

Is Robocop now a reality?

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Robocop (1987), Paul Verhoeven

UK Emergency Services

2017: ~37M calls per year

Around 25% of Police calls were emergencies

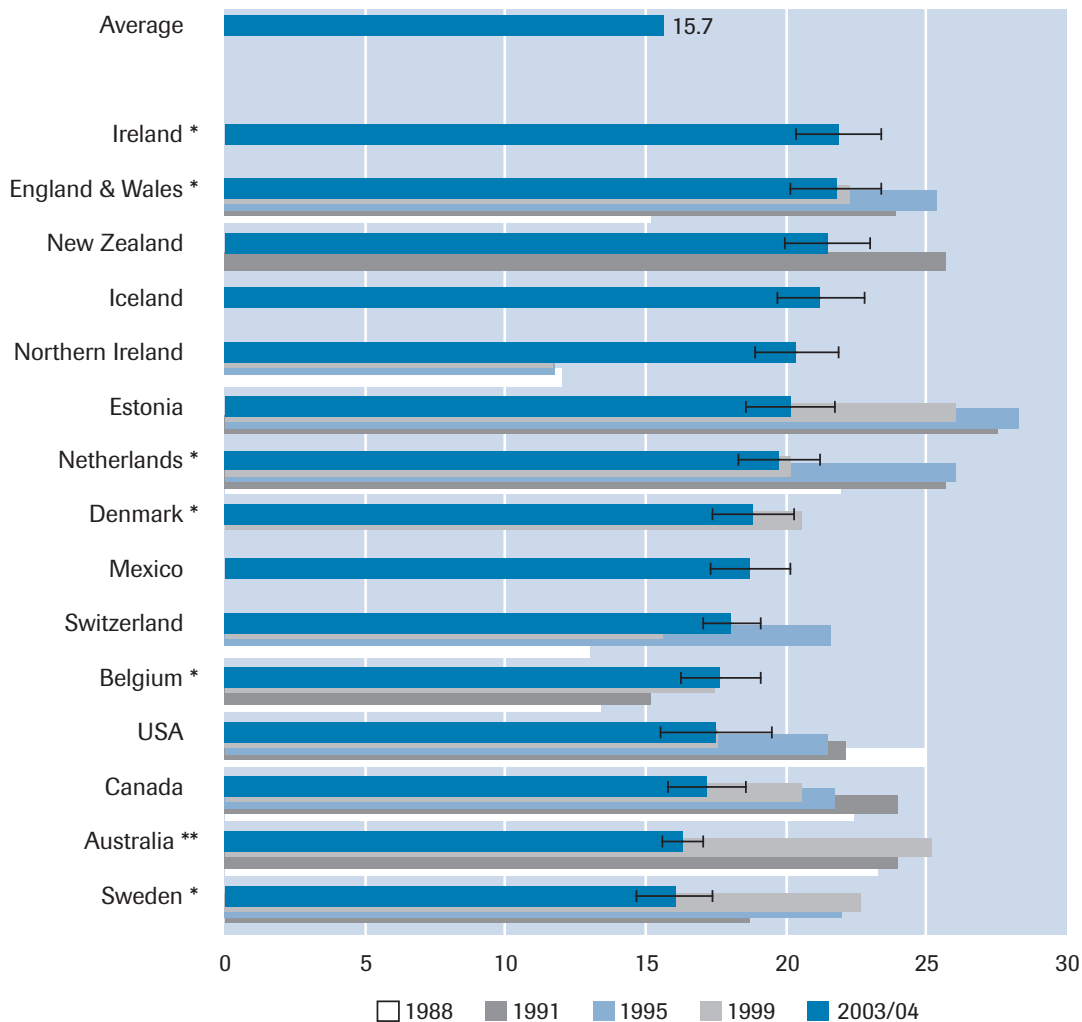


■ Police ■ Ambulance ■ Fire ■ Coastguard

Van Dijk, J.J.M., van Kesteren, J.J. & Smit, P. (2008).

Criminal Victimisation in International Perspective, Key findings from the 2004-2005 ICVS and EU ICS.

