



Portland Police Bureau

2024 – ASU Herman Goldstein Award Submission

Stolen Vehicle Operation

Less Stops, Better Outcomes

Apprehending active stolen vehicles in the community.

by Sergeant Brad Nutting & Officer Michael Terrett

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Summary

Project Title:

Portland Police Bureau Stolen Vehicle Operation.

Less Stops, Better Outcomes – Apprehending active stolen vehicles in the community.

Scanning

From 2016 to 2022 the total number of stolen vehicle reports received by the Portland Police Bureau (PPB) increased by 112% — more than doubling from 5,244 thefts in 2016 to a record 11,097 reports in 2022. Not only is car theft an inconvenience and a hardship to the victim but it also impacts the entire community. Stolen vehicles are often used in numerous other crimes in Portland as they provide a significant investigative barrier to law enforcement and are readily accessible to those engaging in criminal conduct.

Analysis

In February of 2022, a team from East Precinct took on and developed the idea of collecting key data points on characteristics of stolen vehicles. The data to be collected was colloquially known about stolen vehicles but had not been analyzed. The goal was less stops, better outcomes. Less stops refers to the number of community members impacted by stops conducted by law enforcement in an attempt to locate stolen vehicles that are active in the community. Better outcomes refer to the location & recovery of a stolen vehicle while presenting arrestees to the courts to be held accountable. Upon analysis of the data points, patterns were immediately identifiable that were leading to an increased rate of stolen vehicle identification by officers.

Response

During the initial formulation of the data collection process the need was recognized for an expert in the field of big data studies. Locally a contact was found at Oregon Health & Science University's Knight Cancer Institute, Dr. Jeffrey Tyner. Dr. Tyner and his associates provided feedback regarding the data collection and analysis processes to aid in the furtherance of the project. Officers who worked the SVO missions were subsequently provided with these analytical results and instructions were given at the pre-mission briefing to focus on defined "enrichment factors".

Assessment

Throughout the collaboration with OHSU, the SVO workgroup has looked at a multitude of outcomes. One major outcome the SVO has been tracking is the number of motor vehicle thefts reported monthly in the Portland Police Bureau's jurisdiction. Stolen vehicle reports were at all-time highs when the SVO began its new practices in March of 2022. As the SVO's continued the public support, media attention, and public awareness increased. In January of 2024 there were 56% less stolen vehicles reported to Portland Police Bureau when compared to the number of stolen vehicles reported in the same month one year prior. A direct comparison between the number of stolen vehicles identified in comparison to the number of overall stops conducted revealed officers were taking less stops to identify stolen vehicles.

Scanning

In the last quarter of the year 2021 the City of Portland was experiencing, and continued to experience, record setting levels of stolen vehicle being reported to the police [1].

From 2016 to 2022 the total number of stolen vehicle reports received by the Portland Police Bureau (PPB) increased by 112% — doubling from 5,244 thefts in 2016 to a record 11,097 reports in 2022 [FIGURE 1]. A 2020-2021 study by the National Insurance Crime Bureau shows that the greater Portland metropolitan area ranked fifth in the nation for the highest vehicle thefts per capita with 680 stolen vehicles per every 100,000 residents [2]. Not only is car theft an inconvenience and a hardship to the victim but it also impacts the entire community. Stolen vehicles are often used in numerous other crimes in Portland as they provide a significant investigative barrier to law enforcement and are readily accessible to those engaging in criminal conduct. The nexus between stolen vehicles and other criminal conduct is well-documented in local Portland news outlets [IMAGE 1] [3]. As law enforcement we see the utilization of stolen vehicles as modes of transportation in the commission of homicides, shootings, robberies, and other felony crimes.

When police attempt to stop occupants of a stolen vehicle, the occupants often elude the police by engaging in reckless driving behavior that puts the public in danger of serious injury or death. Those who drive stolen vehicles typically drive at a high rate of speed, run stop signs or traffic lights, cut in and out of traffic, and seemingly have no regard for others' safety. Because of this behavior, police must be strategic about how to address this problem as pursuits through city streets and neighborhoods with pedestrians, families, and other vehicles pose significant risks to the community.

The potential causes of the increase in motor vehicle theft and the resulting fallout are multifaceted. TikTok trends and YouTube tutorials documenting how to hot-wire Kia and Hyundai vehicles are one substantiated reason for the increase in vehicle-related crime. But in addition to this, low staffing levels and public perception may also be potential contributing factors leading to the rise in motor vehicle thefts. Among the 50 largest cities in the US, Portland ranks 48th in officers per capita. As of 2024 PPB currently employs 812 officers for a city with 641,162 residents (1.2 officers per 1,000). The National average is 2.4 officers per 1,000 residents. As a result of fewer staff and increased crime, the PPB's response time has increased — its current response rate is 16.4 minutes, double that of its 8.1-minute response time in 2016 [4]. As documented in multiple studies, a localized and focused increase of police presence and faster response times have a positive correlative effect on a decrease

in crime [5].

