The State of Police Intelligence Integration in Canada
A Report Prepared for Canadian Police Services
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Introduction

Public and government calls to enhance police transparency and accountability have led police services to adopt 'smart' tools and information technologies that are believed to 'lessen the exposure of police work to flawed decision making based in human subjectivity and bias' (Sandhu and Fussey 2021: 73). As a result, data science practices and advanced information technologies have come to perform a central role in informing police decision-making, developing frontline and investigative practices, allocating resources, providing evidence and support to court cases, and modifying and developing policies (Ferguson, 2017). Police services are interested in and able to access an increasing volume and variety of data sources, analytic platforms and big data technologies. Information technology to support intelligence practices has developed rapidly with new platforms and programs being introduced regularly. The limited existing research available on intelligence work suggests that, despite formal adoption of new tools, implementation and use by practitioners has been uneven and with varying success (Sanders and Chan 2021). Presently, in Canada, there is little evidence-based research available on the state of intelligence analysis in policing – including the state of technological adoption and implementation, as well as the professionalization of intelligence analysts.

This report provides is a first step at addressing this gap in knowledge by exploring the state of intelligence integration within Canadian police services. Specifically, this report summarizes the results of a survey that was administered to police administrators that explored: the intelligence needs of their service; the human resource facilitators and challenges associated with integrating intelligence personnel; their service's past, present, and future experiences with intelligence software and accompanying technologies; and, the technological benefits and challenges associated with existing intelligence technologies/software in their service.

This survey is part of a larger, federally funded research project that investigates the craft of intelligence analysis. Specifically, the objectives of this Social Sciences and Humanities Research

Council of Canada funded project are to explore 1) how intelligence analysts construct intelligence products, and the knowledges, rationalities, and decisions that inform their craft; and 2) to identify the training, expertise, and competencies that analytic managers hold, and how these shape the craft and production of police intelligence. For more information regarding the larger study and its research outputs please email Dr. Carrie B. Sanders (csanders@wlu.ca).

Methods

Data were collected via an online survey hosted by Qualtrics between September and November 2023. Our survey was guided by existing measures of technological decision-making in policing (e.g., Hendrix et al., 2019; Strom, 2017), with necessary amendments to focus the survey exclusively on intelligence integration. To examine the breadth of intelligence integration within police services, the target sample for our survey included all police administrators (e.g., Chief, Deputy Chief, Superintendents, Administration, Executive Management). As such, we sent a recruitment email to every English-speaking police service in Canada (n = 150) requesting that the recipient forward along the recruitment to applicable participants. The survey recruitment poster was also distributed via email by the Canadian Association of Chiefs of Police Data Analytics subcommittee.

This survey was designed to be exploratory of specific intelligence technologies and experiences with the integration of intelligence from the viewpoint of police administrators. Further, we sought to collect information regarding intelligence positions that exist within services to aid in the subsequent phases of the research project. It is important to note that our intentions for this survey were exploratory to better understand the breadth of intelligence across Canada. Correspondingly, we do not intend for the results to be generalizable or extrapolated into statistical inferences. The data collected from participants are anonymous and responses to open-ended questions were anonymized from any identifiable information (e.g., locations, ranks, names).

Main Findings

Demographics

A total of 19 Canadian police services participated in the survey. The occupational titles of respondents varied greatly, including Manager (Crime Analysis Unit; Business Solutions; Strategic Services; BI and Data Analytics), Coordinator (Business Systems; Intelligence Database), Supervisor (Crime Analysis; Integrated Crime Analysis), and Deputy Chief of Police The following table highlights additional demographic information of the respondents and their accompanying services:

Table 1. *Demographic Information by Service*

Location	**Number of Services**
Atlantic (NL, PEI, NS, NB)	2

Central (ON, QC)	7
Northern (YT, NT, NU)	-
Prairie (AB, SK, MB)	2
West Coast (BC)	-
Region Type	
Urban	10
Rural	-
Suburban	1
Service Size	
Under 50	1
51 to 100	-
101-150	-
151-200	-
201-500	1
More than 500	9

