Economic and Social Research Council

ESRC is part of UK Research and Innovation

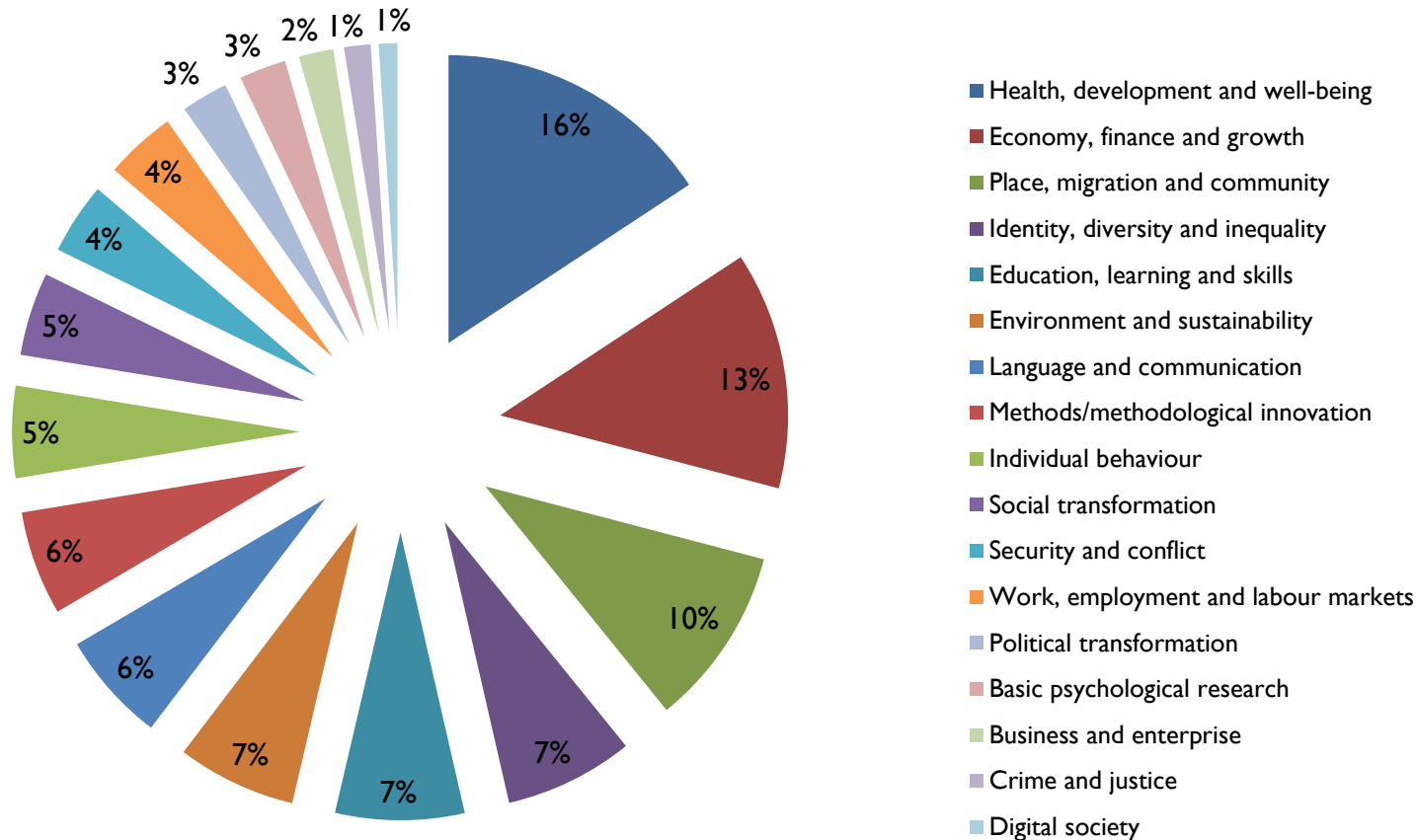# Opportunities for social scientists in the Industrial Strategy

Charlie Dormer, ESRC

ESRC mission

▶ Promote and support high-quality research and related postgraduate training in the social sciences

