scientific evidence and statistics to support effective scrutiny and policy.

Evidence Week was an initiative of Sense about Science, the House of Commons Library, Parliamentary Office of Science and Technology and Commons Science and Technology Committee, and held in partnership with SAGE Publishing. Training and briefings were given in collaboration with community organisations, research and regulatory bodies.



A huge stand designed by Soapbox, in Upper Waiting Hall, provided 3 minute briefings on different kinds of data.



Chi Onwurah MP responds to community speakers.



Phil Gomersall of the National Allotment Society and Nick Ross, Sense about Science trustee.



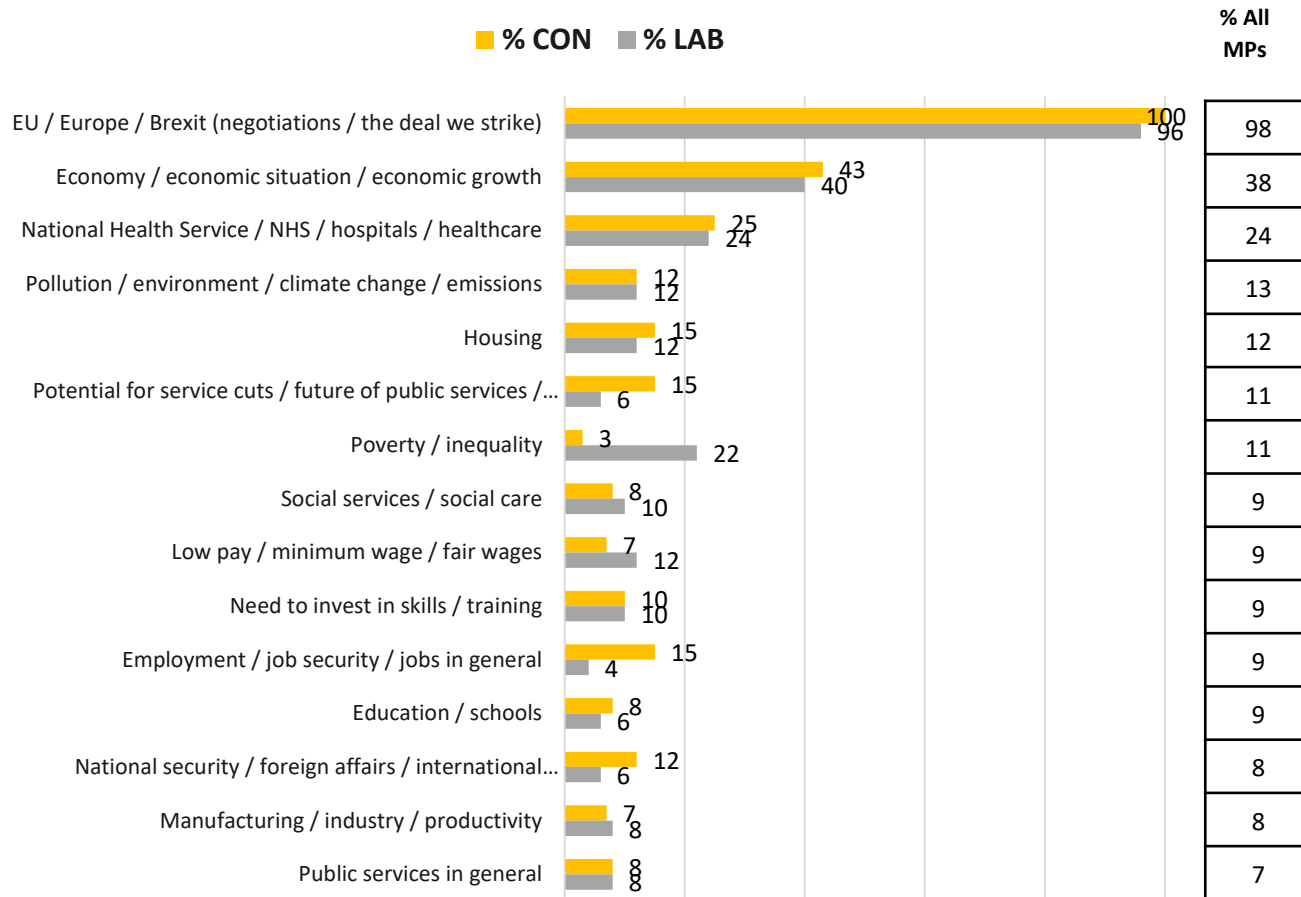
Sarah Wollaston MP responds to community speakers.

