

A Cityforum Annual Police Technology Round Table

Delivering Change at Pace

A summary report following a round table discussion

Wednesday 3rd July 2019

BT Centre, Newgate St, London EC1A



Foreword

- by an innovation practitioner

The public sector has a tendency to complicate its interventions, especially when working collectively. It does this at the expense of practical progress.

Policing's crisis of confidence in getting in shape for the digital age should not be underestimated. In public, the nation's most senior law enforcement officers have petitioned for change and advanced a vision, while regulators have appealed for reform. In private, at this Annual Police Technology Round Table, and at the Policing the Nation Round Table earlier this year, powerful contributions have set out the challenge ahead: new coordination implying new governance; new structures implying new public policy; new funding implying new priority calls; new skills implying new people; new ethical dilemmas implying new doctrine. Challenging existing governance, policy, prioritisation, people and doctrine do not make success easily achievable or a foregone conclusion.

Yet, from a practitioner's standpoint there is another, more practical, perspective: people. A need to concentrate on the role of people in law enforcement, and those that work with them in the private sector and wider society. A need to release the value of what they know and what they can already do with technology and data. In this digital age, just as in previous industrial revolutions, people are the disruptors using technology to change the world around us. Policing must urgently magnify its people's smarts to establish its authority over digital technology and data. It must respond to generational expectations in a way that traditional command and control mechanisms do not encourage. Collaboration, trust, flexibility and pace are essential qualities. Policing must mark itself out as embracing those characteristics. Elsewhere the public sector must incentivise decision-making, procurement, funding and other practises which reflect those behaviours, rather than inhibiting them. Just as with earlier cultural changes, policing, if it is to remain, relevant must mirror the values of contemporary society, as well as the human behaviours in the digital economy. No amount of doctrine will substitute for this.

More sophisticated, systemic changes will only be successful when:

- policing understands and then embeds a modern and contemporary personal leadership culture which rewards innovative behaviours and empowers individuals;
- government institutes enduring mechanisms which value innovation in public procurement, funding appraisals and governance; and
- the private sector becomes involved in mission problem-solving, co-creating solutions and kick-starting operational implementation, to deliver change at pace.

Toby Jones

**Co-founder of ACE
Home Office**

Search for ACE on [GOV.UK](https://www.gov.uk)

Police Technology Round Table – delivering change at pace

Cautious optimism but possible underestimation of the challenges

We are in the foothills of exploiting artificial (or augmented intelligence)

Technology brings new opportunities for criminals & terrorists

*The pace of change has never been this fast, yet it will never be this slow again**

The Cityforum Annual Police Technology Conference, as always, brought together a broad range of speakers to consider the technology challenges facing law enforcement and how these should be tackled. The mood of the conference was cautiously optimistic, more so than in previous years. There is more confidence that policing is beginning to understand what is necessary to overcome some of the institutional barriers to change and the effective exploitation of technology, but perhaps an underestimate of the challenges remaining. And there is an underlying gloom and pessimism about the state of the overall criminal justice system.

Technology had its place in the conference programme, but much of the focus of presentations and discussion was on human and behavioural factors. How must Policing continue to evolve to meet technology and societal challenges? What does inspiring contemporary leadership look like, how should policing be organising and taking decisions, what sort of people should it be recruiting and how should it be equipping and developing them? What leadership styles, skills and capabilities are required to transform the service? And what can Policing learn from other organisations facing similar problems including Defence?

Digital is no longer a novelty, but it evolves at a bewildering rate. The challenge might be (as Wayne Gretzky puts it in another Canadian quote) ‘to skate to where the puck is going, not where it has been’; that is to get ahead of the curve. But predicting where technology might take us is no easy matter. Criminality is exploiting it in the here and now; and is more agile and adaptive than governments and its agencies. New forms of criminality become possible in the ‘internet of things’, for example in exploiting remote access to technology for domestic abuse. We are in the foothills of artificial or augmented intelligence (AI) and machine learning (ML). Generative Adversarial Networks (GANs) using AI can create images and voices that are not readily distinguishable from the real thing, or which reflect an alternative and fraudulent reality. Such techniques are already used in advertising and could undermine confidence in evidence.