▶ Develop and support the national data infrastructure that underpins high-quality research

▶ Advance knowledge and provide trained social scientists who meet the needs of users and beneficiaries

▶ Communicate clearly and promote public understanding of the social sciences
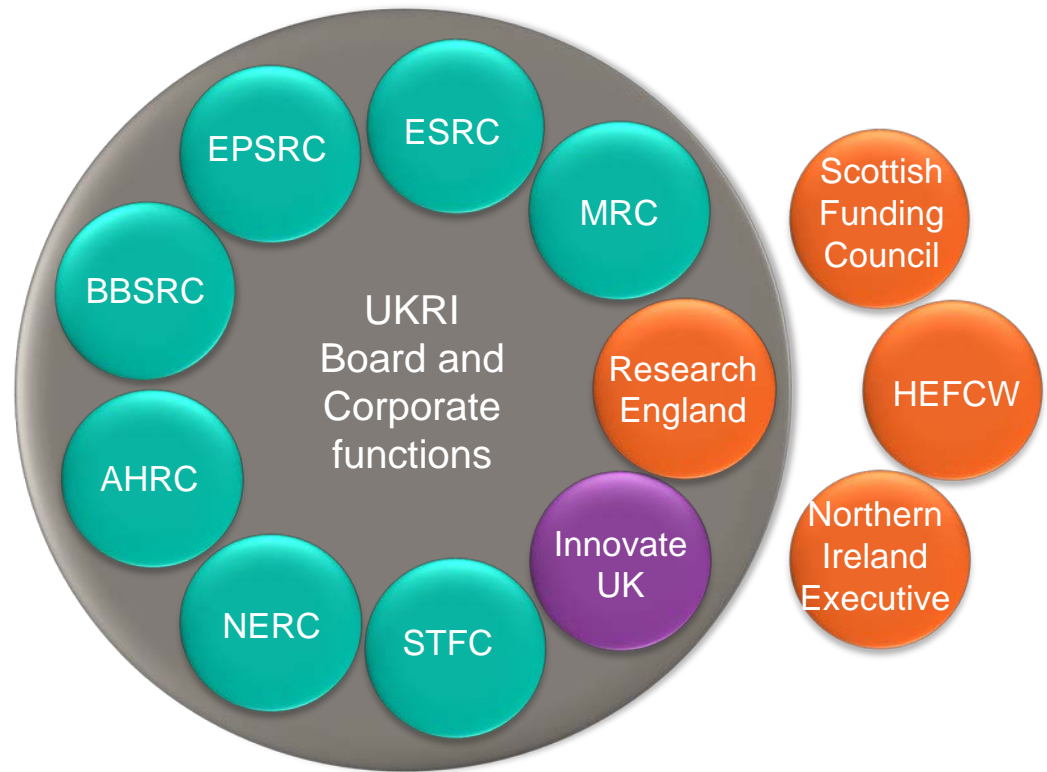
ESRC Portfolio

Value of research grant portfolio by research area on 1 September 2016

- Health, development and well-being
- Economy, finance and growth
- Place, migration and community
- Identity, diversity and inequality
- Education, learning and skills
- Environment and sustainability
- Language and communication
- Methods/methodological innovation
- Individual behaviour
- Social transformation
- Security and conflict
- Work, employment and labour markets
- Political transformation
- Basic psychological research
- Business and enterprise
- Crime and justice
- Digital society

What is UK Research and Innovation?

UK Research and Innovation, launched in April 2018, is the new funding organisation for research and innovation in the UK.

It brings together the seven UK research councils, Innovate UK and a new organisation, Research England, working closely with its partner organisations in the devolved administrations.

