Creating an International Ecosystem for Responsible AI Research and Innovation
## Today's agenda

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>12:00</td>
<td>Arrival and lunch</td>
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<tr>
<td>13:00</td>
<td>Welcome and overview of RAI UK</td>
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<tr>
<td>15:30</td>
<td>Networking</td>
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<td>16:30</td>
<td>Close</td>
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Tweet today: @responsibleaiuk #ResponsibleAI
The UK is investing over £1.5bn in science and technology with AI at the core. This aims to power UK society and economy with greater productivity.

“We are putting the full might of the British government and our private sector partners behind our push to become a scientific and technological superpower, because only through being world-leaders in future industries like AI and quantum will we be able to improve the lives of every Briton.”

– Michelle Donelan, SIT Secretary
A FRAGMENTED ECOSYSTEM
RAI UK will enable Responsible and Trustworthy AI to power benefits for everyday life
MISSION

Develop national conversations around AI

Develop the connections and principles to underpin a national AI ecosystem

Provide spaces to ensure all voices from within the RAI UK community are heard regardless of seniority or loudness, and that views can be expressed, challenged and debated in a constructive and respectful way.

Deliver research that addresses societal and economic challenges such as climate change and national security
OUR GUIDING PRINCIPLES (WIP)

Listening and Engaging. A dialogue with stakeholders, policy makers, and the general public is critical to develop a multi-perspectival approach to developing AI that is responsive to society's demands as they arise.

Reviewing Research Fairly. We will adopt peer review standards and best practices to assess and drive the work of the programme, from the selection of early ideas for development, to the assessment of proposals.

Promoting Creativity. We encourage risky and adventurous approaches to develop new perspectives, or to create engaging and critical experiences for the public by working with the Arts and the creative sector.

Working across Disciplinary Perspectives. We will nurture and promote a culture of respect and understanding of different disciplinary perspectives to ensure a holistic view in addressing the challenges of designing, using, and regulating autonomous systems.

Striving for Equal Voices. We will provide spaces to ensure all voices from within the RAI UK community are heard regardless of seniority or loudness, and that views can be expressed, challenged and debated in a constructive and respectful way.

Collaboration is open to all. As a national centre we are open to collaboration with research organisations, government, NGOs, SMEs, industry, and the wider public.

Transparency. As a tax-payer funded centre focused on Responsible AI, we need to ensure that everything we do is open to scrutiny and meets the highest ethical standards.

Inclusive and Responsible Research. We will promote research that take careful deliberation and broad engagement to reflect on its intentions, design, risks, and potential societal concerns.

Nurturing a Diverse Research Community. We will create an inclusive and accessible working environment, and will put in place mechanisms that help provide fair and equal opportunities for all members of the RAI UK community.

Openness. We advocate the principles of open science, aiming to make our research outputs transparent and accessible, including open access, open data, open source etc.

Striving for Equal Voices.
We’re multidisciplinary — developing and deploying responsible AI will need a range of perspectives
LEADERSHIP TEAM

Professor Tom Rodden, Co-Chair

Professor Dame Muffy Calder, Co-Chair

Professor Sarvapali (Gopal) Ramchurn, Chief Executive Officer

Professor Dame Wendy Hall

Professor | Yr Athro Matt Jones, Co-lead Research Programme

Professor Máire O'Neill, Co-lead Skills Strategy

Professor Prokar Dasgupta

Professor Gina Neff, Strategy Group Chair

Professor Jack Stilgoe, Co-lead Policy and Public Engagement Strategy

Ms Sana Khareghani, Co-lead Policy and Public Engagement Strategy
DELIVERY TEAM

- Professor Derek (Mac) McAuley, COO
- Professor Elvira Perez Vallejos RRI, Trusted Research and EDI Lead
- Professor Joel Fischer, Research Programme Lead
- Dr Caitlin Bentley, Co-lead Skills Programme
- Dr Shoaib Ehsan, Co-lead Skills Programme
- Dr Kate Devlin, Creative and Outreach Lead
INDUSTRY, GOVT, NGOs
Four areas we are working on

1. Ecosystem creation
2. Research and innovation
3. Skills programme
4. Public and policy engagement
RAI ECOSYSTEM CREATION

Develop strategic partnerships with academia, business and government.