Also worthy of a callout as a potential contributing factor is a change in PPB policy regarding traffic stops. In June 2021, the Mayor and Police Chief provided a directive to focus primarily on moving violations that pose an immediate danger to public safety. In response to this, there was a dramatic decrease in traffic stops and self-initiated activity in the Police Bureau. In 2020, PPB conducted 24% fewer traffic stops than in 2019, with a total number of 24,991 stops. In 2021, that number dropped even lower, with a decrease of 44 percent from 2020 and a total of 14,028 traffic stops. The decrease in stops may have led to fewer stops involving stolen vehicles.

This increase resulted in decreased public safety and increased the need to focus on causal factors associated with the aforementioned high-level crimes impacting the Portland community. A resulting mission was created by Sergeant Norman Staples (now Lieutenant), to directly address the stolen vehicles, understanding their nexus to other major crimes. East Precinct's Commander, Erica Hurley, approved the Stolen Vehicle Operation (SVO) and the subsequent missions that Sergeant Staples would implement.

Analysis

Starting in November of 2021 East Precinct began the Stolen Vehicle Operations and conducted a series of five, ten-hour missions.

Historically within the Portland Police Bureau a mission is conducted using officers with a skill set for detecting the matching criminal behavior. This allowed proficiency in skills to be implemented and utilized by officers working the missions. Additionally, the officers relied on their "training and experience" to inform their decision making.

Sergeant Staples was interested in capturing specific outcomes resulting from the missions. While working with the internal data collection/analysis group within the Police Bureau (Strategic Services Division – SSD), there were data anomalies and errors found due to missing links between a variety of systems, e.g. – Computer Aided Dispatch system not able to link to previous calls in output reports.

In February of 2022, Officer Michael Terrett requested a meeting with now Lieutenant Staples and Commander Hurley to present an idea to enhance the SVO's capabilities. Officer Terrett has a bachelor's degree in computer

science and, prior to becoming a Portland Police Officer, was working in the private sector as a partner in a software design firm focusing on utilization of data in relation to e-commerce. Present in the meeting were three sergeants from East Precinct who were involved in the SVO's, Sergeants Andersen, Nutting and Sharp. Officer Terrett's idea centered on collecting key data points on the characteristics of stolen vehicles. The data to be collected was colloquially known about stolen vehicles but had not been analyzed. Examples of the data are visual appearances, driving behavior changes when police officers are present, absent registration placarding, improperly installed window film (tint), altered vehicle registration permits/licensing, and identifiable attempts to disguise a stolen vehicle from being detected by law enforcement officer.

Commander Hurley, Lieutenant Staples, and the sergeants agreed the proposed approach was a deviation from the cultural norm but had significant promise in enhancing officers' ability to locate and recover stolen vehicles. Officer Terrett began the endeavor of moving the SVO's into a data driven evidence-based practices in March of 2022.

Methods of data collection surrounding stolen vehicles can be fraught with errors and bias depending on a multitude of variables. Officer Terrett and Sergeant Nutting began the data collection process with a clear and simple goal of less stops, better outcomes. Less stops refers to the number of community members impacted by stops conducted by law enforcement in an attempt to locate stolen vehicles that are active in the community. Furthermore, better outcomes refer to the location & recovery of a stolen vehicle while presenting arrestees to the courts to be held accountable for their criminal behavior and prevention of continued criminal conduct. Upon commencement of the data collection process, it was decided to be conducted only within the SVO missions and original identification of what would become known as "enrichment factors" were identified and catalogued through interviews with top performing officers who regularly located and could easily identify a stolen vehicle in the community.

Enrichment Factor is defined as an element that will increase the likelihood of an event occurring in a dataset. For stolen vehicles, elements are the characteristics that are commonly seen on stolen vehicles – missing plates, broken back window, etc. The event would be that the vehicle is stolen. Occurring in a dataset means of all the vehicles in the area at that time, the vehicle with multiple enrichment factors will be more likely to be stolen than the others.

After initial interviews were conducted to formulate these putative enrichment factors, a data input form was

created for use by officers working the SVO missions to facilitate proper capture of these factors for each encounter. Initially the input sheets were completed through Officer Terrett calling the stopping officers and conducting a brief interview regarding each stop at its conclusion. The data input form has been revised throughout the SVO missions. The revisions were necessary to succinctly capture the important and unique data officers were able to articulate regarding stolen vehicles prior to the stop. Revisions were determined through an informal interview process with SVO officers to ensure the capturing of the appropriate data. As the development of the data-collection forms progressed officers were tasked with collecting their own data on paper forms and would turn them in to Officer Terrett at the conclusion of each mission for database entry. The goal of using data was to take the information (data) collected, conduct analyses, and determine whether patterns existed relating to the identification of active stolen vehicles within the community.

