

WMP Briefing Paper

Officer Visibility

Ethics Committee (13 September 2023)

This project is at the proposal stage and is presented to the committee 'in principle' so that any immediate concerns can be raised.

The finer details of the methodology, exact data to be used and mode of communicating the results will not be determined until after the exploratory data analysis (EDA) phase has been undertaken.

Once the analyses have been completed the project will be presented to the Committee again so that the data used, methodology, findings, intention for deployment and communication plans can be examined in more detail.

Legal opinion has been sought and the Data Protection Impact Assessment (DPIA) is being reviewed by the Force Data Protection Officer (DPO).

Tasking

This project was requested by Chief Inspector Mark Lacey in April 2023.

The aim of the project is to provide a tool for policing managers to understand how visible their staff are to the local community and to manage their efficiency and effectiveness.

The project has been endorsed by the Local Policing Governance Board.

Purpose

The purpose of the analysis is to develop a Business Insight (Qlik) dashboard which can be interrogated by policing managers to understand where and when front line officers have been visible in their policing areas. The tool would enable managers to answer the following questions:

- How long do officers spend outside a police station?
- How long are officers in certain status codes (available to be deployed; en route to an incident; dealing with an incident)?
- How long does an officer spend in a given area?
- The number of officers visible in the community at various time periods throughout the day?
- The number of hours of officer visibility in the community at various time periods throughout the day?

The data will be able to be filtered both geographically (Local Policing Area (LPA), Impact Area, Sector and Neighbourhood) and in terms of personnel (department/LPA, team and individual officer).

Context

West Midlands Police (WMP) introduced a new operating model in April 2023 with a Force mission of *'Working in partnership, making communities safer'* delivered by the seven LPAs¹. The intention is that clear ownership, affinity and pride in local teams will help tackle local criminality, prevent crime and keep people safe; and enable the Force to build on existing relationships with communities and serve them better.

In order to achieve the Force mission, local policing managers will be held accountable for delivering a service that works for local people and working with engaged communities. In order to do this, they need to have access to data which helps them understand the amount of time their staff are visible to the community.

Intended activity resulting from the project

The data will enable local policing managers to monitor team and individual performance against a key Force priority and to provide evidence of our commitment to community policing to local communities and partners:

- Policing managers will have the tools to drive a performance culture that places value on officer time spent in the community and enable them to better manage their teams' efficiency and effectiveness.
- Providing data at the level of team and individuals will ensure that this evidence can be used to support conversations about individual contributions to the Force strategic priority.
- The data will also enable managers to identify where there are gaps in our coverage and support strategic deployment decisions.
- The data will improve our ability to provide evidence of officer visibility for local community forums and other partners in order to improve confidence that the Force is focused on ensuring that a significant proportion of officer time is spent patrolling, engaging and responding.

Ethical considerations

This data will provide more information than previously available about officer movements throughout their tour of duty.

- As with all data relating to the performance of individuals, this data will be used to inform conversations with their supervisor which will also take into account the wider context of their duties and local circumstances.
- Information about officer visibility provided to local communities and partners would not refer to individual officer or team performance and would be aggregated to geographical areas such as wards or local authorities. Only relevant WMP employees would have access to the dashboard.

It is acknowledged that this tool will not provide information about the 'quality' of the activity being undertaken whilst 'visible' in the community. This tool is only intended to provide a baseline to inform managers about the proportion of officer time that is visible to the community. Additional contextual information about the nature of the engagement will be generated through usual supervisory interaction with their officers.

¹ LPAs are co-terminus with the Local Authority areas

Data

Data to be used:

- ControlWorks
- HR Fusion

Level of analysis:

Individual

Individuals aggregated?

Yes

No

Data will be available at the level of individual and team, but can be presented as aggregated data when appropriate, for example to inform conversations with partner agencies.

Specific Area:

The data will be available at the level of neighbourhood, sector, impact area and LPA.

Reliability of data:

An extensive exploratory data analysis (EDA) phase will be undertaken to examine the extent of any data quality issues. The data comes from ControlWorks and HR Fusion which have been used in a number of previous Data Analytics Lab (DAL) projects.

Sample or entirety: entirety

Type of analysis:

Exploratory

Explanatory

Predictive

Optimisation

Business Insight (Qlik) Dashboard

Proposed methodology:

The methodology for this project will build upon the work already undertaken for the Guardian Targeted Patrols randomised control trial to calculate officer time within a specified area. Further discussion with the subject matter expert (SME) will determine the precise definition of 'visibility' and how this can best be calculated from the data routinely collected.

Will the project eventually be automated?

Yes

No

Means of evaluation:

The dashboard will be tested by end users on LPAs for accuracy and usability. Their feedback will be incorporated into the final product.