The themes for the four days were:

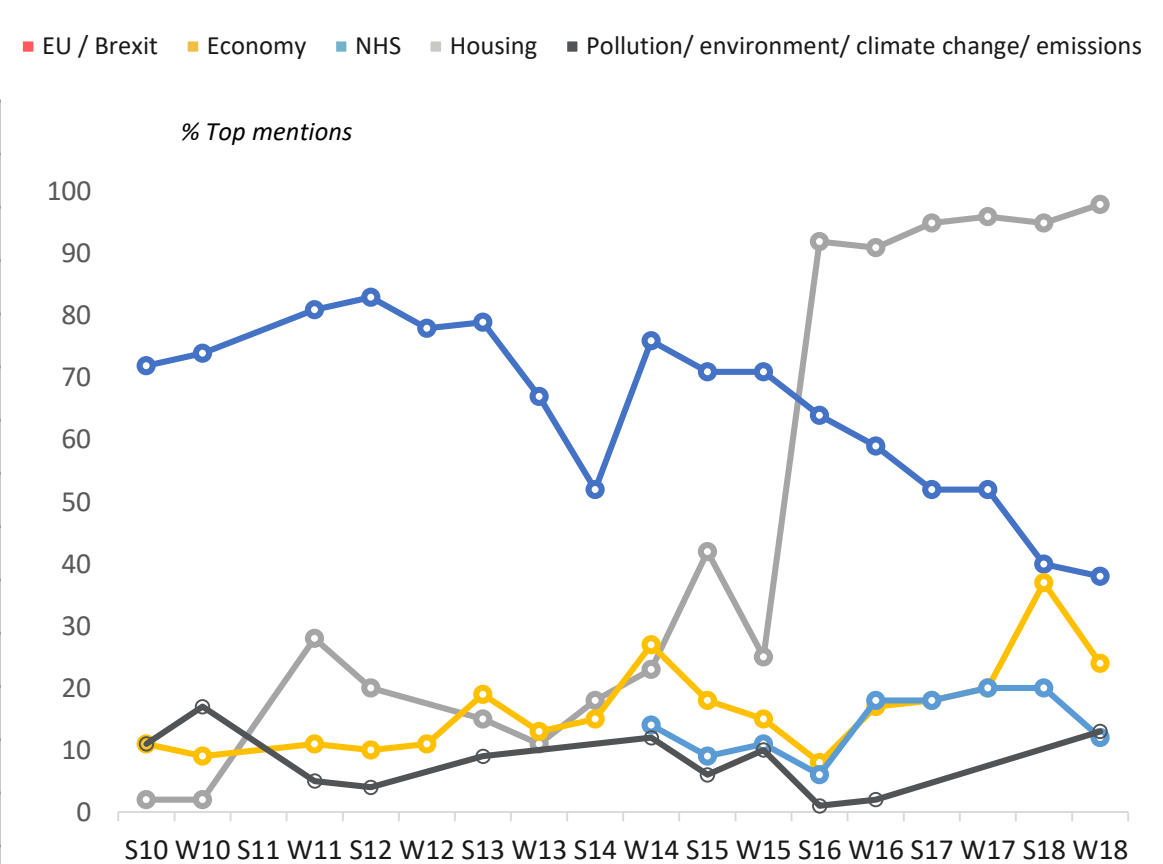
- **DAY 1 MONDAY 25 JUNE**
QUESTIONING QUALITY
- **DAY 2 TUESDAY 26 JUNE**
NAVIGATING DATA ANALYSIS AND STATISTICS
- **DAY 3 WEDNESDAY 27 JUNE**
WHAT IS EFFECTIVE IN HEALTH AND ELSEWHERE
- **DAY 4 THURSDAY 28 JUNE**
‘WICKED’ PROBLEMS

Issues facing Britain

What do you think are the most important issues facing Britain today?



Base: All MPs (98), All Conservative MPs (48), All Labour MPs (40)

