

# Part 3

## Future challenges



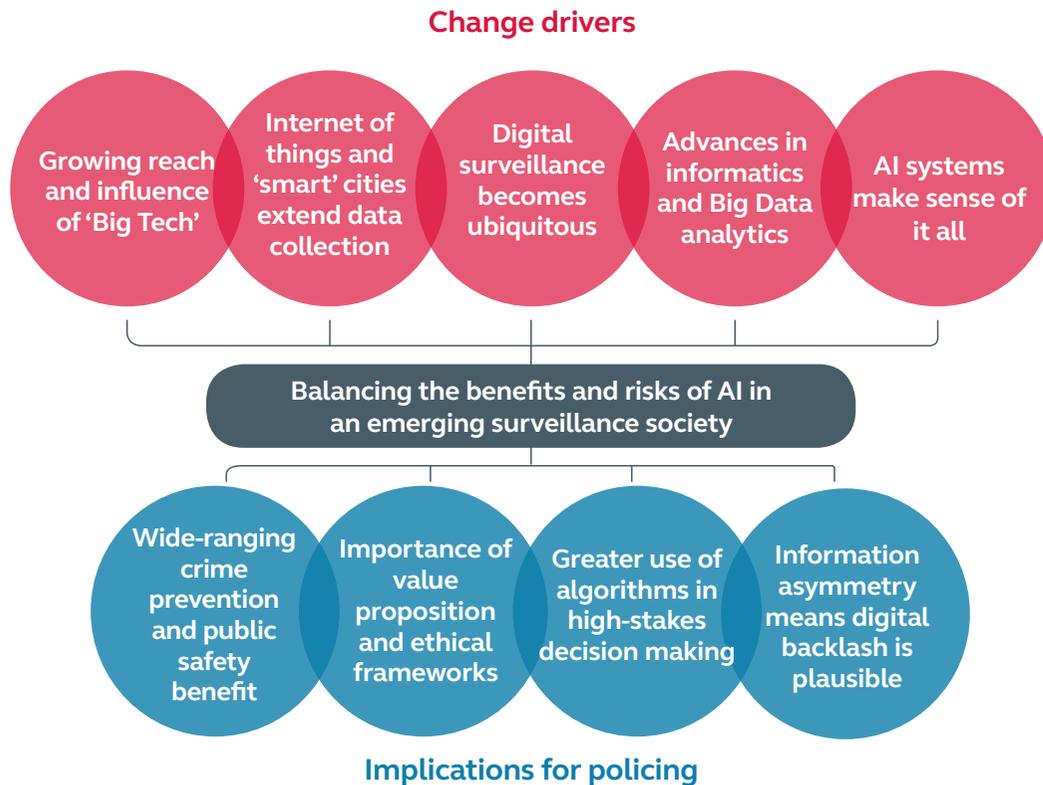
# Part 3: Future challenges

Analysis of the trends and scenarios described in this report suggests that policing will face five key challenges over the next 20-years. Each challenge will take up an increasing amount of policing's 'bandwidth', adding new layers of complexity to existing demands and raising important questions about how policing is organised, resourced and governed. Yet they are also challenges which can be met – so that threats are diminished and opportunities are capitalised on – if policing starts to prepare for them today.

## Contents

Balancing the benefits and risks of artificial intelligence in an emerging surveillance society	3
Policing digital disinformation	6
Building trust in a digital era	9
Shaping the future police workforce	11
Operating in conditions of increasing complexity	14

# Challenge 1: Balancing the benefits and risks of AI in an emerging surveillance society



AI has the potential to vastly improve policing’s ability to prevent crime, manage its resources more efficiently and coordinate fast-moving responses to major incidents. Crime prevention and criminal investigation teams could use AI to speed up the identification of criminals and their motives. Neighbourhood policing teams could use it to gain a better understanding of community dynamics that help them achieve greater community support.<sup>82</sup> Major incident commanders could use AI systems to improve situational awareness and better visualise potential strategies and tactics.<sup>83</sup> And police call centres could use AI systems to more efficiently route responses to calls for service. These use cases are all examples of ‘narrow’ AI that is developing rapidly and assuming responsibility for a growing number of tasks within everyday life.<sup>84</sup>

In the context of crime prevention and public safety, many applications of AI involve the use of ‘human profiling’ systems which collect and interpret information about people’s interests, behaviours, movements and physical characteristics to forecast future behaviour and inform decision-making. In countries where this is already happening, surveillance cameras, biometrics and machine learning systems are used to track fugitives, profile potential future criminal activity and provide alerts if people considered ‘dangerous’ move into areas which are restricted according to their profiles. Such systems bring obvious benefits in terms of public safety but also raise a number of ethical dilemmas. For instance, while facial recognition technologies allow police and law enforcement to detect and disrupt obfuscated threats, they can also be used to collect data in support of political subjugation.<sup>85</sup>

“We’re not living in the 21st century in policing at the moment. For us to be a proper part of the future, we’ve got to get our act together on things like AI, to use it to our advantage”

Superintendent

<sup>82</sup> See <https://www.nesta.org.uk/blog/making-case-ai-policing/>

<sup>83</sup> Cerri, T., et al. (2018) ‘Using AI to Assist Commanders with Complex Decision-making’. I/ITSEC Paper 18072.