Define the portfolio of thematic areas and translational activities.

Define the associated impact metrics.

Broaden and consolidate network nationally and internationally.

Identify course adjustments to national policy (e.g., industrial strategy and the UK AI strategy).
STRATEGIC INPUTS to RAI UK

• 6-7 members per WG
• Proposal to be submitted to the Executive Management Committee
• Initial WG ideas: Defence, Security and the Judicial System, Health and Social Care, Foresight, Responsible Innovation, Future of Work
• ££ to run a mini-network+, ops team support, funds for workshops, white papers, public engagement

• Mainly UKRI Investments
• Partner Network Representatives (industry, govt, etc..)
• AI Hubs representative
• Advises on Working groups, Funding calls, and ensure coherence across UKRI investments
Strategic Group

What: Help create the RAI UK ecosystem, advise the Leadership Team, support RAI UK activities.

Who: To include representatives of UKRI, key research projects and networks, other key expert groups (e.g., Ada Lovelace Institute, AI Council), industry, public sector research establishments, and government.

Why: An opportunity for input into RAI UK strategy and coordinate responsible AI strategy more broadly.

How: Monthly online meetings with quarterly f2f meetings, with smaller strategy advisory teams convened around specific problems, sectors or contexts.

More info: gsn23@cam.ac.uk
RAIUK TIMELINE

Phase 1: Initiation
LT Planning
LT oversees WGs, develops Roadmap, Business cases for KPs, and act as advocates and advisors to KPs. They monitor and evaluate the programme with the SG and Independent Advisors.

- Sandpits and calls for KPs
- Sandpits & Integrator Projects
- Pump Priming Projects
- AI Global

Phase 2: Delivery
- Up to 3 KPs and Coordinating KP led by Delivery Team
- Skills, Public and Policy Engagement, Creative & Outreach

Phase 3: Consolidation
- Sandpits & Integrator Projects
- Pump Priming Projects
- AI Global

Phase 4: Legacy
- Sandpits & Integrator Projects
- Pump Priming Projects
- AI Global

6 months 1 year 2 year 3 year 4 year 5 year
Research and innovation programmes

Professor Derek McAuley
Chief Operating Officer
Mission is to deliver:

- *consortia-led* research that address fundamental challenges with multi-disciplinary and industrial perspective,
- *integrative* research projects that link established research teams across the community
- *early stage and industry-led* research and innovation projects to expand the UK’s ecosystem and develop the next generation of leaders.
RESEARCH AND INNOVATION PROGRAMMES - MECHANISMS

Keystone projects (incl KPs) £3-£5m
Larger multi-disciplinary research teams tackle grand challenges with flexible resources

Impact Projects £50k-£200k
Impact Accelerators, Enterprise Fellowships, Cross-Cutting Research, Travel Grants

Integrator projects (Travel/Workshops/Consumables)
Impact Accelerators, Enterprise Fellowships, Cross-Sectoral Insights, Travel Grants

International projects (AI global)
International Sandpits with groups of 30 researchers leading to 2-5 co-funded projects every year
UPCOMING IMPACT FUNDING CALLS

**Impact Accelerators**
build on existing research

**International Partnerships**
work with world-leading researchers

**Enterprise Fellowships**
Commercialise your research

**Cross-cutting Research**
Establish cross-sectoral principles, best practices, frameworks

Funding available: ~£3m-£4m
TBA: July 2023
Deadlines: August/Sept/Running call
Notifications: Oct-Nov
Start: Nov/Dec
Duration: 12-18 months

More details will be posted on the website (rai.ac.uk) and through our mailing list.
Policy outreach and engagement

Ms Sana Khareghani,
Co-lead Policy and Public Engagement Strategy

sana@khareghani.com
@sanakb
Policy

- Support national and international collaboration by refreshing policy map of the UK
- Be a front door across the ecosystem by connecting and joining up work and activity across the UK
- Ada Lovelace, CDEI, Alan Turing Institute, Royal Society, Royal Academy of Engineering, Civil Society/Advocacy groups, PWC, Accenture, DeepMind
- Input into ongoing work – like AI Safety Summit – and meet with relevant bodies across government (e.g., DSIT, Office for AI, LLM Taskforce)
Public engagement: 'AI Nation'?