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UKRI priorities

▶ Delivering increase in funding through Autumn Statement 2016 and the Industrial Strategy – helping Government meet £2.4% of GDP target

▶ Increase the pipeline of research and innovation talent

▶ Launching a new International Research and Innovation Strategy

▶ Delivering a Strength in Places Fund to support regional growth

▶ Developing a new interdisciplinary Strategic Priorities Fund for common fundamental research priorities

▶ Continue dual support of research and council's own priorities

E·S·R·C
ECONOMIC
& SOCIAL
RESEARCH
COUNCIL

Two main contributions of social science research to Industrial Strategy

▶ Evidence to support Industrial Strategy policy making at national and regional levels

▶ Collaboration with businesses to address major challenges and opportunities facing the UK (and building the skills to do so)

Evidence to inform Industrial Strategy

▶ We're talking to policy makers to help them become aware of research landscape

▶ Lots of ESRC funded research has findings that can inform Industrial Strategy

▶ Not a lot of new funding in this area *currently*

▶ Productivity Insights Network

▶ ESRC serious commitment to productivity priority and research on the changing world of work

Today's focus - ISCF

ISCF Wave 1 challenges

Medicines

Robotics

Batteries

Creative Clusters

Composites

Driverless cars

Satellite launch infrastructure

…More technically focussed, but with some potential for social science, eg economics case for Faraday, Policy and Evidence Centre for Creative Industries Cluster Programme.

Wave 2 of the Challenge Fund

Transforming
construction

Data to early diagnosis
& precision medicine

Transforming food
production

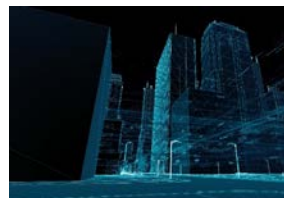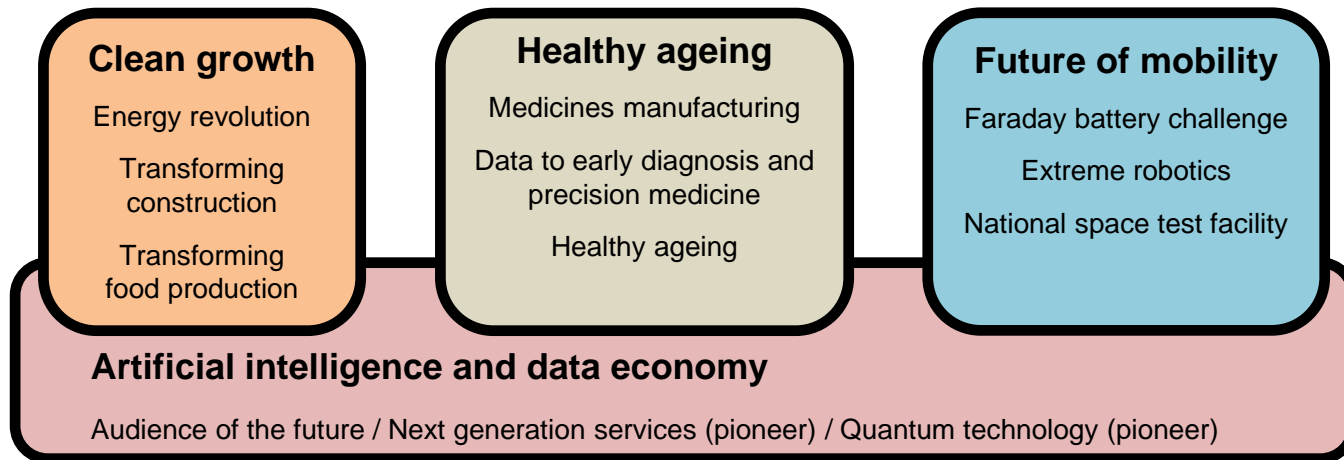Next generation
services

Energy revolution

Healthy ageing

Audience of the future

Quantum technology

How the ISCF wave 1 and 2 challenges fit with the Industrial Strategy Grand Challenges

Clean growth

Energy revolution

Transforming construction

Transforming food production

Healthy ageing

Medicines manufacturing

Data to early diagnosis and precision medicine

Healthy ageing

Future of mobility

Faraday battery challenge

Extreme robotics

National space test facility

Artificial intelligence and data economy

Audience of the future / Next generation services (pioneer) / Quantum technology (pioneer)

What is the social science contribution?