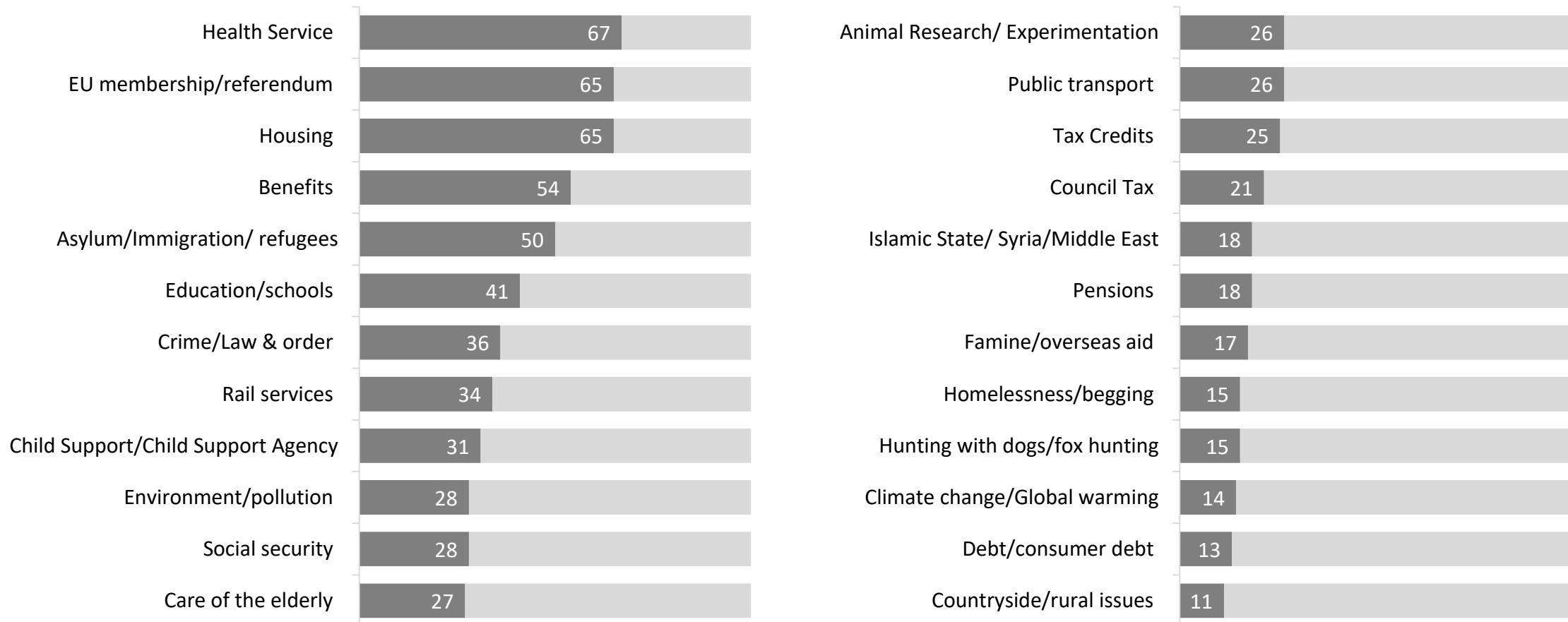


Ipsos MORI Survey of Members of Parliament, Winter 2018

Postbag (all MPs) – summer 2018

Which of the subjects of the list, if any do you receive the most letters in your postbag, or receive most approaches about from individuals in clinics or other ways?

All MPs / % mentioning (top mentions)



Opening event: Community groups

- Constituents across the UK came to Parliament, many for the first time, to speak for 90s on why evidence matters to them and their communities
- They brought to life the range of evidence-related issues that MPs face in their role, highlighted in the findings launched at the event from Ipsos MORI's MP survey and in opening remarks by Penny Young, House of Commons Librarian and Director of Research and Information



Penny Young, House of Commons Librarian, and Director of Research and Information at the opening event



Shannon Trust declaring why evidence matters to them in their mission to teach adults in prison to read



Norman Lamb MP at the opening event in Strangers' Dining Room in the House of Commons



3-minute evidence pods

- New format for 2019 concentrated on two days of short evidence briefings similar to those that had been most effective in 2018
- 20 research groups gave briefings on diverse topics such as how to visualise community inequalities, work out the effect of pupil premium or see the scale of the drone noise problem
- We counted over 163 of these innovative briefings given to MPs and peers across the two days



Paul Sweeney MP at the 'Visualising community inequalities' pod



Maggie Throup MP at the 'Antimicrobial resistance' pod



The setup in Upper Waiting Hall



JUST 3 MINUTES...

Rapid one-to-one briefings at Evidence Pods in the Upper Waiting Hall

TUESDAY 25 JUNE, 9AM-1PM



POD 1 VISUALISING COMMUNITY INEQUALITIES

You can now visualise the complex relationships between communities, the built environment and inequality in our cities. By analysing and representing not only our roads, paths and buildings, but also human activity, social infrastructures and power relationships, this novel technology shows up existing inequality. It also shows the likely effect of policy decisions that help or hinder spatial and social connections.



POD 2 HOW DO REGIONS THRIVE?

Building up local and regional economies, and tackling inequalities at the local level, are pressing concerns. LSE research combines social survey, electoral and economic data sets to build detailed regional profiles and identify specific opportunities to stimulate growth. Data inferences provide a regional lens on how social inequalities are changing and where progress can be made in addressing them.

WILEY



POD 3 USE THE RESEARCH BASE ON ADVERSE CHILDHOOD EXPERIENCES (ACES)

Adverse Childhood Experiences (ACEs) are highly stressful events or situations that directly harm children or adolescents or negatively affect the environment in which they live; from abuse to growing up in a household with separated parents. The Commons SciTech Committee was concerned about the lack of government strategy or effective oversight mechanisms to monitor what evidence local authority approaches are based on. Our pod will provide a 3-minute introduction to the kind of evidence that can be used to develop effective interventions and evaluate them.

NIHR

POD 4 RESEARCH EVIDENCE TO IMPROVE YOUNG PEOPLE'S MENTAL HEALTH

Many mental health problems start in childhood or adolescence, but very few of these young people have access to evidence-based treatments. Our pod will highlight how NIHR research has led to the development of efficient and effective interventions so that children and young people can get help when they first need it.

HOURS OF PARLIAMENT

HORIZON SCANNING

Join us to find out how we bridge research and policy by identifying emerging topics of interest for Parliament, producing impartial and peer-reviewed POST notes, and providing a host of exciting services for Committees and parliamentarians.



JUST 3 MINUTES...

Rapid one-to-one briefings at Evidence Pods in the Upper Waiting Hall

TUESDAY 25 JUNE, 1PM-5PM

POD 1 2021 CENSUS

Once every ten years the census provides an opportunity to build a detailed and comprehensive picture of the nation. Our 3-minute briefing will showcase how we will engage with all communities to ensure

JUST 3 MINUTES...