Prior to the SVO missions, Sergeant Nutting and Officer Terrett provided briefing of the operational area and provided the necessary information for officers to appropriately and self-sufficiently complete the data input forms without the need for dialogue with Officer Terrett at the conclusion of each stop. The data input forms would then be returned to Sergeant Nutting and/or Officer Terrett at the completion of each 10-hour SVO mission. Officers began filling out their own data input forms in May of 2022. Officer Terrett had created a database to collect and organize the information from all of the data input forms. Currently the database holds in excess of 150,000 data points, which can be analyzed for patterns.

Upon analysis of the database by Officer Terrett, patterns were immediately identifiable that confirmed certain of the putative enrichment factors were leading to an increased rate of stolen vehicle identification. Officers who worked the SVO missions were subsequently provided with these analytical results and instructions were given at the pre-mission briefing to focus on the confirmed enrichment factors.

As Covid-19 restrictions began lifting the SVO workgroup recognized the need to inform the community stakeholders. In January 2023 the SVO workgroup hosted a precinct-wide neighborhood leadership presentation at East Precinct to inform community stakeholders of evidence-based practices. This presentation resulted in very high levels of support and continued engagement from the community leaders. Furthermore, the community left the presentation asking how they could help enhance the messaging of the program as they believed the new methodology was highly innovative and easily understood **[IMAGE 2]**.

Response

During the initial formulation of the data collection process the need was recognized for an expert in the field of big data studies. Locally a contact was found at Oregon Health & Science University's Knight Cancer Institute, Dr. Jeffrey Tyner [IMAGE 3] [6]. Dr. Tyner and his associates have extensive experience with collection and analysis of large datasets, and they routinely publish and present their findings at international conferences and in leading journals (>200 articles in peer-reviewed medical and scientific journals at the time of this writing). The focus of their work is Leukemia and the use of large, integrative datasets to better understand the biology of this disease and leverage this understanding for improved therapeutic strategies. This community contact was vitally important for East Precinct's SVO missions as the OHSU research staff provided an unaffiliated peer review of the collection and analyses processes. The OHSU research staff works daily with data and analyses but has no vested interest as an organization in Portland Police and, therefore, could provide unadulterated feedback.

In June of 2022, Commander Hurley, Lieutenant Staples, and Officer Terrett, were invited to present the methodology and process of data-collection and initial analysis to the Oregon Health Sciences University's Knight Cancer Research Institute. Specifically, Dr. Jeffrey Tyner and his associates were the audience at the presentation. This presentation was to ensure proper collection and analyses processes were being conducted regarding the SVO missions. Dr. Tyner and his associates provided feedback regarding the data collection and analysis processes to aid in the furtherance of the project [IMAGE 4]. One example of the feedback/input received by Dr. Kevin Watanabe-Smith, "The data collection process outlined by Officer Terrett is strong and if continued has the potential to be novel and widely useful dataset." Dr. Watanabe-Smith concludes, "Ultimately I think this is very impressive work, and I say that while having a healthy dose of skepticism around policing data [7]." Officer Terrett and Sergeant Nutting implemented all the input provided by OHSU's experts throughout the upcoming months to further enhance the data's reliability and credibility.

At each mission, officers are provided with a briefing of the operational parameters, area to work, law enforcement assets involved, and a stolen vehicle data briefing. Officer Terrett leads the instruction for the data briefing portion and provides officers with feedback from the previous SVO mission's statistics. While the statistics provide an encapsulated view of the single mission, Officer Terrett produces executive level presentations to assist with dysfluency of the data. Dysfluency in this setting is a learning modality and is defined as, "dysfluency means working more slowly, more deliberately and more manually which requires more attention [8]." It is an attempt to get officers to further grasp and understand the data which is collectively produced through their

stops and data input sheets. For example, poker has known outcome percentages or probabilities, and these can be displayed and learned over time. The same can be said about stolen vehicles, albeit stolen vehicles have a human element affecting the enrichment factors, e.g. – removing the license plates from the vehicle. Therefore, by using the technique of gamification and other hands-on processes for the SVO officers, the officers can become more familiar and adept at recognizing and utilizing the enrichment factors related to stolen vehicles.

Immediately after the pre-mission briefing, officers leave the briefing to begin working on the SVO mission. The SVO mission is a 10-hour shift, and the officers are solely dedicated to the SVO, which allows for more intentional and focused efforts at determining and utilizing enrichment factors.