<sup>84</sup> ‘Narrow’ AI is very good at performing a narrowly defined task (eg, detecting a specific image in a large dataset of images). ‘General’ AI is capable of successfully performing any intellectual task at a level comparable to or better than a human being.

<sup>85</sup> See <https://carnegieendowment.org/2019/01/09/how-artificial-intelligence-is-reshaping-repression-pub-78093>

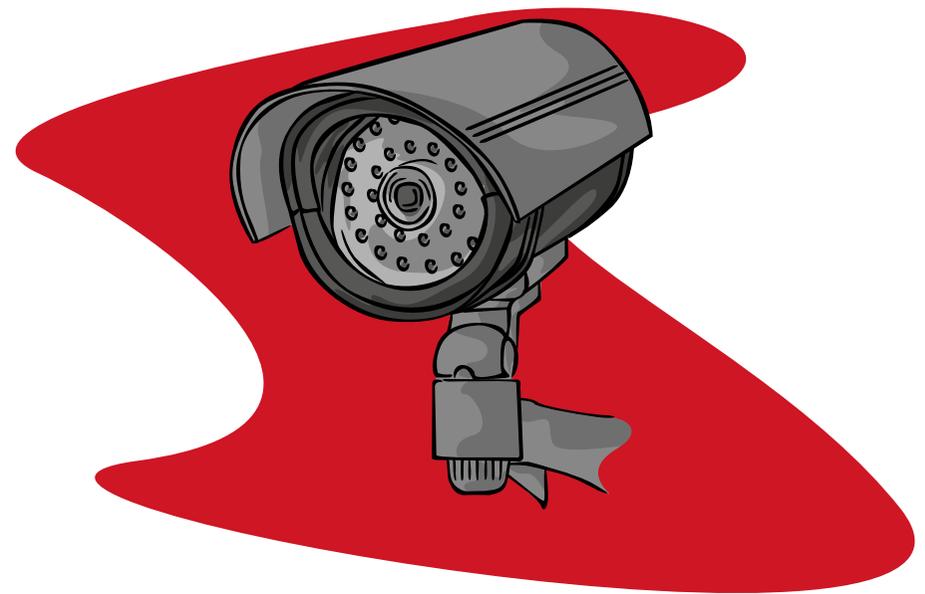
## Challenge 1: Balancing the benefits and risks of AI in an emerging surveillance society

While current profiling systems typically analyse a person's 'digital footprint' (eg, their internet presence), future systems could possess the ability to interpret people's moods, emotions and (hidden) intentions based on verbal and physical cues. For example, advances in neurotechnology could allow us to monitor brain 'events' in ways that are not currently possible, with information 'downloaded' from the brain being used to control devices or obtain knowledge of a person's intentions.<sup>86</sup> At the same time, digital assistants, sensors, self-driving vehicles and aerial delivery drones will have a growing presence in everyday life, many equipped with audio and video systems capable of collecting and interpreting highly personal information. The 'deep surveillance' these technologies make possible would effectively dissolve the boundary between public and private spaces.

“When I think about AI my concern is that this kind of technology gives new meaning to an age-old worry about the state having all kinds of power to encroach on our lives”

Professor

<sup>86</sup> See [https://www.cell.com/trends/cognitive-sciences/fulltext/S1364-6613\(18\)30092-5](https://www.cell.com/trends/cognitive-sciences/fulltext/S1364-6613(18)30092-5)



Such developments have the potential to create a society where practical opportunities for maintaining privacy are extremely limited (where 'opting out' is no longer feasible) and where access to information about people's lives can shape the balance of social, economic and political power in ways that some people find unacceptable (but which others may welcome). Significantly, those who collect and control this information, including the police, could find themselves in a situation where they know more about individual citizens than citizens know about themselves. This makes a digital backlash plausible: if privacy

## Challenge 1: Balancing the benefits and risks of AI in an emerging surveillance society

is no longer viable because surveillance is ubiquitous, both in public and private spaces (including our bodies), 'Neo-Luddism' (a philosophy opposed to many forms of modern technology) could evolve from an individual reaction to collective resistance or even a mainstream political movement.

“I don't think we understand the implications of AI yet. There's a vacuum in thinking and narrative around the values and ethics of AI and what it will do for policing. There seems to be a race to move towards that technology without thinking about the implications”

