



Government
Office for Science

Forensic Science and beyond: authenticity, provenance and assurance

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Why Forensics?



Resilience



Policy



Emerging Technology

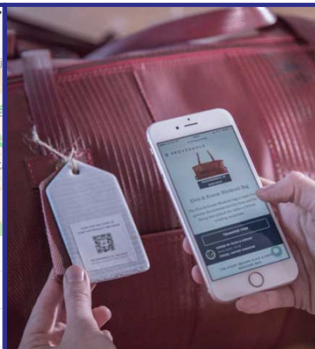
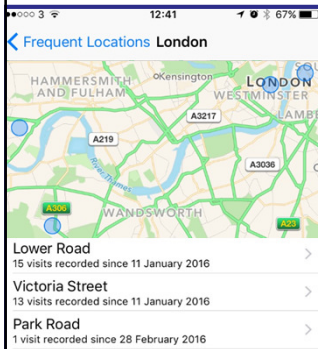


2014 Themed Annual Report

- Growth driven by science and innovation.
- Innovation to deal with global challenges (ageing populations, scarce resources, infectious diseases, carbon emissions).
- Innovation held back by poorly framed discussions about risk
- If governance of risk goes wrong, miss out on major potential benefits, or suffer needlessly.



The changing landscape of modern forensics



Trace evidence can be recovered in increasingly minute amounts, and now also includes our digital presence.

Increasing consumer requirement for the assurance of the provenance of goods.

Cyberspace is a new global infrastructure, only partially governed by national governments.



Forensics beyond the courtroom

- Provenance
- Authenticity
- Assurance



Policymakers and practitioners must adapt and innovate

- New ways to link a person to a place
- New classes of evidence
- Forensic evidence to deter crime





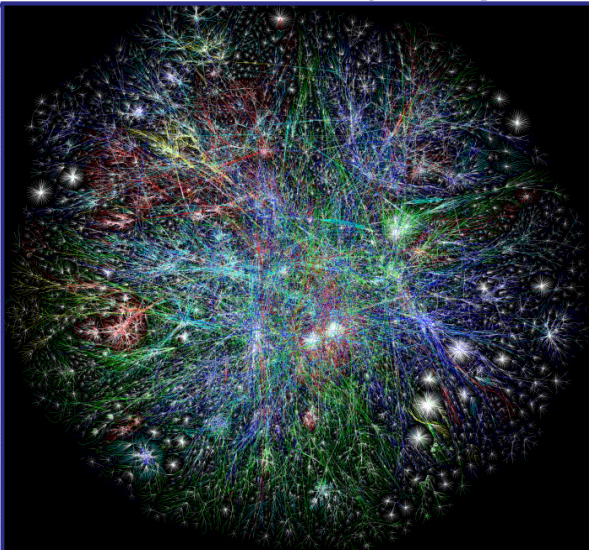
Working together – the 5 Cs

- Consistency
- Communication
- Common standards
- Collaboration
- Clarity



Growing role of cyberspace

- Fastest growing domain of criminality
- Cyber skills shortage
- Global challenge

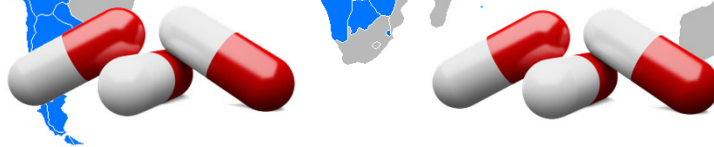


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Assuring identity and provenance

WHO's international Medical Products Counterfeiting Taskforce (IMPACT) estimate that up to 25% of the total medicine supply in less-developed countries is counterfeit.



The prevention of crime

- Designing out crime
- Identifying early markers for temptation
- Making objects less valuable when stolen





Distributed Ledger Technology



Distributed ledgers are a disruptive technology that can enable:

- Insider threat mitigation
- Advances in cyber forensics
- Protection of critical infrastructure and supply chains



Novel techniques present new opportunities and challenges





Conclusions

- Forensic science draws on almost every discipline and cuts across the criminal justice system and beyond
- Innovation can come from almost anywhere, and be applied in seemingly unrelated fields.
- Forensic techniques can increase confidence in markets and create new business models.



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