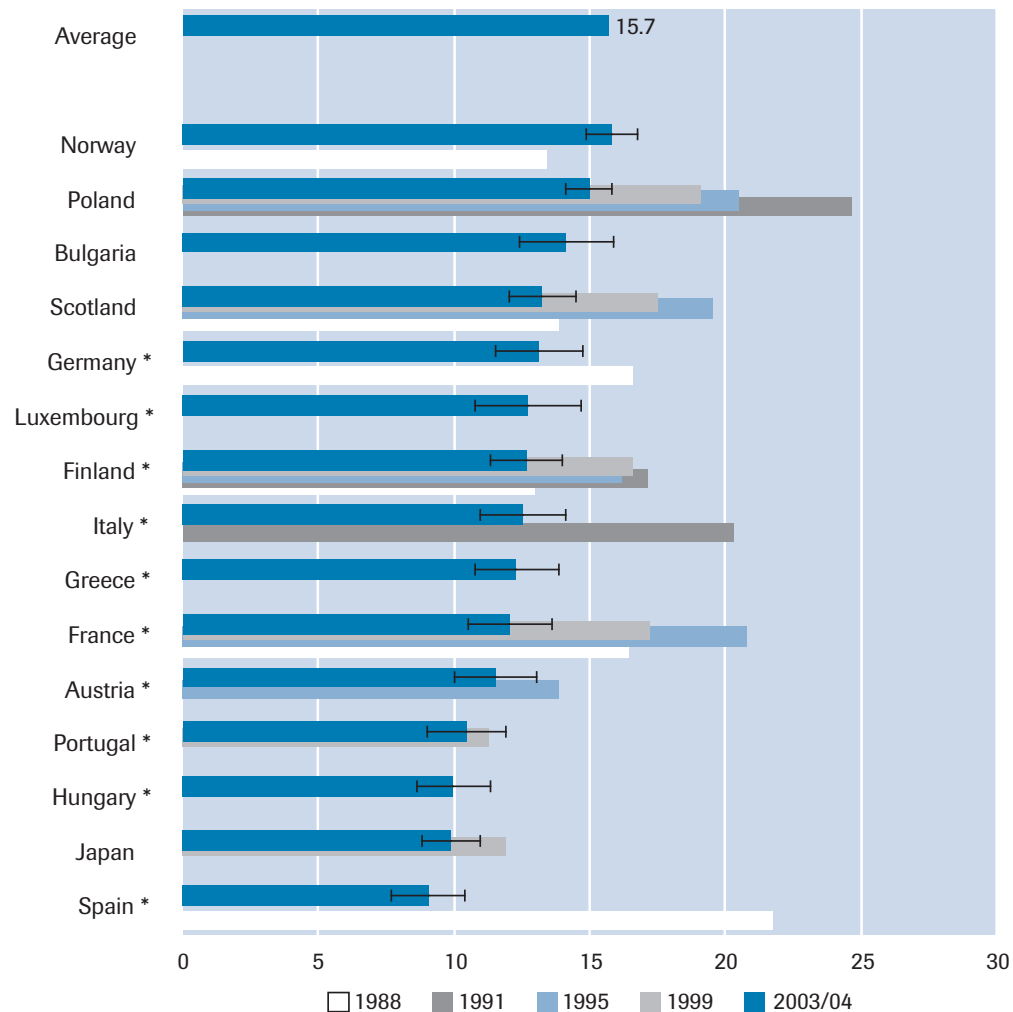
Den Haag: Boom Juridische Uitgevers



Van Dijk, J.J.M., van Kesteren, J.J. & Smit, P. (2008).