Rapid one-to-one briefings at Evidence Pods in the Upper Waiting Hall

WEDNESDAY 26 JUNE, 9AM-1PM



POD 1 UNDERSTAND THE PSYCHOLOGY OF ROAD USERS

When driving, we make life-or-death decisions in an instant. Research into how the human brain takes in, stores and responds to information is essential to successful road safety policy. Our interactive display will show you policy can take account of these to reduce deaths on our roads – and give you insight into your own driving habits too.



POD 2 THE VIRTUAL HUMAN: A CASE STUDY IN COLLABORATIVE DATA

Bridging human biology, chemistry, physics and computer science, the Virtual Human uses digital evidence – from the letters in your genetic code to medical imaging of your heart – to seek real improvements to your healthcare. It exemplifies the power of using data on multiple scales, from multiple sources in collaborative projects between research teams in the UK and internationally.



POD 3 RESEARCH AND REGULATION TO STOP FOOD POISONING

This evidence pod will share insights on how the UK uses evidence to inform food safety decisions and what can go wrong. It will show you the impact regulators have on industry standards and how a reduction in Campylobacter contamination in chicken could lead to 150,000 fewer cases of illness and a saving of £110m each year.



POD 4 ANTIMICROBIAL RESISTANCE: HOW WE ARE TACKLING THE LOSS OF WORLDWIDE MEDICINE

The research and policy challenges of antimicrobial resistance (AMR) are daunting. The UKRI AMR evidence pod will provide a simple entry into this crucial and complicated issue, with insight into cutting-edge AMR innovation and how scientific research is supporting public policy.



EVIDENCE IS A PUBLIC INTEREST ISSUE

From children's mental health to the quality of the air we breathe, evidence matters to constituents from different walks of life across the UK. Get an embargoed copy of our guide to data science and hear how you can support the Ask for Evidence community campaign to hold the powerful – including politicians – to account.

4

5

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JUST 3 MINUTES...

Rapid one-to-one briefings at Evidence Pods in the Upper Waiting Hall

WEDNESDAY 26 JUNE, 1PM-5PM



POD 1 DRONES – AND THE RESEARCH YOU'LL NEED TO USE

Is society ready for pervasive use of drones... and their noise? Drones could be flying in urban locations within a few years. This evidence pod will give you a 3-minute briefing combining current knowledge about drone noise, public reaction, design challenges and operational realities. It will chart the research route towards effective control, economic benefit and the looming political problem if the ground rules are not speedily set.



POD 2 ELECTRIC VEHICLES: SEE WHY AI IS NECESSARY

While promising to cut pollution and greenhouse gas emissions, the uptake of electric vehicles will create an unprecedented load on the UK electricity infrastructure. At our evidence pod, you will learn what artificial intelligence can do – to manage vehicle charging in a smart way within existing infrastructure, and to turn electric vehicles into smart batteries (vehicle-to-grid). Within 3 minutes you'll see the policy challenges that need to be overcome to realise a smart grid.



POD 3 BRITAIN BREATHING

Get familiar with a new state of the art approach using 'citizen sensors' to gather real-time local data on asthma and allergies and how environmental factors such as pollutants may or may not be playing a part. With these new data you will be able to compare your constituency with others.



POD 4 CLIMATE CHANGE TARGETS FOR YOUR LOCAL AREA

Do you know about science based, Paris Agreement aligned climate change targets for your local area? Researchers at Tyndall Manchester have developed an interactive tool to help local areas set their own climate change targets based on the latest research.



WHAT MPS ARE CONCERNED ABOUT

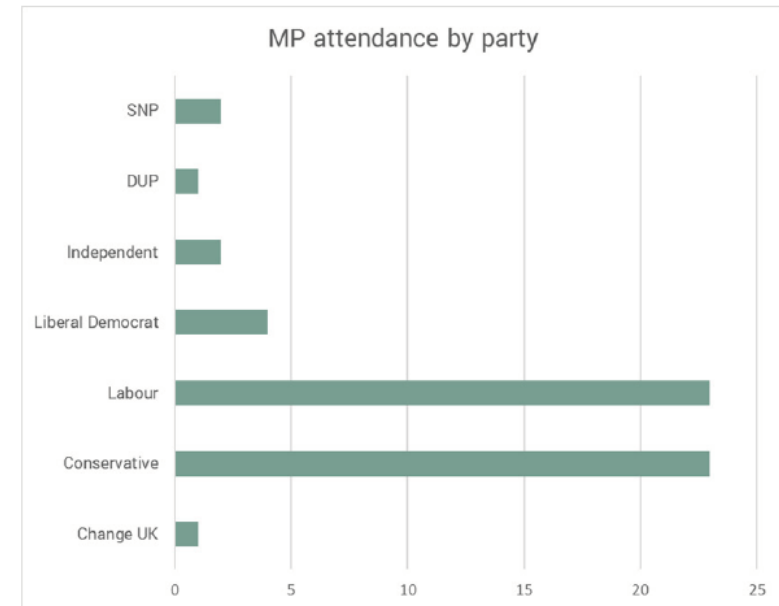
View the results from Ipsos MORI's biannual survey of MPs, on the most pressing issues facing their constituency and the nation, as well as a topic analysis of MPs' postbags.

