

10 March 2020

PAPER CLASSIFICATION: OPEN

Board of Trustees

STRATEGIC ENGAGEMENT AND GOVERNMENT POLICY ANNUAL REPORT

(Note by Joanna Cox. If you have any questions on this paper before the meeting please contact Joanna Cox on 07738 713867 or by email joannacox@theiet.org)

1. Issue

This report summarises the achievements of the Strategic Engagement and Partnerships (SEP) team and the wider Government Policy related activity within the IET, between 1 January to 31 December 2019.

2. Timing

Board of Trustees meeting, 19 March 2020.

3. For Note

The Board of Trustees is invited to note this report.

4. Background

4.1. This report is produced annually for the Board of Trustees to summarise the IET's Strategic Engagement work on key issues within Engineering and Technology, and to review the IET's overall Government Policy related work over the past year.

4.2. Responsibility for Government Policy within the IET ultimately lies with the Board of Trustees. On an operational level, it is overseen by the Head of SEP, Dr Joanna Cox. In the UK, direction is taken from the SEP Panels, whereas internationally it is led by the relevant national level groups. This report is to inform the Board of Trustees on the overall progress made.

5. Introduction

5.1. Strategic Engagement and Government Policy work is an outward facing function of the IET. It provides content for the IET's positions as a leading charity and professional body. The outcomes we are seeking to achieve are inspiring innovation, informing the general public and influencing government.

5.2. These outcomes are achieved through the production of specific outputs designed to make a tangible difference. The types of outputs we produce are Reports, Videos, Events, Government and Political Engagement, Consultation Responses and Media, Social Media and Website content.

5.3. The IET's Strategic Engagement and Government Policy work is led by the SEP team, which plays a leading role in promoting thought-leadership within IET as a major professional body. In India the work is carried out by the IET-India staff team. The activity is highly integrated with other departments in the IET particularly

Communications, Marketing, IET.tv, Communities, Education 5-19, Accreditation, Professional Standards, Enterprise Partners and Strategy.

- 5.4. The function is driven by our member-led Panels which provide strategic direction. These Panels each work on a discrete number of topics, to achieve impact on behalf of the profession. The Panels are fortunate to be able to attract high-calibre individuals from across the engineering profession who are willing to volunteer their time to progress topical engineering issues of relevance both to the profession and to society.
- 5.5. Over the past year our direction of travel has been to raise the quality and level of outputs of the work carried out by the Panels and in their chosen topics. We have also built up a body of work to support the upcoming “Societal Challenges” activity, particularly around the “Sustainable Planet” and “Digital Futures” themes.

6. Outputs and Impact in 2019

- 6.1. As a result of the efforts of staff and volunteers our levels of outputs from the IET’s strategic engagement activity continued to increase over 2019. This resulted in:

- 28 consultation responses
- 25 reports
- 21 sector newsletters
- 30 Parliamentary mentions
- 78 videos (approx 1.5M views)
- 5959 event attendees

Note: figures for IET India are listed separately in section 4 of the Appendix.

- 6.2. Each Policy and Sector Panel focuses on 2-3 topics per year, on which it feels that the IET can make a significant impact in delivering the IET’s strategy. In 2019 these areas included: Cyber Security, Energy Policy with BEIS, IET Skills Survey, Retrofit, Healthcare Technologies, Future of Road Transport, Digital Twin, Sustainable Manufacturing, Hydrogen, Digital Technologies and the Future of Work and Net-Zero. Outputs from the Policy and Sector Panels are underpinned by government and political engagement with Government Ministers, Shadow Ministers, MPs, Peers and civil servants.
- 6.3. In India, the IET team identified three key areas of national importance for focus in 2019: The Internet of Things Future of Mobility and Transport and Future of Work.
- 6.4. A full summary of key achievements in 2019 is detailed in the appendix.

7. Risk

There are no risk implications resulting from this report.

8. Resources

The resources are assigned to this function through the annual planning process.

Summary Report of Significant Activity in 2019

Each Policy and Sector Panel focuses on 2-3 topics per year, on which it feels that the IET can make a significant impact. Some of this work is carried out in collaboration with other Panels and IET communities. Below is a summary of significant areas of work, our focus on societal challenges, work in public affairs and policy work in India.