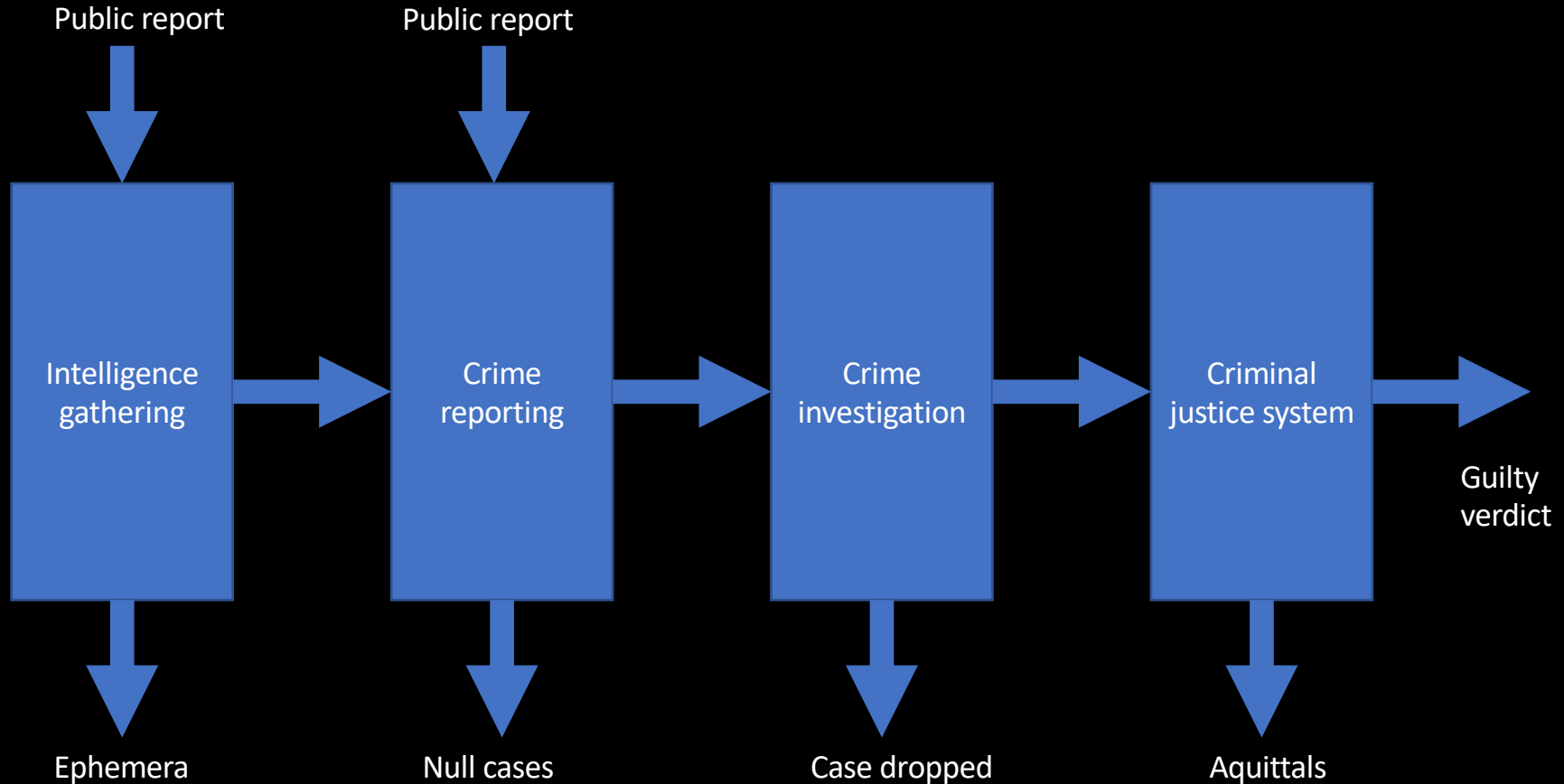
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