

What are Data Analytics in Policing?

A Global Review of 'Best Practices'

June 2024

Table of Contents

Executive Abstract	4
Introduction.....	6
Four Data Analytical Techniques.....	6
Benefits of Data Analytics	7
Report Outline.....	7
Methods of This Report.....	8
Data Analytical Techniques, Their Use Cases, and Best Practices.....	9
Machine Learning: Predicting Individual Re-Offending	10
Overview	10
Limitations and Alternatives	11
Examples.....	12
Geographic Information Systems (GIS): Predicting Hotspots.....	14
Overview	14
Limitations and Alternatives	14
Examples.....	15
Social Network Analysis (SNA): Disrupting Organised Crime	17
Overview	17
Limitations and Alternatives	17
Examples.....	18
Descriptive and Inferential Statistical Assessment: Evaluating Police Interventions.....	20
Overview	20
Limitations and Alternatives	21
Examples.....	22
Benefits of Data Analytics: More Accurate and Ethical Police Decisions.....	24
Professional Judgement in Policing	24
Data Analytics May Produce More Accurate Insights Than Professional Judgement.....	25
Data Analytics May Produce Insights that are More Ethical and Transparent than Professional Judgement	26
Implementing Data Analytics.....	28
Data Analytics: Part of Broader Data Science Process	28
Arrows 1-2: Initial Considerations	29
Arrows 3-4: Data Analytics	32
Arrows 5-6: Acting & Monitoring	33
Limitations	34
Potential for Bias	34

Initial Financial Costs	34
Ethics & Reputational Risks	34
Summary and Policy Recommendations.....	36
Policy Implications	36
Additional Reporting on the Extent of Data Analytics in Policing	36
Increased Funding for Data Analytics.....	38
Laxer Governance Frameworks for External Collaboration.....	38
Develop Standardised Guidelines for the Effective and Ethical Implementation of Data Analytics	39
Develop Best Practices for Public Disclosure of Data Analytics as means of Addressing Reputational Risks	39
Continuous Evaluation and Adaption	40
References	41