Engaging the community and appraising the greater masses interested in SVO's became an additional task the SVO workgroup took on in an effort to be more transparent with community stakeholders. Transparency of law enforcement's actions is imperative to develop trust surrounding enforcement actions within the community and builds relationships previously unattained through traditional methods. With social media and the Portland Police Bureau's Public Information Office the SVO was able to show outcomes and explain the work the officers were conducting after each and every mission. This proved to be highly positive and engaging as media outlets began inquiring about the program and its unique collaboration with OHSU, an unlikely law enforcement partner. The public at large was able to attain further insight and understanding into the program as a result of the formal and informal media information presented directly from the SVO workgroup.

As the rise in reported stolen vehicles occurred so did the Facebook group PDX Stolen Cars' membership. This group has approximately 19,000 members of the community who aid others in locating their reported stolen vehicles and the administrators of the group have a set of rules which must be followed for a member to post, participate in recovery efforts, and generally assist in the group's efforts. Titan Crawford, founder of the group, was contacted by the SVO workgroup and began yet another unique community-policing approach not seen before in the Portland area. Members of the PDX Stolen Cars group provide filtered information during SVO missions to aid in the recovery of stolen vehicles and are using their own investigative means to identify stolen vehicles in the community [IMAGE 5]. The information gathered by the group's administrators is filtered and condensed prior to being passed on to law enforcement working the SVO's to ensure credibility and reliability.

With every project there are limitations and constraints. The following are those that have been currently identified within the SVO missions regarding data. Furthermore, it is recognized that not all limitations and

constraints can be immediately identified, hence, this list serves to name the limitations identified thus far. SVO officer's ability and willingness to fill out the form in its entirety, access to professional data analysts and statisticians, dedicated group of officers to be a pilot program for the studied use of enrichment factors, time is always a limitation and the dual-tasking of working patrol during shift-work hours and conducting data research can be limiting and difficult. Further limitation exists in the ability to conduct a cohort study to validate the initial findings, although this is currently being addressed at the time of this writing. It is also recognized the limitation with human entry of missed stops or unidentified variables.

Assessment

Throughout the collaboration with OHSU, the SVO workgroup has looked at a multitude of outcomes. One major outcome the SVO has been tracking is the number of motor vehicle thefts reported monthly in the Portland Police Bureau's jurisdiction. Stolen vehicle reports were at all-time highs when the SVO began its new practices in March of 2022. As the SVO's continued the public support, media attention, and public awareness increased. In January of 2024 there were 56% less stolen vehicles reported to Portland Police Bureau when compared to the number of stolen vehicles reported in the same month one year prior [FIGURE 2] [9].

Recognizing this comparison showed a meteoric decline, the SVO workgroup sought further advice from OHSU regarding causation or causality. Crime reporting data has a plethora of uncontrolled variables making it difficult to empirically prove causation, but the number is significant when taken at face value for decreasing the number of community members victimized.

One key finding through the data and use of enrichment factors for which a direct comparison is available to validate is the number of stolen vehicles in comparison to the number of overall stops conducted [FIGURE 3]. In terms of ratios there were five total missions conducted prior to the implementation of the data driven policing initiated by Officer Terrett. On those five prior missions, officers averaged one (1) stolen vehicle for approximately every thirty-one (31) stops [1 in 31]. In the subsequent thirty-five (35) SVO missions conducted utilizing evidence-based practices with identified enrichment factors officers averaged one (1) stolen vehicle for approximately every four (4) stops [1 in 4]. This equates to an 825% decrease in total stops, an improved stolen vehicle identification rate of 775%, and a secondary impact of locating illegally possessed firearms has improved 533% [FIGURE 4].

Additional positive outcomes have resulted from the work of the SVO's use of evidence-based practices. Policies and procedures relating to law enforcement and prosecution, public support, interagency collaboration, and decreasing motor vehicle thefts in the City of Portland are a few of the major impacts and positive outcomes resulting from the new data driven approach.

Specific policies and procedures have been revisited and no longer have anecdotally held beliefs informing the decision-making. The result of the SVO's outcomes and practices has provided an opportunity to make informed decisions utilizing a methodology which is publicly supported. Examples include formative policies regarding prosecution and the District Attorney's Office ability to further assert their prosecutorial stance. The Multnomah County District Attorney's Office and Portland Police Bureau have utilized the SVO's approach to train their deputy district attorneys and officers to better understand the methodology being used by the personnel working the SVO's. Internally at the Portland Police Bureau the SVO's approach has resulted in furthering policy revisions regarding motor vehicle pursuits by officers. The SVO data collection methods provide the ability to analyze existing policies and utilize predictive modeling.