1. Policy and Sector Panel Achievements

- 1.1. **Cyber Security with DCMS.** The IET, on behalf of the Cyber Security Alliance, submitted a £2m bid to DCMS to lead a project to establish a new, independent, UK Cyber Security Council to act as an umbrella body for existing professional organisations and drive progress against the key challenges the profession faces. The bid was successful, and the project started in September 2019, with Simon Edwards as the Project Lead and supported by Michelle Richmond. Project management at the IET is being led by Sandra Godman. The project will run until March 2021. This project has led to direct collaborative working at a director level with NCSC and DCMS.
- 1.2. **Energy Policy with BEIS.** Throughout 2019 the IET have been working with various groups in BEIS on Energy Policy. We have led the UK Health and Safety of Energy Storage governance group which is working on increasing consumer and industry confidence in this technology which will be a key enabler of a decarbonised energy system. We worked with the Industrial Energy Directorate to assist them with the design of their £315m Industrial Energy Transformation Fund. We have also been working with BEIS on reviewing the Electrical Engineering Standards in the electricity system. The ongoing independent review on this subject, which has been commissioned jointly by BEIS and Ofgem, is being chaired by IET Vice President Simon Harrison.
- 1.3. **IET Skills survey.** In November we launched the 13th edition of the IET Skills and Demand in Industry 2019 Survey. The report highlights that the skills shortage in engineering remains an ongoing concern for engineering and technology companies in the UK and poses the biggest threat to business success. The results showed an ongoing lack of engineering and technology skills and our recommendations focussed on the specific actions required by both government and industry to address the issue. To disseminate the findings of this research we secured 13 radio interviews with regional and national stations (eg Sky and TalkRadio). The news piece was syndicated to a further 37 radio stations. We also gave a keynote speech at the National Biomedical and Clinical Engineering Conference and presented on the findings at our own "New approaches in Practice" higher education conference at Savoy Place on 18 November 2019. The results were also picked up by many new websites including PoliticsHome.
- 1.4. **Retrofit.** Building on our Retrofit report launched in December 2018, we subsequently produced short summary report for dissemination to policy makers. This led to meetings in January with with Oladipo Okusaga, BEIS Senior Policy Advisor, Infrastructure & Construction Unit and an invitation to present the findings to BuildEast, a group of construction industry CEOs from the East of England. In partnership with Energiesprong in November we held an event at Savoy Place showcasing deep retrofit technology, attracting delegates from the Green Building Council and BEIS to the event. In September we ran 2 workshops in partnership with InnovateUK and the Connected Places Catapult on the Energy Efficiency of our housing stock. During the UK general election campaign in December we gave a Sky News interview on this subject. We were pleased to note that as a result of our and others efforts Retrofit is

now firmly on the agenda of both of the main parties and was reflected in both their manifestos pre-election and subsequent public statements.

