The value of data analysis in policing serious crime

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Catalyst Conference 26 June 2019 #UoECatalystConf
Data Processing Contracts

The GDPR makes written contracts between controllers and processors a requirement, rather than just a way of demonstrating compliance with the seventh data protection principle (appropriate security measures) under the Data Protection Act 1998.


Ensure both understand their obligations, responsibilities and liabilities.
Data Processing Contracts – Rules to Follow

- What do we want to achieve?
- What can we physically do?
- What are we permitted to do/lawfully can do?
- What are we actually going to do?

- Clear communication – early planning
- Ownership
- Iterative Process – first version is NOT the final version
Data processing Contract - Support

- Templates – which can be adapted for a specific project
- Experts – Practitioners, Analysts and Information Managers
- Authorisations – Role Holders already aware of the project
Data Processing Contracts - Content

Things to consider

- The subject matter;
- Duration, nature and purpose of the processing;
- The type of personal data and categories of data subject; and
- The controller's obligations and rights.

Contracts must also include specific terms or clauses regarding:

- Processing only on the controller’s documented instructions;
- The duty of confidence;
- Appropriate security measures;
- Using sub-processors;
- Data subjects’ rights;
- Assisting the controller;
- End-of-contract provisions;
- Audits and inspections.
- Publishing
Analysis Overview

- Knife Crime/Serious Sexual Offences
- Data
- What have we found?
- Including additional datasets
- Outcomes
  - Report
  - Platform
- Further Steps
Knife Crime

Overview
Data

- Two datasets available (victims, victim and suspects)
- Location, time of offence, type of offence and descriptive of victims and suspects
- Provided graphs and descriptive statistics to get a better understanding of knife crime in Colchester
- Predictive analysis
What have we found?

- Predictive model – Using spatial statistical analysis
- We tested the method works on the data provided
- With more data we are confident that the predictability would get better and can become useful
- Paper in draft
Predictive maps

Real knife crime

Predicted knife crime
Data

- Data available from the police systems between 2015 – 2019
- Location data available, time and date, crime description, description of victim and suspect (age, ethnicity, gender)
- We have created new variables based on the existing data
  - Get a better understanding of victimisation, re-victimisation and prevalence of crimes based on age, gender, time of reporting etc.
- Informed Essex Police on additional data needed to get better results
Additional datasets

- In order to get a better picture of potential factors that can inform us on serious sexual offences and knife crime we added extra data from the ONS:
  - Indices of multiple deprivation (e.g. income, education) (LSOA level)
  - Median age (LSOA level)
  - Population density (LSOA level)

- Presented in maps alongside data received from Essex Police
What have we found?

- We provide numbers to back up experience in the field
- We give a better understanding of populations that are at risk of victimisation and of becoming perpetrators
- Check and challenge existing ideas by looking at gender, age and ethnicity
- Inform on re-victimisation and lack of reporting in the data
- Can inform on areas that are more at risk in order to aid intervention deployment
Outcomes

- We have created reports that summarise and visualise the data provided by the Police.
- We have closely worked with the Police to identify patterns, trends, and hotspots.
- We created a platform that can be used in the future with new data in order to have easy access to statistics.
Platform
Further Steps

- We will analyse further data
- Working closely with Essex Police to improve the platform
- Give training to analysts at Essex Police in order for them to be able to use the platform after the Catalyst Project ends
- Try a new experimental method of predicting certain crimes using spatial and temporal data available
- Incorporate the model in the platform if it works
- Publish papers based on the work
Benefits – Policing

- Fact based decision making – not reliant upon anecdotal interpretation
- Expediency of research, problem identification and drill down to detail – continue to be able to add data
- Targeted resourcing/Opportunity to expand to other policing areas
- Ability to overlay multiple data sets to improve understanding of actual picture – Why!
- Support multi-agency working
- Training provision
- Positive publicity
Outcomes

Increased victim satisfaction

Improved public confidence/trust

Decrease in reporting due to less offending taking place

Increase in detection

Encourage innovation in evidence based policing
Questions
Evaluation
Empowering public services to evaluate the impact of their work

Risk Stratification
Using predictive analytics to anticipate those at risk and to better target resources

Essex Volunteering Hub
Providing benefits to local community and students through volunteering

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