Ultimately, the data provided evidence to support enhancing officers' abilities to engage in vehicle pursuits counter to the national trend. When analyzing the data collected on the SVO's it was apparent that multiple high-level offenders were not being taken into custody absent of engaging in a vehicle pursuit, the community was endangered for a prolonged period while the suspect merely eluded without active police pursuit engagement, and critical evidence was being lost including illegally possessed firearms. All of the analysis provided policy makers to have further insight into the unintended consequences of pursuit prohibitions. Initial review and analysis of the expanded pursuit policy has shown there to be a decrease in criminal driving behavior, increase in evidence recovery, and increased accountability for criminal offenders.

Prior to the SVO missions interagency collaboration had diminished significantly due to political and societal influences including COVID-19 and the racial justice protests in Portland, OR. The SVO missions were able to garner interest from outside agencies due to media coverage, positive community support, and the workable model for law enforcement using the SVO approach. At the initial onset of the SVO missions Portland Police Bureau was the only involved law enforcement agency participating. As of March 2024, all four agencies within the county were collaborating on joint SVO missions using the same approach **[IMAGE 5]**. The State Police, neighboring county sheriff's office and Vancouver Police (WA) became involved in the joint missions as they

began learning about the program and its positive outcomes.

Additionally, as the SVO missions continue there is work on developing an electronic data input form to enhance efficiency and efficacy of data input. This is being conducted with the help of the Portland Police Bureau's Information Technology Division personnel and is currently in beta-testing. The implementation of the electronic data input form allows for quicker processing, analysis, and auditing of the data with the goal of providing SVO mission officers the ability to utilize real-time data sheets to conduct independent and specific analysis of the enrichment factors that they observe prior to initiating a stop with the goal of having less stops with better outcomes.

The future of the law enforcement community is not vastly different from other U.S. industries, in that its workforce is nearing retirement age rapidly and with lower numbers of qualified applicants this leaves a gap in experience [10]. Anecdotal evidence suggests the SVO's approach rapidly enhances the newer officers' ability to aptly identify an active stolen vehicle. Additionally, officers who are inexperienced at locating/identifying active stolen vehicles are able to attain proficiency through the program's approach and utilization of data to guide the decision-making process.

SVO's unique collaboration between law enforcement and cancer researchers has gained significant national attention [11]. As a result, multiple agencies across the United States experiencing a significant increase in motor vehicle thefts or are exploring how to enhance their existing programs have contacted the SVO workgroup to gain insight into the program.

Agency and officer information

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Acknowledgments

East Precinct Commander Erica Hurley, you have been dedicated to the project and enhancing the community's

lives from the inception and the on-going work required. East Precinct Lieutenant Norman Staples, through your vision this project was born and through your leadership you have guided and inspired many officers to work hard and try to find better ways to be more effective. OHSU Knight Cancer Research Institute's Dr. Jeffrey Tyner and his associates, your input and collaboration on this project were crucial to its credibility and success. The partnership has built a bridge between community and public service which has been long needed. SVO Officers and Sergeants, your hard-work, dedication, and willingness to adapt has shown your servitude. Through this project the community can see the efforts at which you all work to create safer, more livable communities and what silent professionals you continue to be as policing evolves.