Hypothesis: Most people are more worried about, e.g., inequalities than existential risk

Phase one
A survey of public views. What do people care about? Products, processes and purposes of AI

Phase two
Experts responding to a subset of the same questions. What do AI experts care about? Where are the gaps?

Phase three
Citizens juries
Public engagement: 'AI Nation'?

We will...

• Write a Plain English plan
• Compile a list of organisations/contacts
• Design and schedule public and industry facing events
• Launch podcast to interview AI leaders on responsible innovation
• Write Op-Eds on key lines of debate
Dr Kate Devlin,
Creative and Outreach Lead
CREATIVE & OUTREACH

Promoting Creativity

We encourage adventurous approaches to develop new perspectives and to create engaging and critical experiences for the public by working with the Arts and the creative sector.
We seek to reframe what are usually thought of as technical challenges – with technical fixes – as human-centered, social challenges.

We want to inspire discussion through creative provocations, and to critique the status quo by challenging preconceptions.
We will explore how AI is changing creativity and creative practice.

- We will examine how AI is discussed and portrayed.
- What stories do we tell when we talk about AI safety?
- How is it reported? How do we avoid the clichés?
- Can we work together to disrupt the current narratives?
OUTREACH

We will explore the relationships between people and technology through public engagement.

In return, we will communicate all of our work clearly and accessibly to as wide an audience as possible.
We will form links with fellow initiatives from the AHRC:

• Bridging Responsible AI Divides (BRAID) programme

• Living With Machines

• ...and with projects such as the Creative AI Lab.
OUTREACH

We will speak with:

• Policymakers
• Industry summits
• Campaign groups
• Interested communities
• and via public events

... to discuss, explain and inform about AI safety and responsible, trustworthy development.
WAYS TO GET INVOLVED IN OUR CREATIVE & OUTREACH WORK

• Join our roundtables and workshops
• Apply for funds for Arts-based work
• Co-design creative projects with us
• Invite us to speak on panels, to give talks, and to join debates

Contact kate.devin@kcl.ac.uk
or reach out via social media @responsibleaiuk
Dr Caitlin Bentley,
Co-lead Skills Programme
RAI UK is establishing a new eco-system to develop **Responsible AI skills** in the UK and beyond. It is an important step in creating a more equitable and sustainable future for the country.
What are Responsible AI Skills?
Beyond only the technical...

What are the key competencies and why?
Across disciplines and sectors...

What about competencies for human-machine teams? Or multi-disciplinary teams?
Assuring human-machine teams to ensure both humans and machines are accountable

What does it mean to understand and use AI effectively?
For diverse users, understanding and addressing equitable education and use to promote social mobility and justice

How can we address key challenges faced by industry to upskill and reskill the workforce?
Are there fundamental curriculum, delivery mechanisms, or exchanges that could support cross-sectoral transitions?
RAI UK's Skills Programme promotes the UK's RAI Skills Strategy -- upskilling diverse citizens and businesses.
WAYS TO GET INVOLVED IN THE SKILLS PROGRAMME

Contribute to the RAI UK Skills Observatory
To help formulate the vision for RAI UK’s Skills Evidence-base

Develop an idea through the Accelerator programme
To provide feedback, test, and iterate programmes and resources with us

Attend RAI UK’s Annual Skills Swap
Propose an open-session

Participate in the practice programme
Sign-up to receive updates on CfPs

Propose or request an industry exchange
Sign-up to receive new opportunities

Get in touch with us

Dr Caitlin Bentley
caitlin.bentley@kcl.ac.uk

Dr Shoaib Ehsan
s.ehsan@soton.ac.uk
Elvira Perez Vallejos
RRI, Trusted Research and EDI Lead
RAi UK – Fundamental principles

• Responsible Research and Innovation (RRI)
• Trusted Research
• Equality Diversity & Inclusion (ED&I)
Responsible Research and Innovation (RRI)

• **RRI** means doing research in a way that **anticipates** how it might affect people and the environment in the future so that we can gain the most benefit and avoid harm.