Bringing research and parliamentarians together

- Over 83 MPs engaged (13% of all MPs), plus 20 peers and 29 government/parliamentary staff
- Other attendance was from parliamentary staff, including clerks of committees and committee specialists (20) plus government staff, including staff at the Cabinet Office, BEIS, and DEFRA (15).
- Members of the public engaged by: calling their MP to discuss the event, meeting their MP in Upper Waiting Hall, attending or speaking the opening event, attending/volunteering throughout the week or through the research groups



Lilian Greenwood MP at the 'Virtual human' pod



The new format was well received by MPs & peers...

“What was great about this was that it encouraged us to see it as it was just 3 minutes. Now, I did not take just 3 minutes, I took longer, because I was really interested.”



Catherine McKinnell ✓
@CatMcKinnell

Follow

Good to drop by the Durham University Evidence Centre for Education #EvidencePod in Parliament yday & hear more about their work on the impact of Pupil Premium as part of #EvidenceWeek @DECE_DU #DECEatEvidenceWeek



Matt Western MP ✓
@MattWestern_

Follow

Great to hear from @UniofNottingham about their latest research which could help improve safety and prevent fatalities on our roads. Really glad to see academics engaging with Parliament during #EvidenceWeek! #SeeBikeSayBike

5:45 PM - 27 Jun 2019

“I learnt more in five minutes than in a very long time.”

“I thought the pods were an excellent concept and coupled with the enthusiasm of individuals was a good partnership for promoting science”



David Anderson ✓
@bricksilk


Follow

Replying to @senseaboutsci @PublicPolicyUoS

Thanks for laying this on – you did a great job. It was interesting to discuss the role of predictive analytics in managing electricity consumption, and how it may impinge on protection of personal data.

6:22 PM - 26 Jun 2019

Evidence Week USPs and Sense about Science's approach

- Brings constituents from across the UK to Parliament, many for the first time, to make the case to policy makers that research and evidence matters
 - Identifying priority issues for policymakers
 - Community groups and the public bringing the issues to life and showing policymakers how the issues are being presented in society
 - Innovative 3-minute format is a highly efficient mechanism for parliamentarians to access insights. It also prioritises messaging for researchers
 - Training researchers and research organisations in communicating quickly, relevantly and usefully
 - A focus on imparting lasting insight, tools and resources rather than a single issue message
- 

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Richard Chylla

Chair of AUTM



autm

Transforming Ideas into Opportunities

University knowledge/technology transfer: creating impact in social sciences and humanities

Richard W. Chylla, PhD, CLP, RTTP
Executive Director at Michigan State University

2019 Chair of AUTM





About AUTM



AUTM is...

AUTM is a nonprofit leader in educating, developing, promoting and inspiring technology transfer practitioners to make the world a better place through the commercialization of academic research.

AUTM's global community of 3,000 members represents businesses and government organizations, and more than 800 universities, research institutions and teaching hospitals.



AUTM's vision is...

Advancing discoveries for a
better world.