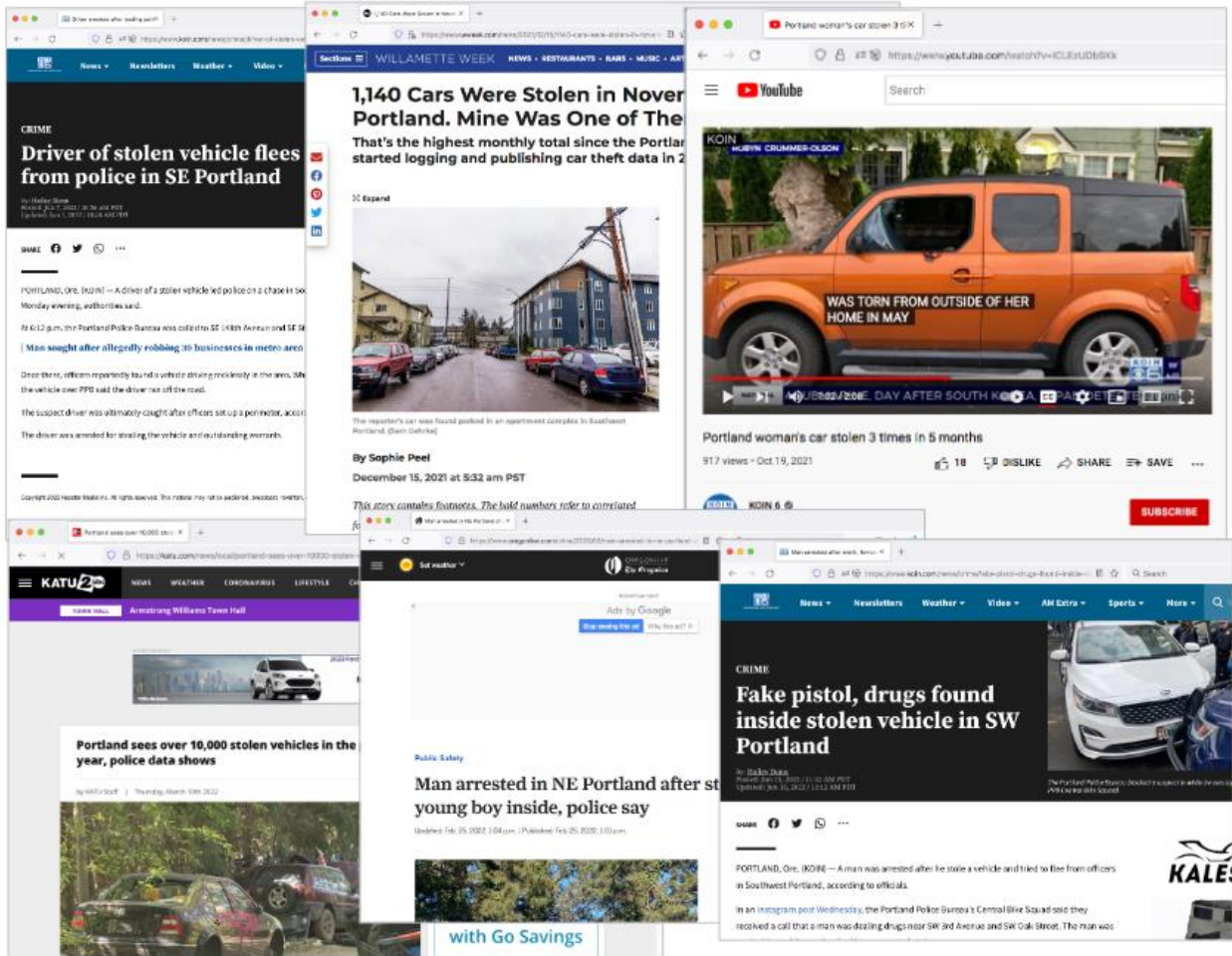
References

- [1] City of Portland. (2022, December 12). Crime Statistics. City of Portland – Police Bureau. www.portlandoregon.gov
- [2] National Insurance Crime Bureau (2022, September 1) NICB report finds vehicle thefts continue to skyrocket in many areas of US. News Releases, *NICB*.
- [3] KGW Staff (2023, March 13) Multiple arrests, stolen vehicles recovered, gun and drugs seized in East Portland. KGW8; Thomas, Adrian (2022, October 19) Police: Crashed, stolen car involved in shooting near Jefferson High School. Fox 12, *KPTV*.
- [4] City of Portland. (2024). Crime Statistics. Dispatched Calls for Service. City of Portland – Police Bureau. www.portlandoregon.gov
- [5] Di Tella, R., Schargrofsky E.(2004). Do police reduce crime? Estimates using the allocation of police forces after a terrorist attack. *The American Economic Review*, 94, 115-133
- [6] Dr. Tyner. www.ohsu.edu/people/jeffrey-w-tyner-phd
- [7] Dr. Wanatabe-Smith (personal communication, June 20, 2022)
- [8] Duhigg, C. (2017). *Smarter Faster Better: The Transformative Power of Real Productivity*. Random House.
- [9] City of Portland. Crime Statistics. City of Portland – Police Bureau. www.portlandoregon.gov
- [10] PERF (Police Executive Research Forum), “New PERF Survey Shows Police Agencies Are Losing Officers Faster than They Can Hire New Ones,” last modified April 1, 2023, <https://www.policeforum.org/staffing2023>.
- [11] NBC Nightly News <https://www.nbcnews.com/nightly-news/video/portland-police-using-data-science-to-find-stolen-cars-177852485693> (May 2023)

Appendix I: Images and Figures

[IMAGE 1]

The nexus between stolen vehicles and other criminal conduct is well-documented in local Portland news outlets.



[IMAGE 2]

SVO Officers and leadership at a community stakeholder workshop informing the community on the SVO approach and goals.



[IMAGE 3]

Locally a contact was found at Oregon Health & Science University's Knight Cancer Institute, Dr. Jeffrey Tyner



[IMAGE 4]

Dr. Tyner and his associates provided feedback regarding the data collection and analysis processes to aid in the furtherance of the project.



[IMAGE 5]

Members of the 19,000+ crowdsourced PDX Stolen Cars group provide filtered information during SVO missions to identify stolen vehicles in the community.