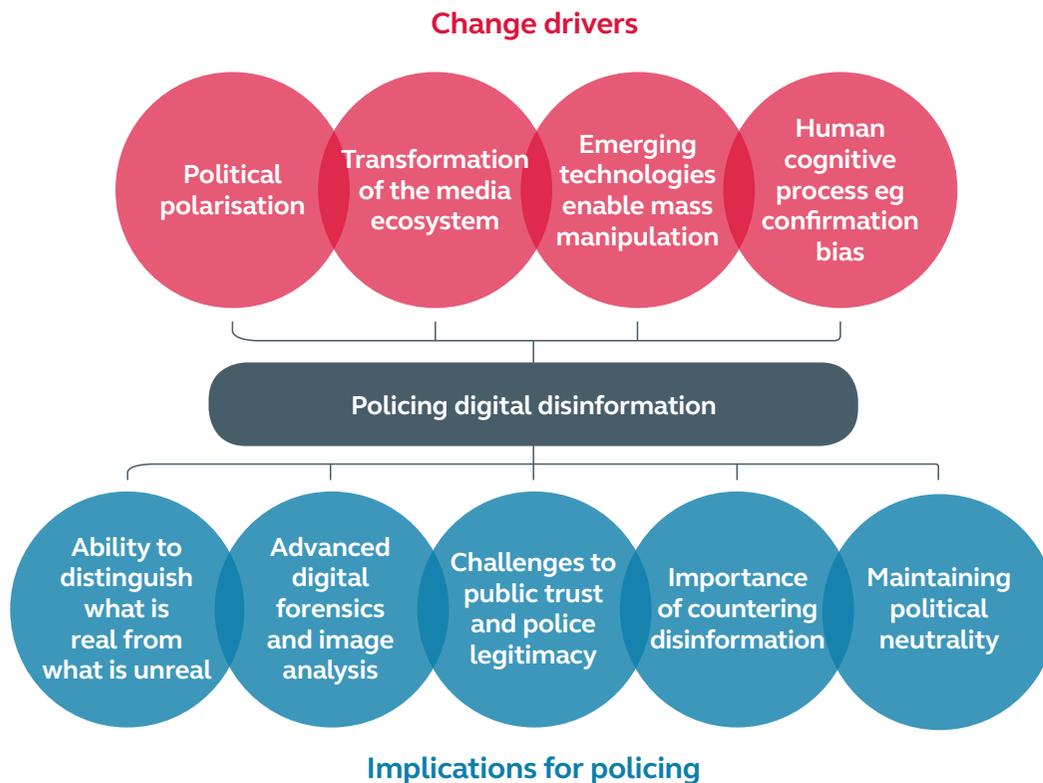
Senior representative of police staff association

If policing is to strike the right balance between the benefits and risks of AI in an emerging surveillance society, it will need to work closely with citizens, government and private sector partners to develop a clear value proposition – as well as ethical use principles and intervention criteria – for its use across the full spectrum of policing activities. With policing still in the early stages of its 'AI journey' there is ample opportunity for ethical frameworks and regulation to be developed up front. Focusing on what AI should do, not what it can do, will be critical to building public trust. The end result could be a 'good surveillance society' which delivers wide-ranging social benefits balanced against practical anonymity and a right to not be interfered with.

### Key questions for policing:

- What is the value proposition for using AI and 'human profiling' systems across different policing activities?
- How can policing ensure that it uses AI in a way that builds rather than undermines public trust?

# Challenge 2: Policing digital disinformation



“Another thing I think is going to be a big one is the mainstreaming of disinformation. We’re starting to see this coming into policing now: sexual assault victims subject to disinformation campaigns; police officers subject to disinformation campaigns. I think we’re going to be swimming in a sea of stuff where nobody knows what’s going on”

Professor

The use of disinformation to artificially shape public opinion online is likely to grow in both scale and sophistication over the next 20 years. As well as posing a direct threat to individuals and communities (eg, through its use to commit blackmail or stoke racial tensions), the way in which disinformation can be used to manufacture consensus, undermine social cohesion and blur the boundaries between ‘real’ and ‘unreal’ raises important issues for societies as well as for those tasked with maintaining order in those societies.

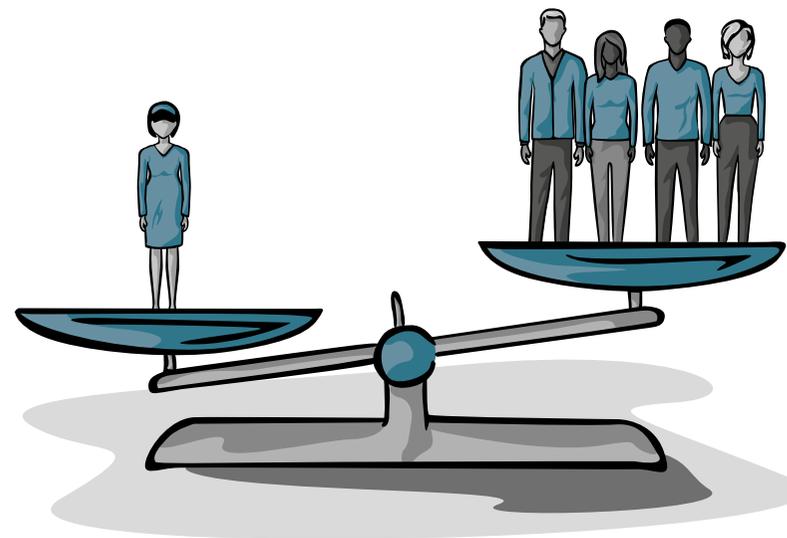
Over the last decade, disinformation has emerged as a favoured technique of nation states intent on influencing public opinion during elections, security crises and other political events. While such events will remain an important target for disinformation out to 2040, the manipulation of mainstream information environments will extend beyond the coordinated efforts of militaries, intelligence agencies and political campaigns. As technology advances and barriers-to-entry fall, disinformation techniques such as ‘spoofing’, ‘fake news’ and ‘astro-turfing’ are likely to become more widely available and easier to use. For example, as ‘deep fake’ technologies become more attainable (i.e. as they move from software requiring technical ‘know how’ to an easy-to-use mobile phone ‘app’), many offenders will gain a powerful weapon to commit online fraud, harassment, blackmail and domestic abuse. What was once a threat by a single person to divulge embarrassing information to a victim’s family, friends or colleagues could become a highly convincing campaign across multiple media to discredit someone in all aspects of their lives.