ALGO-CARE considerations

As this project is at the proposal stage and is presented to the committee ‘in principle’ in order that any immediate concerns can be raised, the finer details of the methodology will not be determined until after the EDA. Once the analyses have been completed the projects will be presented to the Committee again so that findings and methodology can be examined in more detail.

Advisory	
If applicable, are the outputs from the algorithm to be used in an advisory capacity?	<p>Yes, this tool will provide information to assist with resourcing decisions.</p> <p>It will also provide information to support conversations about the performance of teams and individuals.</p> <p>This information would always be used in conjunction with other sources of information before decisions are made.</p>
Does a human officer retain decision-making discretion?	Yes.
Lawful	
What is the policing purpose justifying the use of the algorithm (means and ends)?	The policing purpose justifying the development of this dashboard is that it will enable policing managers to understand and improve the effectiveness of their delivery of community policing, thus supporting the Force strategic priority to deliver a service that works for local people and works with engaged communities.
Is the potential interference with the privacy of individuals necessary and proportionate for legitimate policing purposes?	There is no interference with the privacy of individuals. The data surfaced about individual officers will simply measure the proportion of time they are providing visible policing activity during their working hours.
In what way will the tool improve the current system and is this demonstrable?	There is currently no tool available to local policing managers to easily understand the proportion of time that their officers are visible to local communities.
Are the data processed by the algorithm lawfully obtained, processed and retained,	The data are from WMP systems and collected to enable their normal day-to-day operations.

according to a genuine necessity with a rational connection to a policing aim?	
Is the operation of the tool compliant with national guidance?	The analyses proposed would accord with the Government Digital Service Data Ethics Framework 2020 ²
Granularity	
Does the algorithm make suggestions at a sufficient level of detail given its purpose and the nature of the data processed?	The dashboard will enable the user to interrogate the data in terms of both people and geography, with varying levels of detail for a range of purposes.
Are data categorised to avoid broad-brush grouping and results and therefore issues of potential bias?	The only categorisation would be to align officers to their team and geography.
Do the potential benefits outweigh any data quality uncertainties or gaps?	The project will include an extensive EDA element which should highlight data quality issues. These can be addressed with LPAs to ensure officer details are correctly aligned in the source data and that radio procedures are adhered to. Given the benefits of being able to articulate officer visibility it is not anticipated that any data quality issues would be of such a magnitude as to warrant not undertaking the project.
Is the provenance and quality of the data sufficiently sound?	The data will be those that are gathered during the day-to-day work of WMP and will enable analyses of the type envisioned for this project.
If applicable, how often are the data to be refreshed?	The dashboard will be refreshed on a daily basis. It is intended as a performance information tool, not to inform live time operational decisions.
If the tool takes a precautionary approach in setting trade-offs, what are the justifications for the approach taken?	Not applicable, this is not a predictive model.

² <https://www.gov.uk/government/publications/data-ethics-framework>

Ownership	
Who owns the algorithm and the data analysed?	WMP would own the analyses and data.
Does WMP need rights to access, use and amend the source code and data?	No
Are there any contractual or other restrictions which might limit accountability or evaluation?	No
How is the operation of the algorithm kept secure?	The analyses developed would be kept wholly within the secure WMP computing environment.
Challenge	
What are the post-implementation oversight and audit mechanisms, e.g. to identify any bias?	The dashboard will be tested by end users for accuracy and usability. Their feedback will be incorporated into the final product.
If the algorithm is to inform criminal justice disposals, how are individuals notified of its use?	Not applicable.
Accuracy	
Does the specification of the algorithm match the policing aim and decision policy?	The dashboard will support decision making which support the policing aim to deliver a service that works for local people.
Can the accuracy of the algorithm be validated periodically?	Not applicable – this is not a predictive model.
Can the percentage of false positives / negatives be justified?	Not applicable – this is not a predictive model.

How was the method chosen as opposed to other available methods?	Not applicable – this is not a predictive model.
What are the (potential) consequences of inaccurate forecasts?	Not applicable – this is not a predictive model.
Does this represent an acceptable risk?	Not applicable – this is not a predictive model.
How are the results checked for accuracy and how is historic accuracy fed back into the algorithm for the future?	Not applicable – this is not a predictive model.
How would inaccurate or out-of-date data affect the result?	Not applicable – this is not a predictive model.
Responsible	
Would the operation of the algorithm be considered fair?	Yes. Where any inaccuracies are identified relating to an individual officers' visibility this would be investigated and rectified.
Is the use of the algorithm transparent (taking account of the context of its use), accountable and placed under review?	A technical report describing the methodology used will be provided.
Would it be considered to be used in the public interest and to be ethical?	It is in the public interest for local policing managers to be able to monitor and articulate the proportion of time their officers are visible to their local communities.
Explainable	
Is information available about the algorithm / decision-making rules and the impact of each feature?	A technical report describing the methodology used will be provided.