[IMAGE 6]

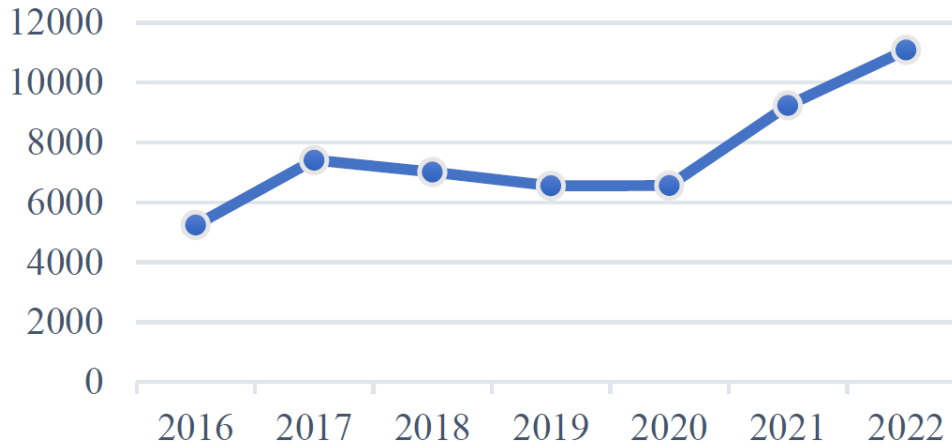
As of March 2024, all four agencies within the county were collaborating on joint SVO missions using the same approach.



[FIGURE 1]

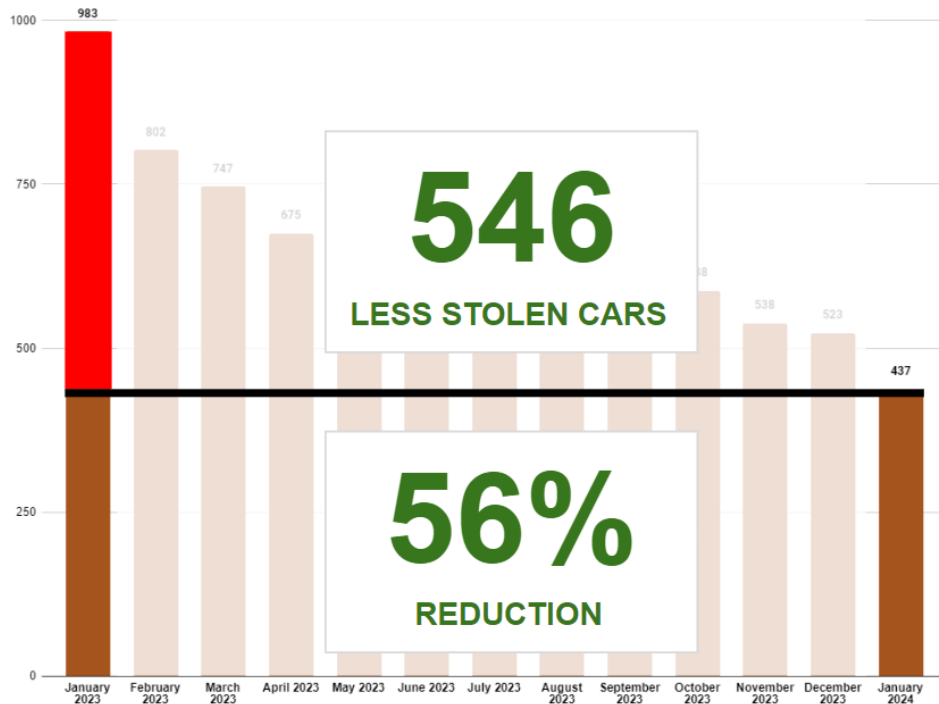
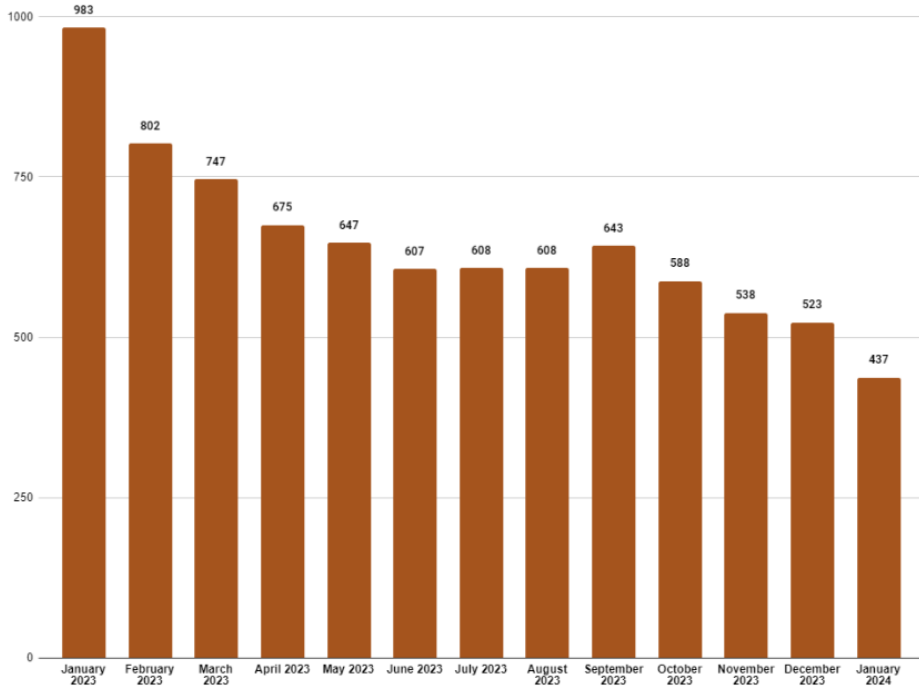
From 2016 to 2022 the total number of stolen vehicle reports received by the Portland Police Bureau (PPB) increased by 112%. The City of Portland was experiencing record setting levels of stolen vehicles being reported to the police.