## Challenge 2: Policing digital disinformation

“Policing’s remit has expanded significantly in recent years. A big example of that is the unresolved – and hardly addressed – question of how much policing should be involved in policing online environments”

Professor

As the financial, psychological and societal harms associated with disinformation become more visible and widespread, calls for policing to play a more active role in its mitigation are likely to grow. Two issues here stand out. The first issue concerns the still unresolved question of what role the police should play in the regulation of online spaces. On the one hand, countering digital disinformation may ultimately require government to convince, cajole or legally compel technology platforms to monitor and remove disinformation that meets certain criteria. On the other hand, responsibility for dealing with criminal or dangerous online harms, a growing number of which will have a disinformation component, cannot be completely delegated to profit-driven private interests. Security remains a primary task of the state – one of whose legitimating claims is to deliver equal protection to all citizens. If as expected, tackling disinformation is going to involve a mix of public education, police action and private sector expertise, the question of how this can be organised and regulated with public interest considerations in mind is a pressing one.



“The amount of disinformation that’s out there could really impact our ability to build public trust”

Assistant Chief Constable

Second, while any incident which rises to the level of criminal activity will be investigated and likely prosecuted, there remains an important question about the police response to disinformation which is being used in ‘real time’ to provoke panic, disorder or civil unrest. A growing body of research shows that major crises (eg, after a terrorist-attack or during a pandemic) are conducive settings for the communication of false or misleading information, including the creation and spread of rumours, conspiracy theories, fake news and propaganda.<sup>87</sup> Looking to the future, policing may need to attend far more

<sup>87</sup> Innes, M., Innes, H., Dobрева, D., Chermak, S., Huey, L. and McGovern, A. (2018) ‘From Minutes to Months: A rapid evidence assessment of the impact of media and social media during and after terror events’. Report to the five country ministerial countering violent extremism working group.

## Challenge 2: Policing digital disinformation

to the ways in which these types of disinformation, especially those delivered during the midst or aftermath of a crisis, are used to influence people's emotions and behaviours in an attempt to elicit fear, spread confusion or exacerbate social tensions. Designing and delivering interventions that not only diminish such processes but also enable positive counter-influences will be an important component of responding to future crises.<sup>88</sup>

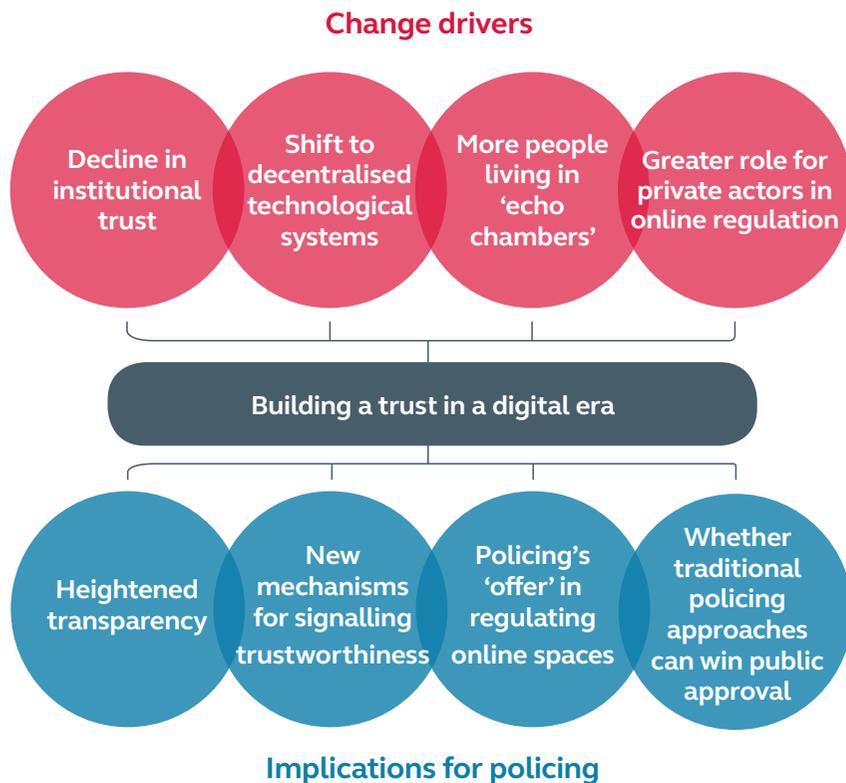
Regardless of the precise role policing plays in countering digital disinformation, an increase in the volume and sophistication of false, misleading or abusive information will have a number of practical implications. First, the investigation of offences involving the manipulation of video and audio will require new technical skills, forensic expertise and associated credentialing standards. Determining whether manipulation has taken place will require advanced digital forensics and image analysis. Second, countering disinformation will become increasingly important for public reassurance, protecting operational integrity and building the trust of diverse communities. Greater attention will need to be paid to how police media teams can use strategic communications interventions ( eg, fact-checking, debunking and discrediting) to counteract the damaging effects of disinformation. Last, responding to disinformation will require policing to balance its core mission of protecting the public with the need to remain politically neutral, that is, to police online spaces in ways which do not expose it to claims that it is limiting freedom of speech or expression. Some rights groups have claimed that the fight against disinformation is being used to make unjustified arrests and pass repressive laws.