• **RRI** invites researchers, innovators and other stakeholders to **consider** the bigger picture, including the long-term **impacts** of their work and its value to society.

• **Reflective practices** are most needed in disciplines where there is more **uncertainty**: AI
Training and Education

• Builds Provision on the TAS Hub Guiding Principles and RRI training

• Promote engagement with existing resources (UKRI) and creation of new in-house resources (RRI Prompt and Practice Cards)

• Regular training sessions, events, workshops, round tables, awards.

• Nurture a culture of responsibility and appreciation for RRI
Trusted Research: Advice and Signposting

• International partner suitability
• Considers conflict of interests
• Research security
• Intellectual property
• Due diligence
• Ethical and integrity considerations
Equality, Diversity & Inclusion (ED&I): Activism

• Building on TAS Hub EDI Framework and EDI Principles
• ED&I monitoring > build strategy > deploy action plans
• Everyone feels welcome, represented and respected, valued and able to contribute and benefit from RAi UK
• Tackle existing inequalities, lack of representativeness and historical bias
• Challenge and be challenged
• Decolonising AI
• ED&I is everybody’s responsibility, get involved!
Regional perspectives

Professor Máire O'Neill,
Co-lead Skills Strategy

Professor | Yr Athro Matt Jones,
Co-lead Research Programme
Northern Ireland

AI Landscape & Opportunities
<table>
<thead>
<tr>
<th>Category</th>
<th>Number/Value</th>
</tr>
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<tbody>
<tr>
<td>UK AI Companies</td>
<td>3,170</td>
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<tr>
<td>Dedicated Companies</td>
<td>1,909</td>
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<tr>
<td>Diversified Companies</td>
<td>1,261</td>
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<tr>
<td>AI related revenues</td>
<td>£10.6bn</td>
</tr>
<tr>
<td>£5.2bn AI related revenues</td>
<td></td>
</tr>
<tr>
<td>£5.4bn AI related revenues</td>
<td></td>
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<tr>
<td>People in AI roles</td>
<td>50,040</td>
</tr>
<tr>
<td>26,299 people in AI roles</td>
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<tr>
<td>23,741 people in AI roles</td>
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<tr>
<td>Investment</td>
<td>£18.8bn</td>
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<tr>
<td>£7.8bn Investment</td>
<td></td>
</tr>
<tr>
<td>£11.0bn Investment</td>
<td></td>
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<tr>
<td>Gross Value Added</td>
<td>£3.7bn</td>
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AI sector in Northern Ireland

- Turing AI Report (2019)
  Universities combined would be 6th in UK

- DfE AI Sector Foresight Study (2021)
  Advanced manufacturing, bio/pharma, Cybersecurity, fintech, health/social
AI sector in Northern Ireland

£40M NI ADVANCED RESEARCH & ENGINEERING CENTRE (ARC) IN PARTNERSHIP WITH PWC

Collaboration to develop innovative solutions that aim to transform business processes using research at the frontiers of AI, visualisation and HCI.

LEVERHULME INTERDISCIPLINARY NETWORK ON ALGORITHM SOLUTIONS (LINAS)

Addresses the implications of massive-scale data processing, AI and ML for both the actual operation of algorithmically driven public decision-making in wider society, and within science and engineering.
City deal projects underpinned by AI
AICC – AI COLLABORATION CENTRE

