



THE NATIONAL DATA QUALITY IMPROVEMENT SERVICE

BETTER DATA IN POLICING




THE PROJECT


Datactics began working with the UK Home Office and Policing in 2019 to investigate the benefits of automation for crime classification and reporting across all UK police forces.

The Datactics platform is currently live in 42 police constabularies across England & Wales, as the National Data Quality Improvement Service (NDQIS). Funded by the UK Home Office, it provides a highly scalable, private cloud-based system for crime classification and reporting.

THE PROBLEM



Constabularies have a legal duty to accurately report various crime statistics to the Office for National Statistics (ONS) and Home Office Data and Analytics Group. However, the underlying process at the time was very manual and subject to error, as analysts had to deal with large volumes of complex data in multiple sources.



Home Office wanted a technology partner that would work collaboratively with its in-house subject matter experts to create an innovative replacement and cover all UK police forces.



THE SOLUTIONS

04



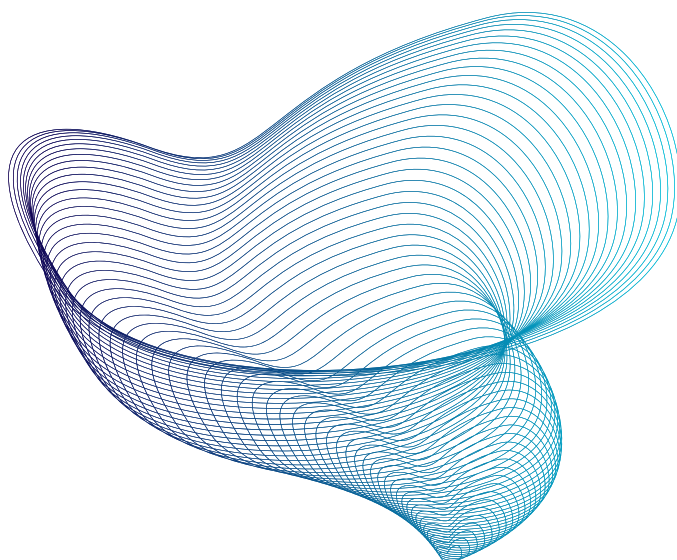
Phase 1

The initial NDQIS specification phase involved a small Datactics team building a working proof of concept (POC) with Derbyshire police force. The team worked with police and Home Office (on-site and remotely) to collaborate on the requirements, design, and implementation.



Phase 2

The security-cleared data engineers from Datactics worked with multiple third-party systems and police record management systems, such as Niche and Police National Database. This work was done in collaboration with the recognised systems integrator Datalynx, where we interfaced with a software gateway to allow import/export of data from all crime master data management systems currently in use across the UK.



THE SOLUTIONS

05



Phase 3


Project Managers from Datactics collaborated with Home Office using a scrum-based approach. This was designed to ensure that all stakeholders were included in an agile fashion, allowing for changing requirements from customers. Throughout the project, Datactics maintained regular contact with key stakeholders from national policing via the NDQIS Steering Committee and Home Office Data and Analytics Group, to review the project plan. Through weekly meetings, we reviewed timelines, targets, and changes to functional specification.



Phase 4

The system was exhaustively back tested on historical data to prove the accuracy of classification prior to “go live”. Separately, the team proved the information security of the service via a highly secure private cloud network. A key part of the system design was to build on proven data quality technology and create an extensible design. This allowed for the easy extension of the service to rapidly integrate with multiple data sources and information types as they evolved over time.