<sup>88</sup> Innes, M., Dobreva, D. and Innes, H. (2019) 'Disinformation and digital influencing after terrorism: spoofing, truthing and social proofing', *Journal of the Academy of Social Sciences*. Available at: <https://doi.org/10.1080/21582041.2019.1569714>

### Key questions for policing:

- If, as expected, tackling disinformation is going to require a mix of public education, police action and private sector expertise, how can this be organised and regulated with public interest considerations in mind?
- What role might police communications play in countering the effects of disinformation on social cohesion, police legitimacy and operational integrity?

# Challenge 3: Building trust in a digital era



“If we aren’t able to give people the outcomes they want, if we aren’t able to keep up with new crime trends, if we aren’t able to make ourselves relevant in the digital space, we’ll lose public trust. And that’s the one that worries me at the moment, to be honest, because we’ll become less relevant if people don’t feel that what we’re providing is of use to them”

Senior representative of national policing body

Many Western nations are experiencing chronically low levels of citizen trust in institutions. In 2019, just 42% of UK citizens trusted government, business and media to ‘do what is right’, with wrongdoing, widening inequalities and populist attacks on the leadership and accountability of prominent institutions all contributory factors.<sup>89</sup>

At the same time, many institutions have struggled to adapt to a digital world characterised by heightened transparency, the near-ubiquity of social media and the rapid rise of online platforms and marketplaces. While industrialisation required people to place their trust in central authorities such as banks, universities and government agencies, the digital era has ushered in an array of new technologies which both undermine and allow people to sidestep those authorities.<sup>90</sup> The result has been a shift in trust from centralised institutions to distributed technological systems.<sup>91</sup> Moreover, this shift is likely to accelerate and deepen over the next 20 years, as emerging technologies such as blockchain mature and enable greater decentralisation of the internet.<sup>92</sup>

Even though trust in policing remains relatively high, this changing trust landscape, its consequences still unfolding, is far from an irrelevant backdrop: it brings with it new characteristics and mechanisms that policing will need to better understand if it is to sustain public trust in the digital era. Two issues stand out. First, as more people consume information about policing via digital media, with its algorithmically determined and easily manipulated news and information feeds, citizens across all social and political spectrums

<sup>89</sup> See <https://www.edelman.co.uk/research/2020-trust-barometer-uk-results>

<sup>90</sup> Examples include social media platforms, online marketplaces and crowdfunding sites, many of which are supported by review and rating systems.

<sup>91</sup> Botsman, R. (2017) Who can you trust? How technology brought us together and how it might drive us apart.

<sup>92</sup> Decentralisation is the process of distributing and dispersing power away from a central authority. Its underlying technology, blockchain, is what allows for this decentralisation, as it offers every single user an opportunity to become one of the network’s many processors.

### Challenge 3: Building trust in a digital era

will see ‘realities’ that reinforce their existing belief systems and worldviews. To the extent that these realities are based on emotion, untethered from objective facts and frequently in conflict with each other, building public trust and policing by consent could become increasingly difficult.

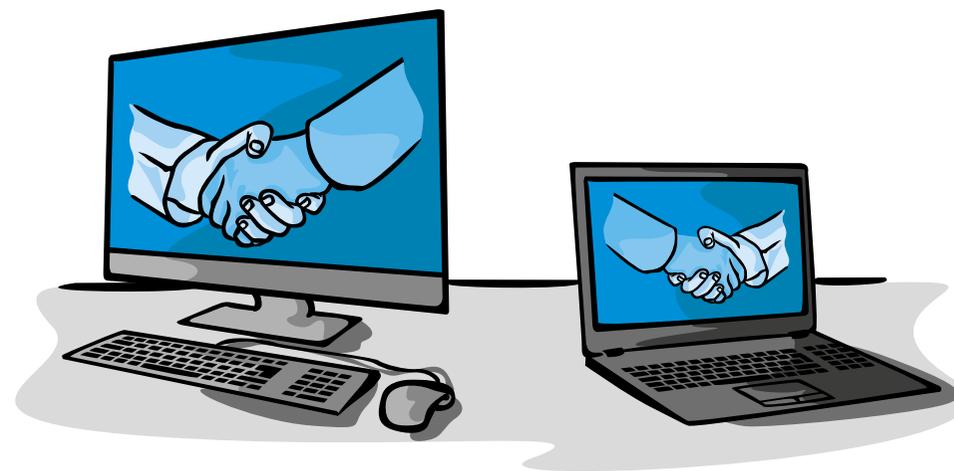
A second issue concerns the way in which greater decentralisation of the internet may give rise to new forms of regulation which minimise police involvement in dealing with online harm. Most online fraud, for example, is already managed through a prevention-compensation paradigm operated by financial institutions; it seems likely that information security more generally will also be governed in the future by the private sector.<sup>93</sup> As technologies such as AI, blockchain and quantum computing mature, technically proficient private actors are likely to play a more overt and significant role in the regulation of online spaces.<sup>94</sup> As a result, decisions about what online harms to govern, how to govern them and who ultimately benefits will fall to profit-driven companies rather than the state. Ceding sovereignty in this way could challenge police legitimacy by undermining the claim that security is a primary responsibility of the state.