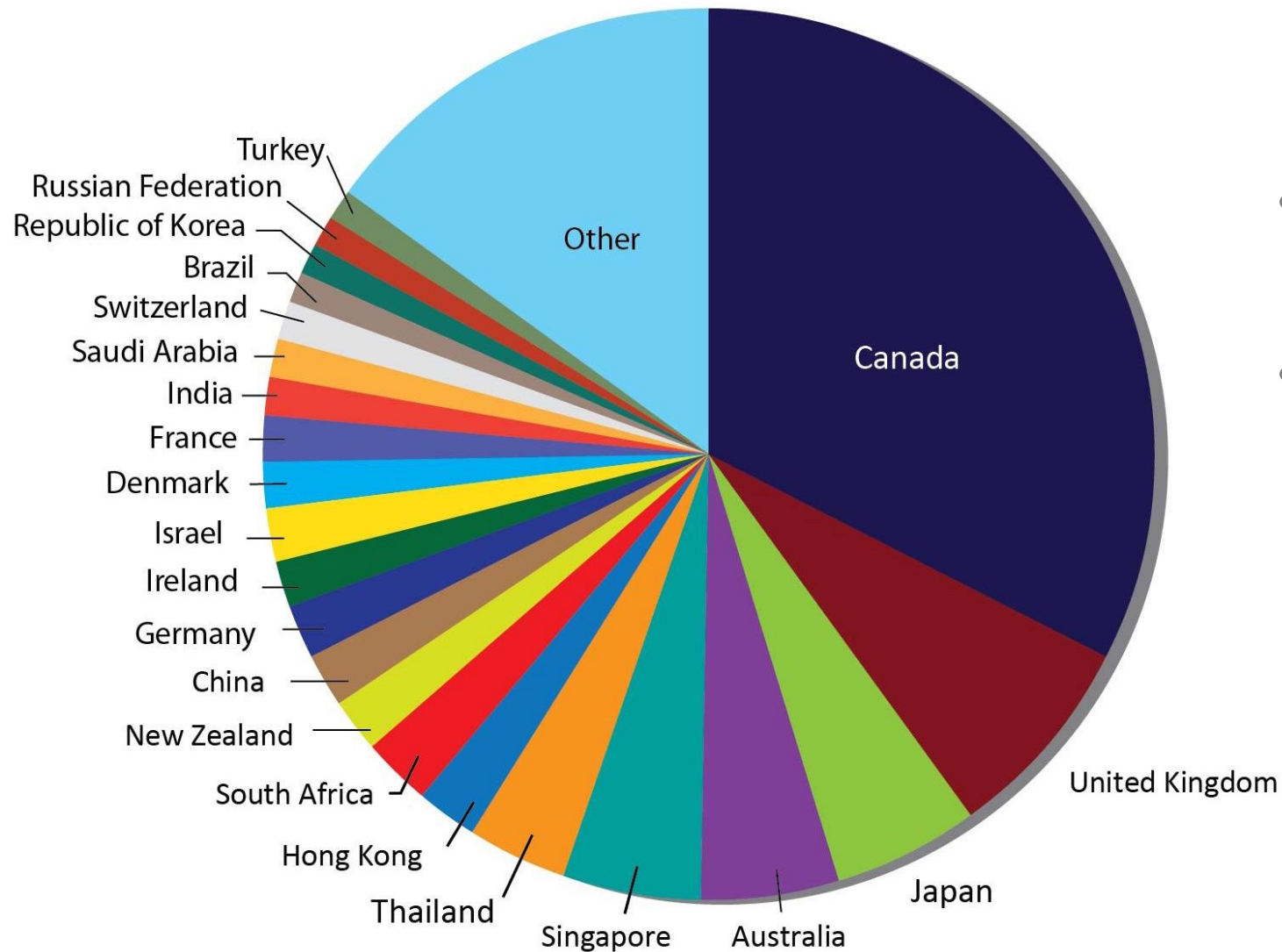


AUTM's mission is to...

Support and advance
technology transfer
worldwide.



A Global Community



- 20% of membership is located outside United States
- 60 countries represented by AUTM membership

Maximizing Impact

- Under Bayh-Dole, university and researcher may retain title to innovations made using federal research dollars
- This system incentivizes the transfer of technology to the private sector for job creation
- Net licensing revenues to universities go back into more research, education, or patenting costs
- Initial economic development usually happens locally – more than 70% of start-ups formed each year are located in same state as research institution