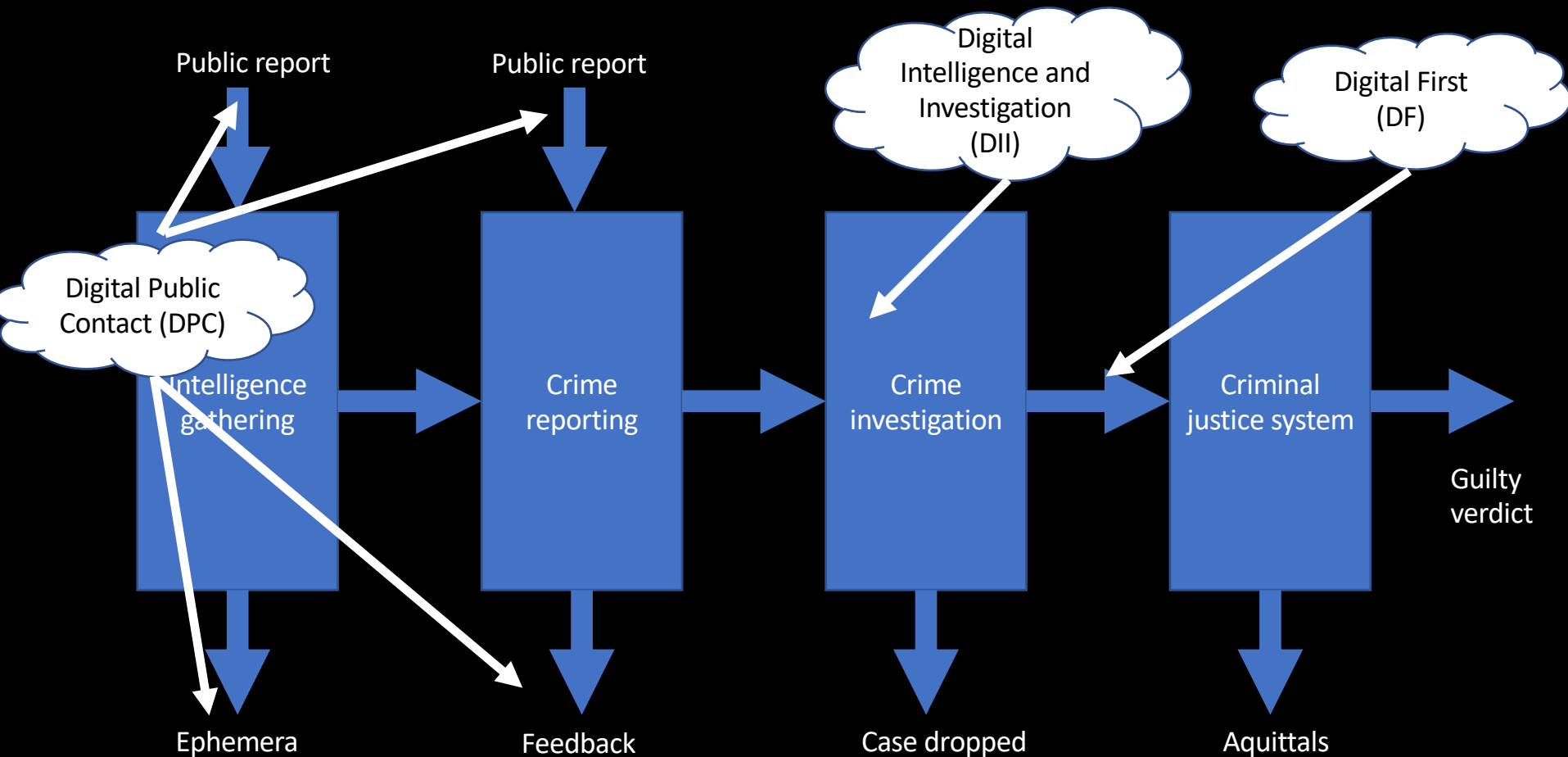