“I don’t think the police are connecting the online stuff with their legitimacy. If it gets to the point where people just don’t rely on the police for this kind of stuff, where prevention and investigation is done by someone else, that will challenge their authority and legitimacy”

Professor

<sup>93</sup> See Carrapico, H and Farrand, B. (2017) ‘Dialogue, Partnership and Empowerment for Network and Information Security: The Changing Role of the Private Sector from Objects of Regulation to Regulation Shapers’, *Crime, Law and Social Change*, 67(3) pp. 245-263.

<sup>94</sup> Ibid.

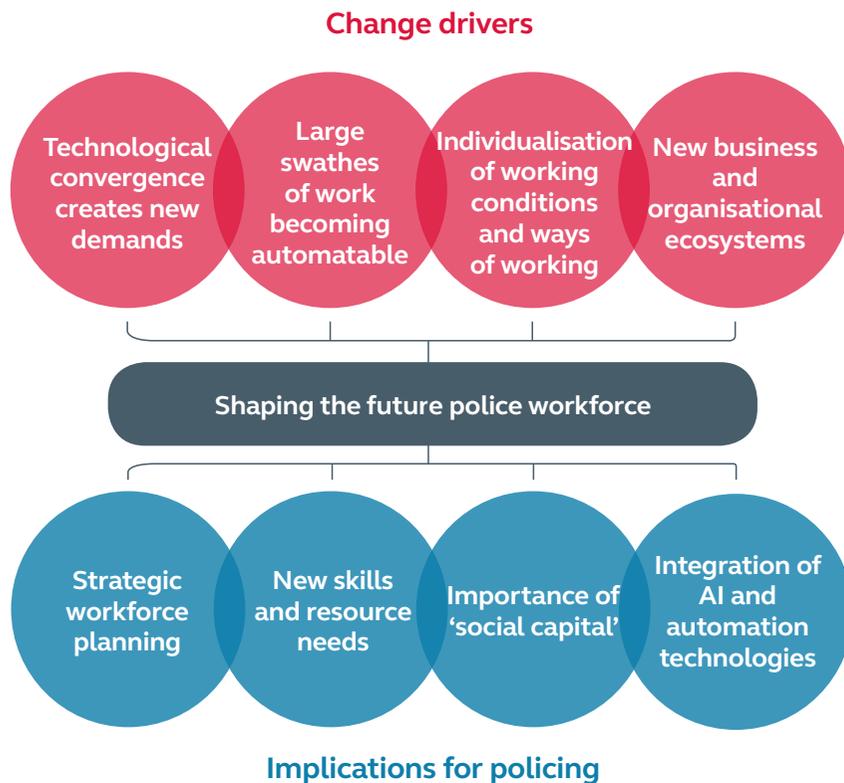


The police role must remain to prevent crime and disorder by winning the approval and trust of the public. The challenge for policing is to navigate the ‘digital revolution’ without losing its intimate connection with the public, to find new ways of building and sustaining trust in a digital environment which is becoming increasingly complex, chaotic and confusing. This is no minor challenge: as well as addressing questions about its approach to digital engagement and its role in preventing and investigating online harm, policing will also need to convince the public, especially those individuals and groups whose relationship with the police is already strained, that its own use of technology can be trusted.

#### Key questions for policing:

- Is policing’s current approach to digital engagement capable of building public trust in the digital era?
- What is the future role of policing in regulating online spaces – both in terms of enforcing regulation and investigating breaches?

# Challenge 4: Shaping the future police workforce



“What are the skill types that we need going forward? The skills that may require more investment but will enable us to get upstream of things? Because we’re never going to get upstream the way we’re going at the moment. I think we have to think differently about our workforce and we’ve got to be more agile in how we allow them to work”

Superintendent

Over the next 20 years, advances in technologies such as AI, robotics and biotechnology will transform – and disrupt – not only jobs and skills but also deeply held assumptions about what it means to ‘do work’ and create value. Partly this is because of the potential for these technologies to connect and empower workers like never before, boosting productivity, facilitating quicker access to knowledge and enhancing a range of human physical and cognitive abilities.