- 1.5. **Healthcare Technologies.** On 23-24 January 2019 we held a workshop with the Design Council at Savoy Place that was attended by both the Minister for Social Care, Caroline Dinéage and senior civil servants. The workshop, which was part of a wider programme of activity in pursuit of the Government's Industrial Strategy Ageing Grand Challenge, explored everyday low dexterity challenges which cause significant distress for many people whether the elderly, infirm or arthritis sufferers of all ages. In November at Austin Court in Birmingham we held the "Think Big Future Health & Life Science Unconference", to promote healthcare innovation and connect health-tech innovators, engineers, policy makers, and clinicians. We created a mixed programme focused on cutting-edge technology from deep biomedical engineering to informatics, including mobile apps, Artificial Intelligence, Virtual Reality, 3D printing, medical devices and biosensors, standards, precision medicine and genomics along many other relevant topics. Overall 2019 saw continued growth in our Healthcare Technology thought-leadership, with the production of 24 videos, 2 reports, events in Holyrood and at the SNP conference and articles citing the IET in *The Telegraph* and *The Daily Mail*.
- 1.6. **Future of Road transport.** Over the year we have further built up the IET's public profile in the Future of Road Transport. Examples of outputs included Darren Capes' keynote speech at the ITS-Norway conference in January, attendance at the Science Advisory Council for the Department of Transport in March, and the establishment in July of a working group on "How do Local Authorities build roads fit for the future" followed by a "Roads fit for the future" workshop on 19 September 2019 at Savoy Place. We arranged for an IET stand at Highways UK on 7 November 2019 which featured 4 talks and one panel session. We have given media interviews to Sky, *The Telegraph* and Radio Cambridge. At ITS World Congress in October in Singapore we held a joint IET/Department for Transport Special Interest Session on Learning Lessons From C-ITS Early Adaptors. Most recently, on 4 December 2019, we ran a workshop for the Department for Transport Traffic and Technology team in which we explored standards and the implementation of future digital transport technologies.
- 1.7. **Digital Twin.** Our report on the use of "Digital Twins for the Built Environment" was launched at an event on the mainstage at the Digital Construction Week conference in October. This was supported by a social media campaign from IET and our partner Atkins SNC Lavallin. The report has been well received by the Industry as a significant early report on the topic. Our lead author, Cristina Savian, has subsequently been asked to give presentations on the topics at multiple international events.
- 1.8. **Sustainable Manufacturing.** Our report 'Sustainable manufacturing – progressing the next steps' was launched in November at the Smart Factory Expo in Liverpool. This built on a series of reports from the IET Design and Production Sector on this topic, and provides practical advice to those in the manufacturing industry.
- 1.9. **Hydrogen.** We launched our report on "Transitioning to hydrogen: Assessing the engineering risks and uncertainties" on 14 June 2019 with a briefing at the Science Media Centre. This report was developed in collaboration with IChem, IGEM, IMechE, and the HSE. It specifically looked at the Engineering feasibility of this technology. The results were reported in the national press. Prior to the report launch, the working group presented to a technical industry audience on the topic at All Energy 2019 in Glasgow. The IET had a stand at this event, where we also ran a session on SME innovation in the Energy Industry. The report has attracted significant interest and fed in directly to the UK Committee for Climate Change plans.

- 1.10. **Digital Technologies and the Future of Work.** Throughout 2019 we have been working with the Institute for the Future of Work, whose co-Founder is Naomi Climer, Past President of the IET. This has included in May a session at Portcullis House on ‘Setting the vision future of work’ and in October a workshop on “AI and Impact in Equality” at Savoy Place.
- 1.11. **Engineering priorities for net zero.** In the autumn the IET returned to the party conferences. At the Labour and Conservative conferences we ran fringe events exploring how engineering solutions can help deliver a decarbonised economy. We have been pleased to see that many of our “policy asks” had been adopted by the parties in their manifestos, demonstrating the value of our direct engagement with politicians of all the major political parties. Our report has also recently been cited in a debate in the UK parliament.

2. Societal Challenges

- 2.1. Over the year we started to build up a body of work to input into the societal challenges activity, particularly under “Sustainable Planet” and “Digital Futures”.
- 2.2. Our work under **Sustainable Planet** encompassed activity across the Energy, Transport, Manufacturing and Built Environment Sectors. It included outputs such as the Engineering Priorities for Net Zero, Retrofit and Sustainable Manufacturing work described above. The London Mayor’s Electric Vehicle Charging Infrastructure plan which was mentioned in section above 7.3 above, included substantial input from IET members who were actively involved in the taskforce that produced the plan. It also included an event in June with the Anglo Israel Association and the UK-Israel Tech Hub on “Technology for the developing world” which was attended by Lord Bew, Israeli Ambassador Mark Regev and Donna Haj from the British Embassy in Israel. To assist with driving this work forward on an International platform, we also developed relationships with International tech-Hub Network at DCMS which have now been set up in Kenya, Nigeria, South Africa and India and with the Institution of African Engineers who are both keen to carry out further collaborative activity with the IET in 2020.
- 2.3. Our work under **Digital Futures** was led by the establishment of the new Digital Panel to give a new strategic focus to this activity. In their first year it focused on:
- Digital Trust and Responsibility
 - AI – Adoption and Leadership
 - Digital Stability and Cyber Resilience
 - Augmented Analytics
 - Digital Skills
- 2.4. More widely our work on Digital futures included the Future of Work and Digital Twins in the Built Environment activities described above. It also included in January a meeting with Ofcom to discuss 5G spectrum bands and meetings with Huawei together with our International teams. In June, SEP and the IET’s International team worked together on a major AI conference entitled the “China-Britain AI Summit 2019”, which was held at Savoy Place in collaboration with the China-Britain Business Fusion organisation. Speakers included, Counsellor Li XinHai, Emma McClarkin MEP, and IET President Mike Carr in delivering the opening keynote. The Digital Panel also wrote 2 articles for the “Business reporter” supplement for the *Daily Telegraph* on 5G. The Northern Ireland committee has been increasingly focussed on digital topics as this is a significant growth area for the Northern Ireland Economy. It supported an inaugural conference on AI which drew an attendance of over 400.