Developers are excited by new technologies and reluctant to recognise the potential for abuse (‘no-one wants to admit their baby is ugly’). And the values and cultures of innovators

* Justin Trudeau, World Economic Forum, Davos, February 2018

are consciously or unconsciously built into the products and services they develop. It is genuinely difficult for technologists and entrepreneurs to imagine how their good intentions might be used for criminal, discriminatory or hostile purposes. Impact and take-up can be unexpected and alarming particularly if the technology is open source and readily available. The barriers to entry for criminality are low. You need little by way of resources and skills to become a cyber-criminal. 'Crime as a Service' is readily accessible on the dark web; log in and rent your attack tools. Autonomous vehicles are already with us. As they reach levels 4 and 5, autonomy will bring new benefits, new markets, new social behaviour – and new opportunities for crime and terrorism. Autonomous vehicles and drones can be weaponised for criminal or terrorist purposes individually or in swarms.

The pace is still too slow

Policing continues to face organisational challenges. The 43 force and Police and Crime Commissioners (PCCs) model in England and Wales is not amenable to the rapid and efficient introduction across the country of consistent, standardised, interoperable and effective technology. Some of the drawbacks of current force structures are being addressed through the collaboration and good intent of Chief Officers and Police and Crime Commissioners, and through the National Police Technology Council (NPTC) and the Police ICT Company.[†] But progress is still far too slow. In the face of extreme resource pressures and the different demands and accountabilities of local, regional and national policing, something more is needed for efficient and energetic procurement, at pace, energy and to agreed common standards. This is increasingly accepted at national policy level, though the underlying federated model of policing in England and Wales is unlikely to change. The trick in part is to find a way of binding commitment to nationally agreed programmes and approaches that cannot be unpicked locally, but that also allow for local innovation and variation where appropriate. The Inspectorate argues for a network code as a mechanism for giving contractual effect to common decisions on technology and procurement. Proposals will be unveiled shortly. This approach has worked for other regulated public services. But not all agree that it is the answer for policing. The 43-force model is also ill-matched to the threat from on-line and cyber-crime including fraud. It would be hard to think of a worse model for dealing with a threat that transcends force and national boundaries. There is a crying need for an effective national body and leadership and a changed relationship between policing and GCHQ; and to find new ways of achieving 'justice without jurisdiction' and imposing costs on perpetrators of cyber-crime. It

[†] <https://ict.police.uk/>

New approaches and new types of leadership necessary to harness the power of the changing workforce

is likely that public safety, crime levels and police effectiveness and resourcing will be electoral issues.

Policing is a big employer (200,000 people were employed by policing in England and Wales in 2018[‡]) and was not ‘born digital’. The managerial and operational challenges of delivering policing daily are complex enough. But the command skills and hierarchical structures for delivering real world operations may not be those best suited to the exploitation of digital technology. The employment market is tight, and the make-up of the workforce is changing. Technical talent and experience are in high demand. Millennials have high expectations of technology in the workplace and of their managers and leaders; and they have different career and cultural aspirations. Policing (like many other organisations) finds it difficult to liberate and exploit the talent within, and to navigate the resistance of the ‘frozen middle’ – those caught between the expectations of senior leadership and the threatening aspirations of more recent joiners. It is not nearly enough for leadership to be ‘technology aware’. Different styles and approaches are necessary to unlock the human power of the workforce and to build public trust in the police use of technology. Change and programme management approaches must change. This means looking again at the way policing prepares people for leadership roles and more explicit recognition that operational and command skills are necessary but not sufficient. Perhaps Command courses need to be restyled as Leadership courses designed better to equip leaders in policing with a different blend of styles and skills appropriate to the fourth industrial revolution. Gartner[§] uses bimodal to describe the management of two separate but coherent styles of work - one focused on predictability and the other on exploration.

Neuroscience can help. Research is changing the understanding of the way the human brain works. Conventional ideas of different learning styles, the benefits of group working and committees, and the efficacy of brainstorming are being challenged. Well-matched teams of two where well balanced in capability may outperform traditional approaches in the quality of decision-making. Communication can be improved by telling stories, painting pictures, and by identifying and using the ‘influencers’, the people who are listened to and whose attitudes shape the organisational response. Viral messages reach parts of organisations to which more formal communications never reach.

Innovation has become a managerial buzzword. Its value is

‡ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/726401/hosb1118-police-workforce.pdf

§ <https://www.gartner.com/it-glossary/bimodal/>

Innovation needs to be led by business problems rather than the technology

regarded self-evident. It is seen as being about creativity; but it is much more than that. It is about carrying ideas through into implementation, achieving operational impact, and creating public value. It requires discipline and governance. The idea of setting out to create a spirit of innovation and creative rebellion against orthodoxy within a disciplined and hierarchical service is scary. Despite recognition of the need for transformational change and different risk appetites, policing still struggles to pull ideas through from inception to operational impact.