Motor Vehicle Theft Portland Police Bureau Offense Statistics



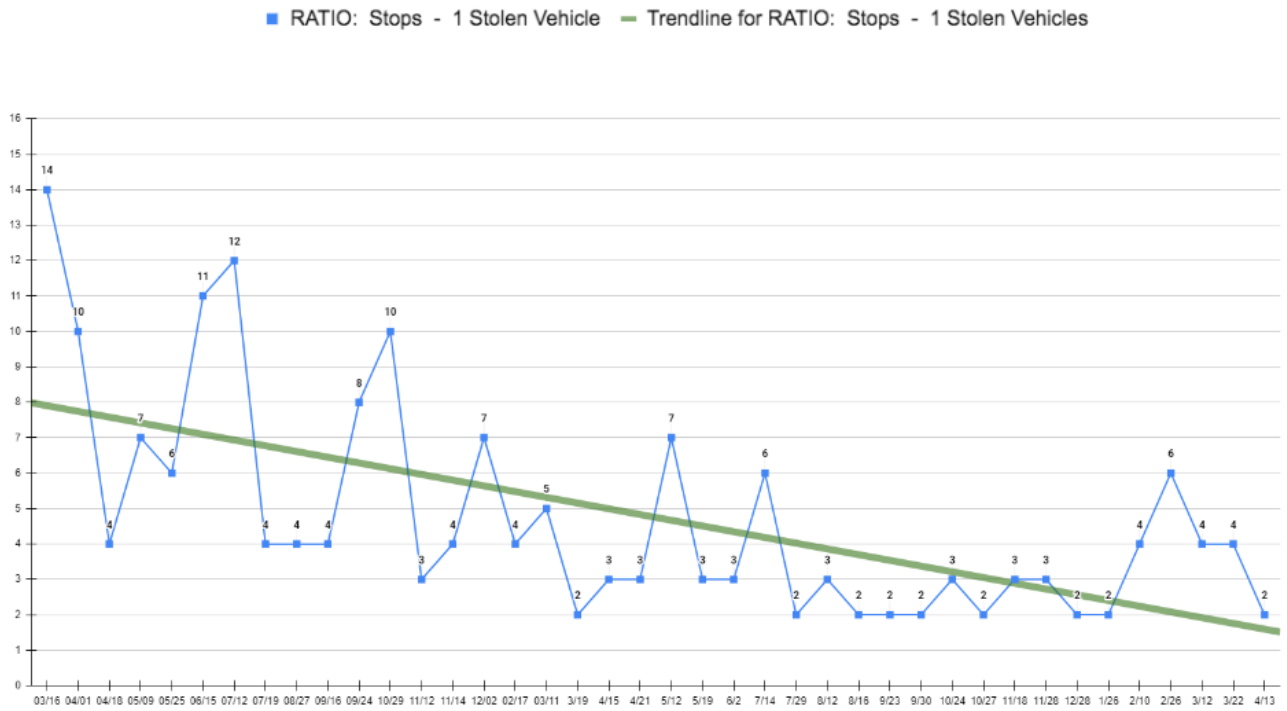
[FIGURE 2]

In January of 2024 there were 56% less stolen vehicles reported to Portland Police Bureau when compared to the number of stolen vehicles reported in the same month one year prior.



[FIGURE 3]

Over time, and with use of enrichment factors, officers needed less stops to identify stolen vehicles in the community.



[FIGURE 4]

Impact - one key finding through the data and use of enrichment factors, for which a direct comparison is available to validate, is the number of stolen vehicles in comparison to the number of overall stops conducted.

	5 Stolen Vehicle Operations - Non Data Driven Approach	35 Stolen Vehicle Operations - Data Driven Approach
Average Stops per Mission	86	37
Stolen Vehicle to Stop Ratio	1:31	1:4
Illegally Possessed Firearm Recovery to Stop Ratio	1:144	1:26