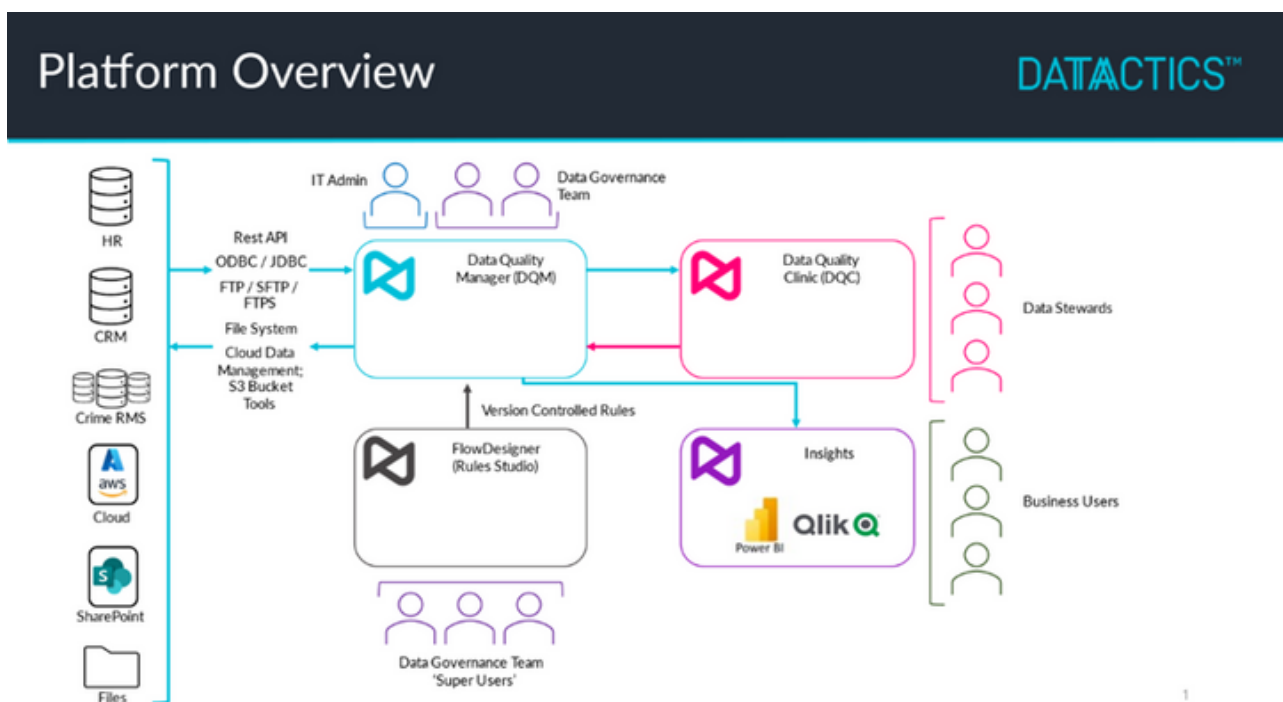
PRODUCT OVERVIEW



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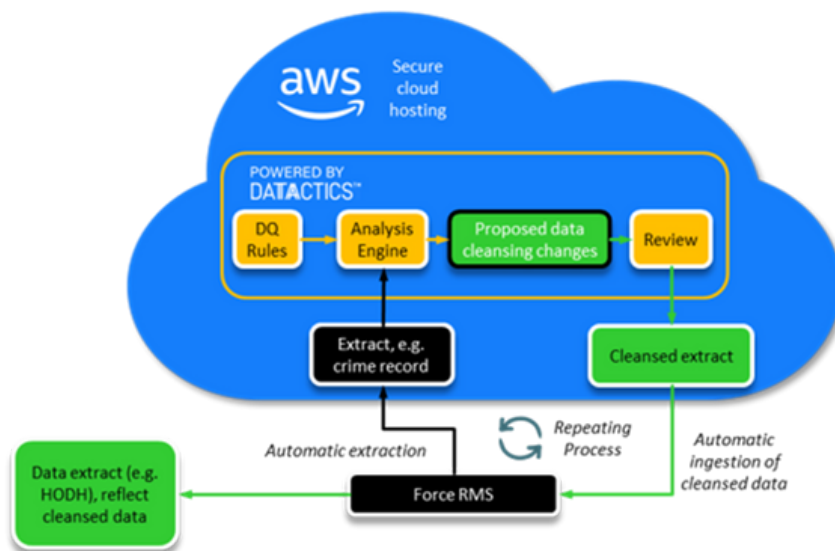
THE PRODUCT

A key business requirement was the enablement of “self service data quality”, where subject matter experts would be able to profile/classify/improve data without requiring programming skills.