- **AI Talent Pipeline and the Future workforce**: Reskill, retrain our current workforce, strategically position our future talent pipeline.
- **Business Support through Data Scientists ‘on tap’**: Help business get started and/or provide support to accelerate their AI strategies – existing/latest tech orientated.
- **NI AI Ecosystem built through Community and Collaboration**: Knowledge sharing, Challenge matching, innovation events, funding competitions, cloud, global outreach, “Safe/trusted space”.
- **AI Policy Advisory**: Policy advice on Ethics, Architecture, Governance, Strategy, Regulation and Skills…
- **Identifying Applied AI Research opportunities**: Introducing industry to research excellence and vice versa – enable two way potential and new collaboration…
NI AI conferences

Al Con 2023

Friday
27th October
2023

Big Data Belfast 2023

26th October 2023

Big Data Belfast

Analytics Engines are delighted to present Big Data Belfast 2023 and to announce that it will return to the ICC Belfast on Thursday 26th October 2023.

BOOK NOW!
AI For the People, With the People

• R&D Resources
  Wales Data Nation Accelerator
  EPSRC & UKRI AI Doctoral Training Centres
  Computational Foundry (EU/WG)
  Supercomputing Wales
  Siemens, Airbus, Admiral, Tata, Amplifi..

• Data at Scale
  “Amongst the richest population data in the world.” (SAIL DataBank)

• Purposeful Legislative/Policy Environment
  Digital Strategy for Wales 2022
  Well-being of Future Generations Act
Up to 23% of working age adults can be brought out of relative poverty through skills and new opportunities (Relative Income Poverty, Welsh Government, 2019)

485% increase in roles in AI in the UK since 2014 (Jobsite 2020)

26% of the nation will be above retirement age by 2023, increasing the importance for efficient and effective health care systems and intelligent social care (ONS)

Wales is home to some 3,600 tech companies employing more than 45,000 people, responsible for turnover of more than £1bn

£7.9bn the potential impact of AI for Wales by 2030 (9.8% GDP) (PwC 2017)

62% employed in businesses are in SMEs with fewer than 50 staff, showing the opportunity to grow businesses through new skills, data and AI (Size Analysis of Active Businesses in Wales, 2019)

Only 1/3 feel their businesses have skills to adopt data driven techniques (CBI, 2017)

46% of people in Wales with high levels of digital engagement say these skills improved their ability to get a job (Lloyds Bank Academy, 2020)
CYMRU/WALES
Jo Marriott, UKRI
AI Technology Missions

• UKRI is investing a further £110m through the AI Technology Missions to transform government's technologies of tomorrow.

• This builds on the existing capabilities UKRI has already been supporting through its investments

• We are focusing investments in activities that will drive collaboration between researchers, innovators, private sector investors and policy makers.
• Embedding Responsible AI throughout the technology development chain, from the underpinning mathematics of algorithm development through technical deployment to policy development

• Our vision is that all our investments are doing responsible AI

• A leadership group which can convene the whole ecosystem.

Responsible AI UK
Responsible AI UK

- Develop, scope, carry out and facilitate others in the community to carry out world leading research
- Identify further challenges – through deliberative engagement
- Build and convene a network of investments, organisations and people across the UK
- Be a leading voice that is respected internationally
Responsible AI UK

• To bring a diverse, multidisciplinary, UK wide and international community in Responsible AI

• Research and deliver AI technologies that
  • Reflect and support human values
  • Are transparent and explainable
  • Are reliable, robust, safe and secure

• Addressing challenges in AI development and deployment to increase AI adoption, support its diffusion through society and show leadership in AI governance
## Upcoming events

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<th>When</th>
<th>What</th>
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<tr>
<td>TBD</td>
<td>Future town halls</td>
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<tr>
<td>03 July 2023</td>
<td>Funding calls announced</td>
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<tr>
<td>13 July 2023</td>
<td>UKRI Trustworthy Autonomous Systems All-Hands Meeting</td>
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Vacancies

- Communications Manager *(Southampton)*
- Head of Transformation *(Nottingham)*
- Network Manager *(King’s)*
- Events Manager *(King’s)*
- Skills Manager *(King’s)*
- Information Systems Manager *(Southampton)*
- EDI manager *(Nottingham)*
Partner Network

Coming soon...
Creating an International Ecosystem for Responsible AI Research and Innovation

www.rai.ac.uk

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