adoption ai approaches barriers **behaviour**
acceptance actions
building   business-models   challenges   change   commercialisation   complexity
consumer   critical   data   dealing   delivery   design   discusses   engagement   human-machine
innovation insight   intelligent   key   link machines market needs   novelty   older
performance   physical   products   research responsible   robots   roles   sociotechnical   stage   successful
system technologies trust **understanding**   universal   usability   user
wrong

Working with those developing technologies to ensure:
- They don't just stay on a shelf or a patent library
- The needs and desires of the end user are considered
- We make the most of what we know about people
- Unintended consequences are avoided or managed
- The benefit is to wider economy or society – not just the businesses funded
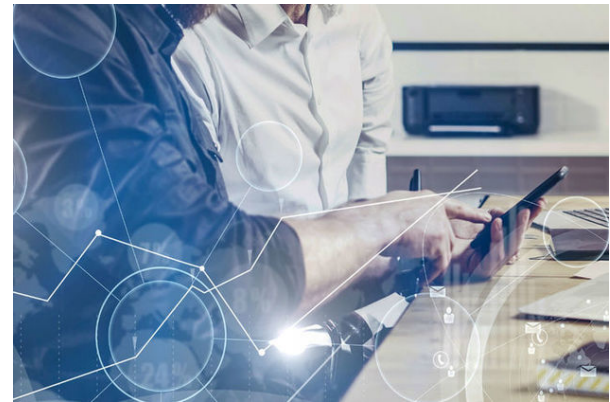
Competitions on the horizon…

▶ Over the next 6 months

▶ Mechanisms vary but usually a mix of

– Interdisciplinary research programmes, centres or networks focussing on developing technology/approaches or addressing specific industry problems

– Large scale demonstrators – normally physical locations where innovations are trialled and shown

– Industry led research and development funding, similar to Innovate UK's current funding

Special focus on 4 competitions

▶ …where we know a bit more about the role of social science

▶ Health warning – none of this published yet so things may change!

Special focus – Next Generation Services

- ▶ Next Generation Services - Innovation Research Centres
- ▶ Adoption (barriers to, and impacts of) of AI in professional services

▶ Invest up to £20m in the application of AI in the services sector through the Next Generation Services Industrial Strategy Challenge. This will include a network of Innovation Research Centres and collaborative R&D to develop new applications of AI and data-driven technologies in sectors such as law and insurance[5].

Special focus – Audiences of the Future

▶ Design – small scale, short business led projects - user centred design and critical early stage questions

▶ Demonstrators – big, one per sector, industry consortium led

▶ Consortium/info events being advertised now (Immerse UK)

▶ Both design and demonstrator go live May 21st – plus London event

Special focus - Transforming Construction

▶ Research call and network plus

▶ Out June/July

▶ Social science questions include:

- Occupant behaviour

- Design, wellbeing

- Homebuyer/resident attitudes

- Barriers to adoption

- Supply of materials/logistics

- Planning

- Link to performance esp schools

Special focus – Healthy Ageing

▶ Timescale tbc

▶ fairly large projects

▶ Combine new research with evidence synthesis

▶ inform the products and services for an ageing population

▶ understanding behaviour, user centred design or how to improve the service that care companies provide

▶ engage businesses and older users themselves as well as integrate with the other parts of the challenge including the demonstrators

But…

- ▶ All challenges will have scope for social science
- ▶ Watch this space for diagnosis, energy and agriculture opportunities

Wave 3 – open process

▶ UKRI recently invited businesses to suggest challenge ideas for a third wave of the ISCF

▶ Wave 3 challenges will have funding starting in FY19/20

▶ To be shortlisted and worked on 2018

▶ 4 grand challenges

Top tips

▶ Make **your** case in **their** language

▶ Doesn't begin and end with the call

- – Later engagement with demonstrators/networks

▶ Keep an eye on:

- – UKRI comms, KTN

▶ Remember how different this is

- – Existing research projects unlikely to find a home

- – Genuine effort to be discipline blind

▶ Engagement and networks

- – Businesses

- – Other disciplines