GCHQ provides an example of an organisation that has had to innovate to keep up, do more for less, and deploy and counter disruptive technologies. It has developed internal processes to forage for ideas, to examine and incubate them, and to work with partners in industry to make them deployable. Different problems may require different styles. But there are ways of encouraging the innovation process. At its most productive it is focused on business problems rather than technology-led and engaged directly with the operational mission. It requires diversity of thought and experience, the ability to bring together different disciplines, and somewhere (virtual or physical) where collaboration can take place. It needs discipline and governance focused on impact and benefit, even if it begins in a leap of faith. And it requires a realistic prospect of pull-through into normal business if it proves to have value. Policing may admire this approach but would find it difficult to emulate on scale alone. GCHQ is a techno-centric organisation spending over half its budget on technology. But on a smaller-scale, organisations such as ACE (Accelerated Capability Environment) use similar principles to match the 'blistering' pace of technological change, and to take ideas of potential value to law enforcement from inception to delivery of mission impact to the customer in a matter of weeks. ACE (working within the Office for Security and Counter-Terrorism (OSCT) in the Home Office) encourages co-creation between government, industry and academia to create value. Innovation is linked to delivery and asks early questions about realism and procurement. The resources and will must be there to pull capabilities through into operations. Otherwise time, energy, goodwill and resource have been wasted. Even existing programmes have funding gaps and there is an ever-present danger of good and proven ideas falling into the 'valley of death' if resources are not there for implementation. One short term response might be to target innovation resources on critical and challenging elements of existing programmes to increase the chance of take up and maximise benefit. More funding and a move away from the straitjacket of annuality would allow more widespread exploitation of productive new ideas. And most believe there is enormous scope for more joined-up and effective

Necessity and proportionality are the key to retaining public confidence whilst making citizens safer

approaches across the criminal justice system within a 'whole system' approach.

Technology may be neutral, but it needs to be developed and managed in ways that protect the public good. The Technology and Public Purpose project at Harvard has adopted this mission and is training, mentoring, researching and bringing stakeholders together to help create a future where technology serves humanity. All too often the discussions about the upsides and downsides of technology take place in different places. And developers and operators are too ready to claim good intentions and to duck responsibility for the impact of the platforms and capabilities they provide. The development and deployment of technology in support of policing and public safety needs even more care to ensure that it lives by the twin principles of proportionality and necessity, and that there is broad public consent.

The organisers reserve the right to
amend the agenda at any time

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Agenda

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Opened by: Mr David Darch *Head of Police Services* BT
Ms Veronica Scott *CEO* Cityforum

Chaired by: Mr Nick Gargan *Associate* Cityforum

09:30 – 11:10 Session One: What are we up against?

Chairman's opening remarks

Emerging technologies and impacts on crime

Professor Shane Johnson *Director of the Dawes Centre for Future Crime* UCL

The neuroscience of change

Professor Geoff Bird *Professor of Cognitive Neuroscience* University of Oxford

An operational policing perspective

Ms Jo Farrell *Chief Constable* Durham Constabulary

Dealing with the tsunami of technology change

Mr Richard Thwaite *Managing Partner* Chaucer Digital

Followed by a round table discussion with Mr John Knights *Chairman* LeaderShape Global

11:10 COFFEE

11:30 – 13:10 Session Two: Overcoming the obstacles to the adoption of technology – moving to adaptability, flexibility, scalability and pace

Mr Angus McCallum *CIO* Metropolitan Police Service

Mr Tony Mather *CIO* AWE [Atomic Weapons Establishment]

Brigadier Sara Sharkey *Head Application Services and DevOps* ISS, MoD

Mr Simon Clifford *Digital Data* Police ICT Company

Followed by a round table discussion with Mr Wayne Parkes *Chair* NPTC and Mr Andy Rowlands *Interim CIO* NCA

13:10 LUNCH

14:10 – 16:00 Session Three: Developing the strategy for joined up policing to keep the public safe: What does this mean in terms of people/process/tech? How should we use the CSR in realising our objectives?