With these advances on the horizon, a more strategic approach to police workforce planning is required, one which constantly pre-empt demand, identifies skills and resource needs and maintains an open mind about what can be done more effectively by or in collaboration with other sectors. While analytical tools can help anticipate demand and skills needs, there is also a pressing need for a more agile workforce that can work flexibly across organisational, jurisdictional and disciplinary boundaries. This may require more short-term, project-based working practices, where multidisciplinary teams are quickly assembled to meet a specific objective before moving on to the next piece of work.<sup>95</sup>

At the same time, the skills, knowledge and life experiences needed to succeed in policing will evolve over the next 20 years as officers and staff face more novel and complex demands. Alongside traditional law enforcement skills, police work increasingly requires a portfolio of technical skills such as advanced digital forensics alongside interpersonal skills such as empathy, creativity and collaboration. This blend of skill sets will become increasingly valuable as more of the demands and challenges facing policing stem from the convergence of emerging technologies.

<sup>95</sup> Accenture (2018) Reimagining the police workforce: A vision for the future.

## Challenge 4: Shaping the future police workforce

“I think we’re heading to a place where we have a much more mixed workforce. Policing today requires different and more extensive skillsets. In terms of preventive work, it requires, I think, a much different relationship between the public, the police and all those other groups and organisations that can assist us with keeping people safe”

Senior representative of national policing body

As well as developing the skills, expertise and resources that it ‘owns’, policing will also need to find ways of connecting to the skills, expertise and resources that are available within a broader ‘ecosystem’ of partners, including volunteers, public services and the private sector. It is widely acknowledged that many of the challenges policing faces cannot be solved by the police alone – this will continue to be the case out to 2040. As a result, policing’s effectiveness will increasingly depend on its ‘social capital’; that is, on the value of its relationships with partners as well as its ability to ‘orchestrate’ these through effective leadership, communication and consensus building.<sup>96</sup> However, previous attempts at police-partnership working have often suffered from a lack of focus, coordination and governance, with the police often at the margins or at best sharing a coordinating role with others.<sup>97</sup>

<sup>96</sup> This suggests that skills and roles (eg, communication management and multi-agency ‘knowledge brokers’) which enable multi-actor cooperation will be increasingly valuable in the future.

<sup>97</sup> Ransley, J. and Mazzerolle, L. (2009) ‘Policing in an Era of Uncertainty’, *Police Practice and Research*, 10(4), pp. 365-381.



“The question for policing is how is it going to use artificial intelligence and automation to free up officers and staff to be more proactive and productive?”

Private sector technologist



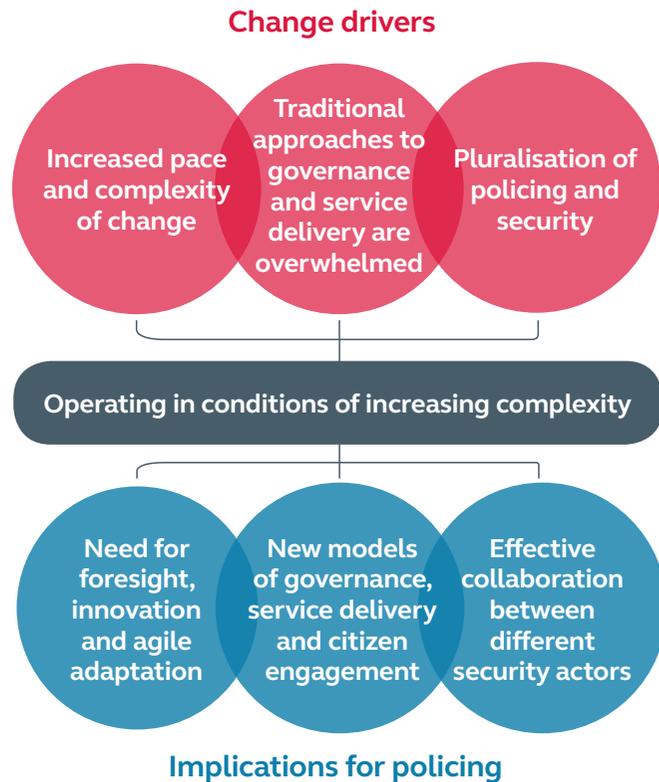
## Challenge 4: Shaping the future police workforce

Shaping the future police workforce will also require higher-purpose – and potentially uncomfortable – conversations about what policing will look like in the context of increasing automation. The use of AI across a range of policing activities increases the likelihood that some police tasks will in the future become automated: wherever a task is deemed too complex, too time-consuming or too dangerous for a human being, AI/robotics could provide a solution. But while it is true that AI and other emerging technologies will play a more central role in policing in the future, their introduction risks damaging the morale, motivation and wellbeing of officers and staff unless their integration into the workplace is managed carefully. Building a workforce with the intellectual and psychological aptitude necessary to work in an increasingly automated environment will be an important part of preparing policing for the future.

### Key questions for policing:

- How can policing build an agile and adaptive workforce capable of working flexibly across bureaucratic, jurisdictional and disciplinary boundaries?
- How can policing best harness the skills, expertise and resources that exist within its broader 'ecosystem' of partners?