Digital crime and justice systems

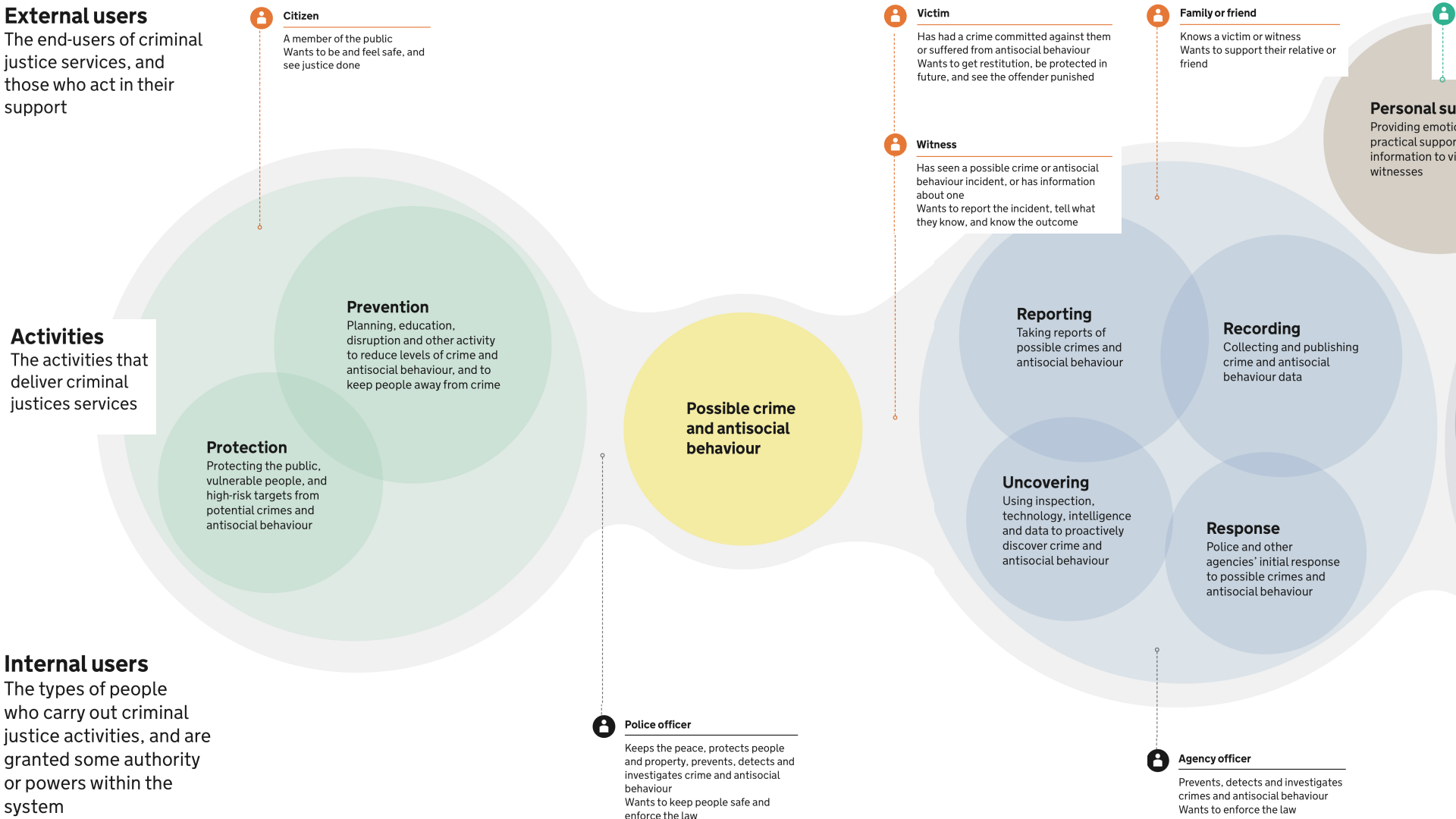
What is digital policing?



NPCC Digital Policing Portfolio



Digital First





Non-government organisations



Detection and investigation



Prosecution



Witness and Victim Services



Enforcement and Probation

- National Offender Management Service
- Public prisons
- National Probation Service
- Private prisons
- Community Rehabilitation Companies
- Parole Board
- Youth Justice Board
- Youth Offending Teams
- MAPPA (Multi-Agency Public Protection Arrangements)



Local Partnerships



Prosecuting bodies (60+)



Trials

- HM Courts and Tribunals Service
- Courts and Tribunals Judiciary
- Jury Central Summoning Bureau
- Magistrates Court
- Youth Court
- Crown Court
- Court of Appeal
- High Court
- Legal Aid Agency

“The more you look at this map, ... the more you realise that the criminal justice system **isn't a system at all**. ...

Of course it was never designed to work this way, but that's because **it was never actually designed**. The system we have today is the result of years of accretion, ad-hoc process on top of ad-hoc process, letter by letter, form by form. It needs a good dose of proper service design thinking.”

Mapping new ideas for the digital justice system

Posted by: [Mike Bracken](#), Posted on: 18 August 2015 - Categories: [Government as a Platform](#)

<https://gds.blog.gov.uk/2015/08/18/mapping-new-ideas-for-the-digital-justice-system-2/>

Digital intelligence and investigation

Cyber investigation

- Not restricted to cyber crime
- Massively increasing in volume

BBC Murder 24/7; Series 1, Episode 1, "The Manhunt"
<https://www.bbc.co.uk/programmes/p084m120>