3. Public Affairs

- 3.1. For the UK general election we asked all members to help us promote the importance of Engineering in the General Election. We pulled together in a single document a series of key statistics and policy asks in order to help members and politicians clearly recognise both the contribution of Engineering and our main concerns. On the day of its launch this document was selected by PoliticsHome as their “manifesto of the day”. We also worked with other PEIs and the Royal Academy of Engineering on a document entitled “Engineering priorities for our future economy and society” which captured concerns from across the breadth of the Engineering community. This was widely distributed to politicians both before and during the election campaign. We were pleased to see that many of our policy asks, including an increase in government spend on Innovation, featured in many of the party manifestos and that since the election the government has made increasing R&D a priority. We continue to push for innovation programmes to be well directed and responsive to industry needs.
- 3.2. Key meetings with politicians have included Lord Heseltine on regional industrial strategy, the former Skills Minister, Anne Milton, to discuss apprenticeships, briefing the Transport Minister, George Freeman on IET transport activities, former Minister for Social Care and now Minister of State in DCMS Caroline Dinenage on technologies for an ageing population and the former Digital Minister, Margot James at an IoT conference at Savoy Place.
- 3.3. We have also worked with the opposition parties. Shadow Minister, Chi Onwurah has attended and spoken at the IET’s New Approaches to Engineering Higher Education conferences this year. We have briefed Shadow Housing Minister, Alex Cunningham on the IET’s Scaling Up Retrofit 2050: why the UK needs a national housing upgrade programme report. In June, the Mayor of London, Sadiq Khan launched his plan for London’s electric car vehicle infrastructure at Savoy Place.
- 3.4. 2019 also saw a continuation of our work in the Scottish Parliament with events on Healthcare, Transport and Transitioning to Hydrogen which were well attended by, and received good feedback from MSPs. We are restarting our work with the Northern Ireland assembly in 2020, and building on our connections with the Welsh Assembly.

4. IET India

- 4.1. The staff team at IET India identified three key areas of national importance: The Internet of Things Future of Mobility and Transport and Future of Work. The key parameters that were considered were (1) the situational and contextual relevance to India, (2) the impact that the area of focus has on Indian population, (3) the overall direction adopted by the government in that space. Across these areas there were over 100 media mentions of IET activity in India.
- 4.2. **Internet of Things.** The Internet of Things Panel has over 80 expert volunteers in 12 working groups spanning domains of healthcare, telecommunications, manufacturing, standards and legal, social impact, cybersecurity, agriculture, retail, ganga rejuvenation, smart cities, skill development and utilities. It produced 9 white papers over the year and organised roundtables on digital health and cyber securities with partner organisations The Mint and the *Deccan Herald*. The digital communications working group curated a set of Investment case studies for IoT in India, and the Smart cities working group initiated a podcast series about smart living and building connected cities, influencing government and policy makers to provide better living conditions in India and demonstrating relevance and exciting possibilities of smart living. The IoT Panel also successfully organised the 4th edition of IoT India Congress, A total of 1,650 attendees attended this edition of IoT India Congress.

- 4.3. **Future of Mobility and Transport.** The Future of Mobility and Transport Panel has 12 expert volunteers in separate focus panels for Urban Mobility, Rural Mobility, Logistics & Freight and Policies. The commented on multiple policy announcements which were sent out to media outlets as well as the government of India and relevant state governments. The Panel also curated speakers and content for an external event: DistribuELEC 2019 in February 2019 and held a round table session in Bengaluru with 12 global experts in October 2019.
- 4.4. **Future of Work.** 2019 saw the launch of IET India's "Engineering the Future of Work' platform. To kick off the discussions, a one-day event was held where Naomi Climer, Past President of the IET was a keynote speaker. The event witnessed participation from over a 130 global experts who are shaping the evolving world of work. The team also launched India's first Future of Work Playbook – a comprehensive guide to navigating the ever-changing world of work.