Academic Technology Transfer Successes

Magnetic Memory
Pap Smear
Vitamin D Milk
Plexiglass
Gatorade
Saccharin
MR Scanner
Rocket
Allegra
Taxol
Polio Vaccine
Hepatitis Vaccine
Cisplatin
Neupogen
Remicade
Penicillin
PET/CT Scanner
Pacemakers
Fluoride Toothpaste
Streptomycin
Electron Microscope



Moving Ideas Forward

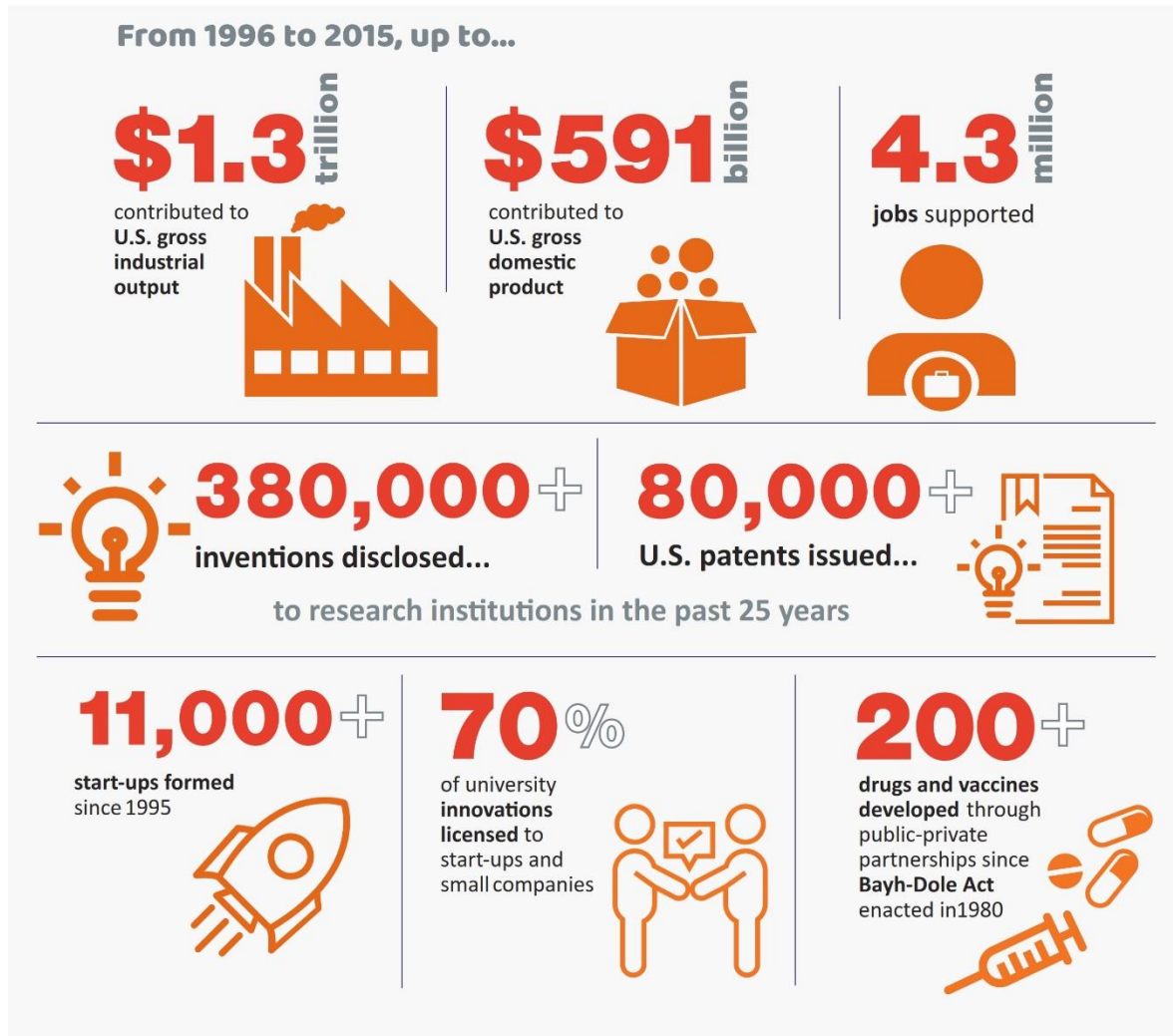
- Is there a market for this innovation?
- Can this innovation have impact in society?
- Can we find a business interested in licensing, developing and commercializing this technology?
- Can we start a new company to move the innovation forward?
- Are there available dollars to help further develop the innovation?