Crime is inhomogeneous

Provinces.	Condemned for Crimes against		Inhabitants to one Person Condemned for Crimes against		Crimes against Property to one Crime against Persons.	Inhabitants to one Pupil at School.
	Persons.	Property.	Persons.	Property.		
Brabant, Southern,	61	168	16,336	5932	2·75	13
Flanders, Eastern,	82	154	17,100	9104	1·88	14
Limbourg, -	32	120	20,384	5436	3·75	15
Overysse, - -	16	42	20,385	7766	2·62	7
Brabant, Northern,	30	66	22,031	10,014	2·20	9
Anvers, -	29	113	22,562	5800	3·90	12
Groningen and Drenthe, - }	18	98	23,611	4296	5·44	7
Liege, - - -	26	82	25,107	7961	3·15	15
Flanders, Western,	46	142	25,222	8171	3·09	15
Namur, - - -	14	66	27,433	5819	4·71	9
Gueldres, - -	21	114	27,633	5090	2·20	9
Holland, Southern,	28	216	32,000	4148	7·71	11
Holland, Northern, and Utrecht, }	28	263	37,560	4000	9·42	10
Luxembourg, -	14	47	42,208	12,572	3·34	8
Hainault, - -	21	76	52,712	14,565	3·62	10
Zealand, - - -	5	86	53,450	3108	17·20	10
Friesland, -	3	103	132,248	3852	34·33	8
Low Countries, -	474	1956	25,747	6239	4·13	10
Low Countries (crimes),	424	1691	28,783	7217	4·00	10
Dutchy of the Lower Rhine, - }	296	994	33,784	10,060	3·36	13
France, - - -	7160	20,308	21,648	7632	2·84	27

"A treatise on man and the development of his faculties,"
M A Quetelet, English translation ,1842, in French 1835

Predpol

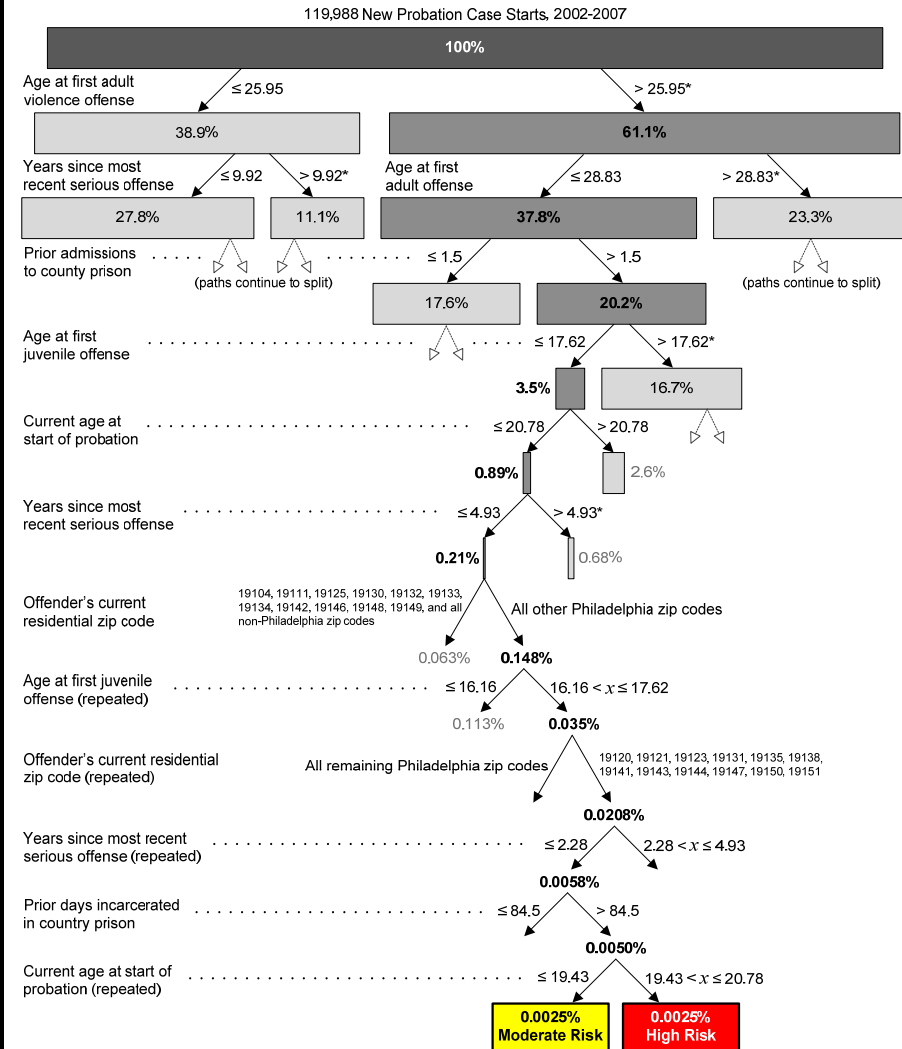
The background consists of a grid of squares in various shades of green and white. A solid, medium-green horizontal bar runs across the middle of the image, behind the text.