Sir Tom Winsor *Her Majesty's Chief Inspector of Constabulary* HMICFRS

AC Martin Hewitt *Chair* National Police Chiefs' Council

Mr Hardyal Dhindsa *Police & Crime Commissioner* Derbyshire

Mr Carl Miller *Research Director* CASM, DEMOS

Followed by a round table discussion with **Mr Ian Bell** *CEO* Police ICT Company and **Chief Superintendent Chris Todd** *Head of Professional Standards* West Midlands Police & *National Data Analytics Lead* NPCC

16:00 AFTERNOON TEA

16:15 – 17:45 Session Four: Delivering innovation: What are the flexible technology enablers that will make a difference? What is required in aligning multiple initiatives? How should we agree priorities for success?

Mr Toby Jones *Founder* ACE [*Accelerated Capability Environment*], OSCT Home Office

ACO Hacer Evans *Director* DPP [*Digital Policing Portfolio*] NPCC

Dr Niel Kempson *Former Director General for Capability & Technology / CIO & CTO* GCHQ

Ms Laura Manley *Inaugural Director of the Technology and Public Purpose Project* Harvard Kennedy School's Belfer Center for Science and International Affairs

Followed by a round table discussion with comment from **Mr David Page** *Deputy Chief Officer* Police Scotland

17:45 – 18:00 Conclusions: Next steps – what are the actions we take away from today?

To include speakers from the day and Chair

18:00 – 20:00 HOT BUFFET RECEPTION

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Cityforum has been contributing to public policy debate since 1990. The organisation comprises a small, trusted, independent group of experienced individuals, respected for their intellectual honesty, knowledge and extensive contacts spanning the private, public and not-for-profit sectors at all levels. In addition, it works closely with a large network of associates, providing depth, breadth and genuine expertise and practical experience. They include a former Cabinet Minister, a retired Member of the Episcopal Bench, public service officials, military, police, intelligence and security specialists, senior medical figures and business executives, academics, journalists and publishers. They contribute in London and elsewhere to Cityforum events and to the studies we undertake, including interviewing at all levels in organisations and sectors of interest.

From its inception working with the Bank of England on the Basel Accords; with the Reserve Bank of South Africa on the transition from apartheid; hosting and planning with the Scottish Government the Adam Smith Bicentenary; Cityforum has been active in an increasing number of areas that now include collaborations in security, policing, crime and justice, emergency services, critical national infrastructure, cyber, privacy, health and social care, transport, financial services, regulation and energy.

It researches and publishes reports and develops and hosts events in the UK and, where invited, around the world. As part of its bespoke advisory and strategic guidance service the organisation also acts as a 'candid friend' to senior public-sector executives, and undertakes studies and reviews, providing sound impartial advice and specialist judgement to assist in meeting the enormous challenges faced by the public service today.

With over 25 years shaping strategic thinking, building understanding and adding value within and between diverse groups, the organisation has a proven track record. Its highly regarded round table discussions and smaller conclaves are well known both for bringing together an enviable mix of decision makers and practitioners and for stimulating new thinking in response to some of the most difficult contemporary public policy challenges.

Cityforum has a particular interest in working with the police and holds three or four Round Tables a year on strategic, technological, human resources, value for money and strategic communication questions affecting the service. It also undertakes specialist advisory and monitoring work for individual Police and Crime Commissioners, and Chief Officers. This has been particularly useful when PCCs - Police and crime commissioners and Chiefs require studies to be undertaken by a seasoned group of specialists who operate methodically and quickly, and have particular skills in interviewing at every level in the organisations requesting assistance. Its reports are succinct and written in readable English rather than in management speak loaded with acronyms.

The Accelerated Capability Environment (ACE)

The Accelerated Capability Environment (ACE) is a Home Office unit within the Office for Security and Counter Terrorism that was founded in April 2017 to provide digital and data solutions to front-line problems in the safety and security domain using much greater commercial and delivery flexibility than traditionally available to government. It is a collaborative partnership between the public and private sectors.

ACE works at pace (impact in weeks and months) in response to immediate and operational needs, while also assisting the successful initiation of large-scale delivery programmes. The unique and agile approach of ACE depends on a vibrant, diverse community of industry, third sector and academic problem solvers (named Vivace), who see commercial and social value in their participation. ACE uses innovative contracting, secure facilities with embedded collaboration technologies, and industry expertise to drive through impactful solutions to the mission front line.

ACE was originally focussed on solving communications data and lawful interception problems, but its general-purpose, innovative, mission-led approach is now being applied widely for other law enforcement missions with data and digital challenges in Home Office, other government departments, NCA, GCHQ and national policing.

www.gov.uk/government/groups/accelerated-capability-environment-ace

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