Tech Transfer Offices Lend a Hand

- Analyzing the marketplace, developing business plans, and understanding patent/licensing issues
- Seeking venture/angel capital or other sources of development funding
- Boosting start-ups through campus-based accelerators, incubators and proof-of-concept programs
- Matching researchers with companies looking to bring new innovations to the market
- Helping faculty create impact through their research

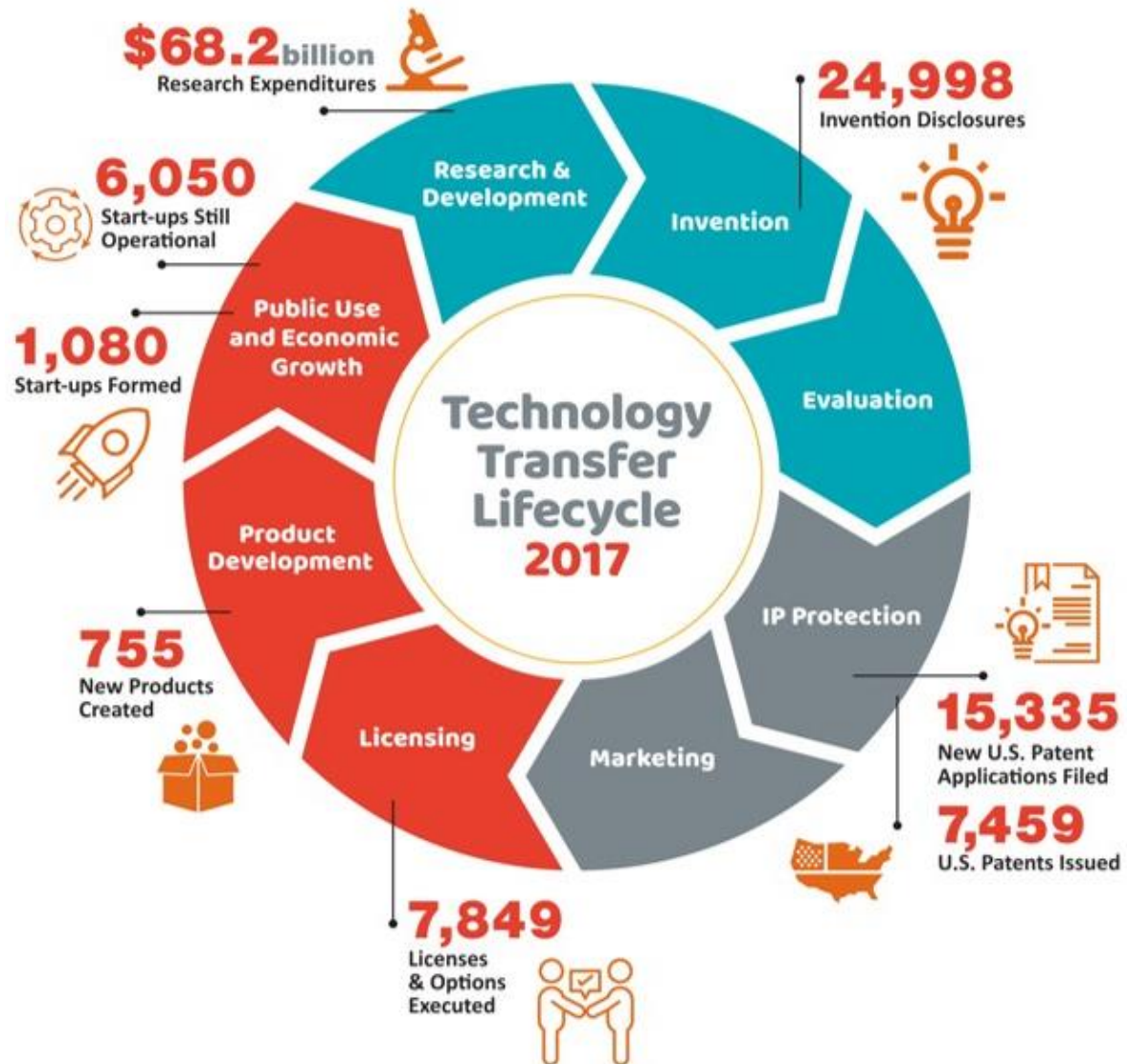
Driving the Innovation Economy

academic technology transfer in numbers



- 4.3 million jobs supported
- \$1.3 trillion contributed to economy
- Create impact from innovations in SS and Humanities

Benefiting Society and the Economy



- 1,080 start-ups formed
- 6,050 start-ups still operational at end of FY2017
- 755 new products created

<https://autm.net/about-tech-transfer/better-world-project>

project

Improving Lives: Understanding What It Means To Be Poor

University of Birmingham



Social scientists in UK universities have produced a series of seminal studies that have improved our understanding of the nature and impact of poverty. The findings have transformed the way that government and charities provide help for the less well-off.

The link between deprivation and ill health has been known for many years, prompting the Victorians to introduce clean water systems and sanitation. But thanks to the work of Thomas McKeown at the University of Birmingham in the 1970s we are now much more aware of all the influences of social conditions on health.

McKeown looked at the number of deaths in England and Wales caused by different diseases from the 19th century until the early 1970s. His statistics revealed a huge impact of factors such as nutrition, water supply, sanitation, food hygiene, smoking, diet and exercise on the health of less well-off communities. The study has led the government to take far more seriously these factors in its efforts to improve the health of people.

“ During the 1970s Richard Morris Titmuss at the London School of Economics and Political Science meanwhile found that poverty, not family circumstances, were behind the behavioural problems and learning difficulties in children from one-parent families.

A Unique Video-Based Approach Makes French Easier

Yale University



In an effort to break away from traditional "classroom French," Yale University language professor and researcher Pierre Capretz created "French in Action," a video-based curriculum that teaches French syntax, vocabulary and culture. Students are not required to memorize grammatical rules and vocabulary lists; instead they are led to learn French from the situations presented in the videos.

This series of programs was developed at Yale University between 1960 and 1983, in cooperation with Wellesley College. Funding was provided by the National Endowment for the Humanities, Annenberg/Corporation for Public Broadcasting, Mellon Foundation, Gould Foundation, Cox Foundation, French Ministry of Culture and French Ministry of Foreign Affairs.

“ *Students are not required to memorize grammatical rules and vocabulary lists; instead they are led to learn French from the situations presented in the videos.*

Pierre Capretz

<https://autm.net/about-tech-transfer/better-world-project>

Hidden Emotions

<https://autm.net/about-tech-transfer/better-world-project>



Think you can tell when your child is playing fast and loose with the truth?

According to Kang Lee, PhD, a professor at the University of Toronto's Institute for Studies in Education, neither parents nor professionals who work daily with children are very good at detecting when children are lying.

In a 2016 TED Talk, Dr. Lee explained that when children lie, their blank expressions belie a sea of emotions raging inside, including fear, shame and guilt. The neuroscientist says there's a reason we can be so easily fooled by our own offspring: despite the fact that human beings are emotional creatures, 90 percent of our true emotions are invisible to the naked eye.

“ To detect what lies beneath the poker face, Dr. Lee developed a technology called Transdermal Optical Imaging (TOI) — and established a company to help businesses access the true feelings and desires that drive human behavior.

<https://autm.net/about-tech-transfer/better-world-project>



Web-Based Software Uses Math To Grade Students' Writing

University of Colorado, Boulder



After 10 years of research, Thomas K. Landauer, Ph.D., a psychology professor at University of Colorado in Boulder, Peter Foltz, Ph.D., a psychology professor at New Mexico State University, and Darrell Laham, Ph.D., a graduate student at University of Colorado, invented Intelligent Essay Assessor (IEA). IEA is Web-based and conducts sophisticated mathematical and statistical evaluations of the semantic content of writing to issue a grade that correlates closely with what teachers or test examiners would give.

IEA automatically assesses and critiques electronically submitted essays providing feedback to both the student and instructor.

“ IEA allows teachers to assign more writing assignments to students without additional grading time and gives students opportunities to practice and improve their writing abilities.”



AUTM Now



Today the Association's approximately 3,000 members represent 60 countries.

Let your university knowledge/technology transfer office help create impact from your scholarship in the social sciences and the humanities.





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Up Next

10.15-11.00 Roundtables

Brown: Commercialising methodologies in SSH *Patrons Lounge*

Yellow: Intermediary institutions *Patrons Lounge*

Green: Evidence-informed policy *Room 4018*

Orange: Institutions, leadership & impact *Room 4019*

Red: Societal impact of the Humanities *Room 4025*

Blue: Societal impact of the Social Sciences *Rasmuson Theater*