Digits

Crime risk assessment tools

- Harm Assessment Risk Tool (HART) – Durham Constabulary
- Based on decision tree algorithms developed on Philadelphia crime data
- Probation seekers categorised into *high*, *medium* and *low* risk
- Overall accuracy, two years later, around 60%.

Classifying Adult Probationers by Forecasting Future Offending, Geoffrey C. Barnes and Jordan M. Hyatt, March 2012, Final Technical Report, Grant 2008-IJ-CX-0024.



Decision aids

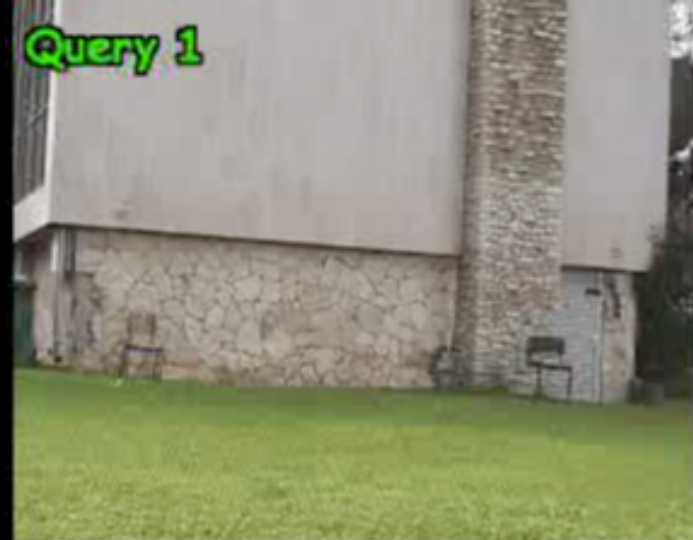
- Heavily criticised for biases
 - USA critiques tend to focus on ethnicity
 - UK on poverty
- Many biases are difficult to spot (HART used Experian Mosaic data)
- Critics are vocal but rarely enumerate the accuracy of the legacy systems

Luddite warning

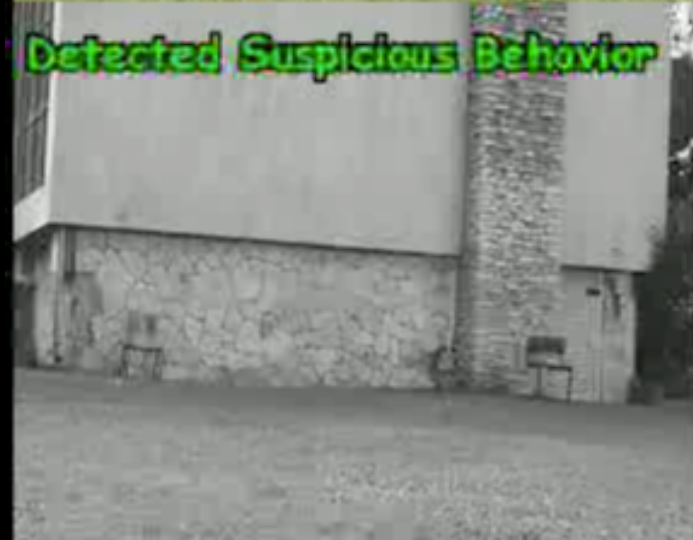
- Failure to compare automatic systems to human benchmark
- Accusation of biases that are culturally charged
- Scrutiny of systems that are out-of-date

Detecting suspicious behaviour

Query 1



Detected Suspicious Behavior



Boiman, O., Irani, M. Detecting Irregularities in Images and in Video. *Int J Comput Vision* 74, 17–31 (2007).
<https://doi.org/10.1007/s11263-006-0009-9>

Digital Public Contact

Meanwhile in Dubai



مساحة الخدمة S
Service Yard S

شارع السعادة
Happiness St
برج خليفة
Burj Khalifa



تجاري
Trade



50 m



Summing-up

- Much progress in *digital intelligence and investigation*
- A constant worry for ethicists and civil liberty specialists
 - These worries are often not balanced properly against benefit
- Less progress in *digital public contact*
 - Most UK forces are now on twitter!
- Progress on *digital first* will be limited until
 - Countries simplify and rationalise their justice systems.

Coming-up

“The cashless society”

Tuesday 26th May 2020 at 18:00