Intelligence Occupations & Salary

The average number of intelligence analysts employed by these services was 11.54 (n = 11, range = 1 - 26). The titles of these analysts included Crime/District/Operational Analyst (n = 9), Intelligence Analyst (n = 9), Strategic/Research/Planning/Policy Analyst (n = 8), Business Analyst (n = 8), Forensic Analyst (n = 6), Statistician (n = 4), Data Scientist/Analyst (n = 4), and Supervisory Analyst (n = 2). The average annual salaries for the main categories of analyst positions are as follows: Crime Analysts $95,819; Strategic (Administrative) Analysts $$90,172; Supervisory Analysts $107,609; and Specialized Analysts $99,657. According to respondents, analysts typically are hired for their roles through internal and external applications. Additionally, respondents noted that analysts are frequently transferred or appointed to the position from within their organizations.

Intelligence Integration: Facilitators & Challenges

The majority of participants felt that intelligence analytics is very integrated within their respective services (n = 7), while a handful felt that intelligence is only somewhat integrated (n = 3) or not integrated at all (n = 1). Participants were also asked which analytic needs were present within their service. The following needs were identified: administrative statistical reports (n = 10), investigative/intelligence reports (n = 10), hot spot/crime maps (n = 10), tactical crime analysis bulletins (n = 10), research/strategic reports (n = 9), and top offender lists (n = 8).

In shifting towards intelligence-led practices (e.g., increasing intelligence personnel, software, and technology), participants were asked about their experiences with a variety of challenges. Respondents often noted challenges with analytical competency and skill level. For example, Participant 002 explains, "*Analytics has a wide range of interpretation amongst professional and/or industries. Finding the right fit for your specific needs with a knowledge set of your specific tools can be a challenge".* Alternatively, one participant discussed their positive experience with analytic competency and skill level within their service, "*We are hiring analysts*

who possess the skills and require only minimal training to gain an understanding of our internal systems" (Participant 019). Challenges with hiring practices and the recruitment of analysts was also flagged as a common experience amongst participants. According to Participant 001, "*Competitive fields with non-competitive work schedules and salaries are being offered by government agencies*". This account suggests that the desirability of external analyst positions can impede police services from hiring and retaining employees. Alternatively, Participant 019 states that staffing analysts has not been a challenge at their service, as they have implemented a systematic scoring process where "*...the candidate who receives the top score is offered the position*". When asked about the training of analysts, majority of respondents identified this as a challenge. Specifically, financial constraints, location/time availability, and limited internal data professionals create barriers to successfully training incoming analysts. Last, participants highlighted existing work culture as a challenge to intelligence integration within their services. For example, services are finding it difficult to shift from traditional investigative methods to data-driven approaches. Those who did not report an issue with work culture categorized their service as adaptable, flexible, and nimble, regarding intelligence implementation.

Intelligence Technology / Software: Facilitators & Challenges

To explore technological decision-making by police, participants were asked how they learn about which intelligence products to consider. Majority of respondents indicated that a scan of practice – such as an informal poll of other services' practices or consulting another department was the main source for learning about new products. Alternatively, some participants relied on vendors through exhibits at conferences, demos, or cold calls/emails. Additionally, the following factors were highlighted as instrumental in the acquisition and implementation of intelligence products: cost, proof of concept, demos, user-friendliness, experience, industry standards, and internal subject matter experts. As such, participants reported that intelligence and/or crime analysts are frequently consulted when making decisions about technology.

Last, participants were asked about a range of facilitators and challenges surrounding the adoption, implementation, and use of intelligence software. Respondents mentioned challenges surrounding infrastructure support (57.14%, n = 4), cost (100%, n = 7), licensing (85.71%, n = 6), data ownership (42.86%, n = 3), organizational resistance (71.43%, n = 5), community/public resistance (16.67%, n = 1), regulation/oversight concerns (71.43%, n = 5), and training/human capacity to use tech (57.14%, n = 4). Further, participants noted *major* challenges with organizational resistance (n = 5), regulation/oversight concerns (n = 5), infrastructure support (n = 4), cost (n = 4), licensing (n = 4), data ownership (n = 2), community/public resistance (n = 2), and training (n = 2). Alternatively, the perceived benefits regarding the adoption of intelligence software products included the improvement on decision support, improvements to public safety, managing information and creating meaningful inferences, increased community service, and a better ability to share intelligence.

References

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