THE PRODUCT




Large volumes of crime reports submitted by the constabularies are analysed and classified according to government standards (ADRs), to create consistent, national reporting for specific crime types, such as Knife Crime, Hate Crime, Domestic Abuse, etc.



Features

-  Data quality and fuzzy matching across hundreds of millions of structured and semi-structured data elements.
-  Web-based workflow management enabling manual review of data falling below confidence thresholds.
-  Automated correction of crime records and submissions of crime numbers to Home Office, used by ONS to report on crime trends and drive policy.

Benefits

-  Reduced manual processing and data preparation time.
-  Increased accuracy of matching a crime report to the correct crime type.
-  Increased automation means reduced psychological impact for analysts.

RESULTS

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The proof of concept was signed off in 2021 and Home Office signed a multi-year contract to enable the roll-out of the system to all UK police forces; committing Datactics to support the platform under demanding business continuity criteria and to integrate it with other key data sources that might become available.



RESULTS

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NDQIS has received significant praise from major government stakeholders.

Read: ONS Blog- ‘Improving Data Collection for Knife Enabled Crime in England and Wales’



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The new knife crime methodology making police analysts jobs easier

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In our latest blog, OSR Regulator and former Police Information Analyst Ward discusses how the Home Office's National Data Quality Improvement Scheme (NDQIS) is improving the way police statistics are recorded.

Prior to joining OSR I worked for the police as an Information Analyst. My role was to collate knife crime data and send it to the Home Office on a daily basis. I then input crimes onto a system, flagging if a knife or sharp instrument was used.

Office for National Statistics

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Improving data collection for knife enabled crime in England and Wales

Sophie Sanders | May 12, 2021

Categories: Crime, Office for National Statistics, Office for Statistics Regulation, ONS, Population, UK Statistics Authority



Knife enabled crime is a serious social issue which has devastating consequences for families and communities. Over recent years, the number of reported offences involving a knife or sharp instrument has been increasing. In this post Sophie Sanders explains the latest improvements in measuring knife enabled crime and what you need to be aware of in interpreting the next set of crime statistics.

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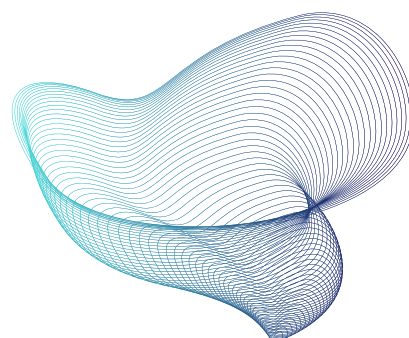
OPPORTUNITIES

Dataactics is represented on the NDQIS Steering Group, made up of all UK constabularies and Home Office Data and Analytics managers. This forum identifies future opportunities and innovations for NDQIS.

Potential policing applications are exciting, as our platform can handle an extremely wide range of data types, structured and semi-structured, making it easily configurable to different challenges, rules, and regulations.

Applications can include cleansing/matching existing data, appending data with third-party reference data, creating and maintaining a golden nominal, facilitating workflows for ongoing data governance such as 'retention, review and disposal', as well as extracting valuable insights from multiple data sources through semantic analysis and fuzzy matching.

We work closely with our customers to explore the application of machine learning to reduce manual effort and increase accuracy, while still providing transparency on how decisions will be made.





ABOUT US

Dataactics specialises in data quality and matching services, augmented with AI and ML. We provide robust solutions and professional services in highly regulated industries including global Tier 1 banks and Government agencies, driving better quality data for regulatory compliance, delivering single customer/citizen view, and improving business intelligence and analytics.

We are a no-code/low-code solution; users are not required to have technical or software programming skills to use our platform. This helps to eliminate roadblocks common in data management, where organisations are overly reliant on IT teams to interpret and hard-code rules into core systems.



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