# Challenge 5: Operating in conditions of increasing complexity



“There’s a real tension between what we might think of as 20th century policing and 21st century policing, between policing’s traditional aims, values and ways of working and some of the contemporary threats and issues that we’re now being confronted with”

Head of think tank

Over the past several decades change has become increasingly complex: in speed, interconnectedness and uncertainty of outcome. This complexity brings with it new strategic risks and systemic challenges – challenges that are ‘knotty’ and difficult to address, such as migration, climate change, emerging diseases and transnational organised crime. While governments have traditionally been good at dealing with problems which are static and can be addressed in silos, the type of change we see today is overwhelming traditional approaches to planning, governance, service delivery and citizen engagement.

We also see this pattern in policing.<sup>98</sup> Many of the problems policing must now contend with are complex rather than merely complicated, which is to say they are fast-moving, cannot be broken apart and solved piece by piece, have little regard for established jurisdictional, bureaucratic or disciplinary boundaries and morph into new problems as a result of interventions to deal with them.<sup>99</sup> Issues such as cybercrime, terrorism and organised crime transcend national borders and require cooperation both inside and outside government to solve. At the same time, many volume crimes are rooted in deeply entrenched social, economic and cultural problems, with policing just one of many actors responsible for their resolution. Few, if any, of these problems can be resolved by traditional, reactive policing approaches. Instead they require new approaches blending intelligence collection, data analysis, new technologies, specialist skills and problem-solving.

<sup>98</sup> Ransley, J. and Mazzerolle, L. (2009) ‘Policing in an Era of Uncertainty’, *Police Practice and Research*, 10(4), pp. 365-381.

<sup>99</sup> See Fuerth, L.S. and Faber, E.M.H. (2012) *Anticipatory Governance: Practical Upgrades*.

## Challenge 5: Operating in conditions of increasing complexity

“The service feels very uncertain about how best to organise itself to respond to the challenges that are coming its way... The current model is defensive, reactive and brittle”

Former chief constable

This complexity poses a profound challenge to the adaptive capacity of many of policing's current processes, structures and systems, which are essentially modelled on the early industrial period: vertical; hierarchical; fragmented; and bureaucratic. As one interviewee put it: “What we're effectively doing is trying to retrofit a 19th century organisation to the problems of the 21st century.” As well as hindering policing's ability to deal with current challenges, this was said to also be impeding policing's ability to anticipate emerging threats (through foresight), to spur new thinking about how best to address them (through innovation) and to mobilise responses quickly to maximise chances of success (through agile adaptation).

Several interviewees said that policing faces difficult choices about how to upgrade its processes, capabilities and governance structures to meet the challenges and opportunities of the 21st century – simply patching up or tinkering with existing processes or structures may not suffice. If policing is to meet the increasingly complex demands of the next 20 years (and beyond), it may need to explore radically different models of governance, citizen engagement, policy development and service delivery. For example, policing may need to cede sovereignty to communities or private actors to create more effective hierarchical governance, or create new, non-hierarchical, networked structures which put resources and services in the right place at the right time. Many of the threats that have emerged in recent years have resulted in policing powers and responsibilities being extended to a broad range of police, security, regulatory, administrative and private actors who form loose networks with overlapping functions.



## Challenge 5: Operating in conditions of increasing complexity

Developing the capacity to ‘orchestrate’ and lead these networks will become increasingly important over the next 20 years.

“My hope is that by 2040 British policing is known as much for its innovation as it is for its tradition... And that’s the reason why it’s seen as the best in the world”

Private sector management consultant

Increasing complexity also poses a challenge to police leadership. To meet future challenges, police leaders will need a more diverse toolkit of skills, experiences and resources, including the ability to anticipate and prepare for emerging challenges and opportunities. In a rapidly changing, complex world, thinking creatively and systematically about the future is a critical leadership role and responsibility. Expanding the police leadership toolkit to include ‘futures literacy’<sup>100</sup> – the ability to better understand the role the future plays in what people see and do in the present – could help police leaders of the future better manage complexity and uncertainty. Not only would this help leaders anticipate future challenges so that they can be avoided or mitigated; it would also help them identify future opportunities so that they can be realised and maximised.

### Key questions for policing:

- How can policing develop the incentives and governance arrangements that sustain a culture of regular, useful, impactful foresight and its subsequent use in decision-making?
- How can policing improve inter-organisational cooperation so that the whole system can be mobilised quickly to address complex problems?
- How can policing expand the leadership toolkit to include ‘futures literacy’?

<sup>100</sup> United Nations Educational, Scientific and Cultural Organisation (UNESCO) Futures Literacy: A skill for the 21st century. Available at <https://en.unesco.org/themes/futures-literacy>.

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## About the College

We're the professional body for the police service in England and Wales.

Working together with everyone in policing, we share the skills and knowledge officers and staff need to prevent crime and keep people safe.

We set the standards in policing to build and preserve public trust and we help those in policing develop the expertise needed to meet the demands of today and prepare for the challenges of the future.

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