



# 2020 In-Car Digital Video Evaluation Report

**Author: Jamie Budd, Business Strategist**

**Strategic Planning Research & Analysis Section**

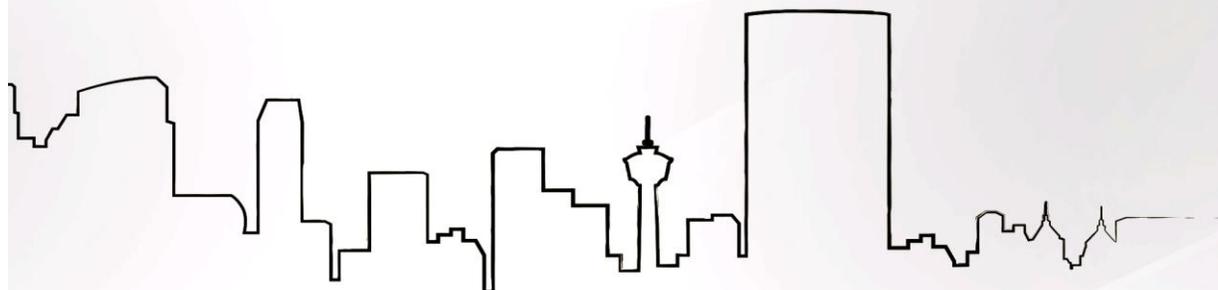
**Prepared for: Amanda Welfare, Executive Director**

**Information Management & Technology Division**

**Katie McLellan, Deputy Chief Bureau of Service & Community Support**

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## Executive Summary

The Calgary Police Service (CPS) implemented the In-Car Digital Video (ICDV) program in 2012. In 2020, CPS's ICDV system is no longer vendor-supported and the contract cannot be renewed according to public-sector trade agreements. This evaluation provides an overview of the current state of ICDV operations to determine opportunities for improvement, inform high level strategic direction for ICDV operations, and communicate impact of ICDV to date.

An evaluation of CPS Body Worn Camera (BWC) operations was also conducted, and findings are presented in a separate report.

## Summary of Evaluation Results

- Stakeholders report that the implementation of BWCs cannot effectively replace the ICDV for vehicle-related incidents. BWCs and ICDVs often work together to provide a full picture of all police vehicle-involved incidents.
- ICDV has many positive impacts on the Service, including:
  - Enhancing officer and public safety through improvements to organizational learning and policy, and monitoring officer compliance.
  - Simplifying incident review, expediting file resolution, and reducing workloads.
  - Advancing criminal investigations and supporting prosecution/ case resolution.
  - Reducing CPS liability for vehicle collision or other insurance claims.
  - Improving public perceptions of CPS accountability, transparency, and overall reputation.
- Three scenarios were identified for ICDV operations at CPS: (1) Dismantle the ICDV system and discontinue all ICDV operations; (2) Continue to use the unsupported ICDV system; and (3) Replace the ICDV system. The benefits and risks to each scenario is summarized in the following table.

### Benefits and Risks for ICDV Operations

	Dismantle ICDV	Maintain unsupported ICDV system	Replace ICDV system
<b>Benefits</b>	<ul style="list-style-type: none"> <li>Remove costs for hardware, software, staff and other resourcing.</li> </ul>	<ul style="list-style-type: none"> <li>Many cameras from 2012-2014 are still functioning.</li> <li>Video evidence continues to be retained on Arbitrator system.</li> <li>No costs for new hardware, software, and staff resourcing to implement new system.</li> </ul>	<ul style="list-style-type: none"> <li>Improved ICDV technology with additional features such as automatic activation triggers</li> <li>Potential to integrate system with BWC system. One integrated system may improve process and workload efficiencies across the Service.</li> <li>CPS has the option to add ICDV under the current contract with the BWC vendor (Axon) and/ or go to market to find and test the best option to meet CPS needs.</li> </ul>
<b>Risks</b>	<ul style="list-style-type: none"> <li>Lose critical evidence for vehicle-related incidents, officer driving behaviour, arrestee transport, internal and external investigations.</li> <li>Without ICDV evidence, time, costs, and workloads may increase for internal and external investigations.</li> <li>Lack of ICDV evidence may impact ASIRT investigations and strength of criminal prosecutions.</li> <li>May increase insurance-related costs.</li> <li>May negatively impact CPS reputation, perceptions of accountability and transparency.</li> </ul>	<ul style="list-style-type: none"> <li>Older MK2 cameras have lower video quality and are reaching the end of their lifecycle. These models are outdated and increasingly unreliable.</li> <li>Newer MK3 system may become more unreliable as memory cards reach the end of their lifecycle and CPS can no longer purchase new hardware from the vendor.</li> <li>Required software bug fixes and improvements are not possible without a vendor contract. IT, Fleet, and the ICDV team can only maintain current performance levels.</li> <li>The current ICDV system may not work with peripheral CPS systems going forward.</li> <li>Unreliable system may lead to lost evidence, increased investigative workloads, and increased officer frustration and inefficiencies operating the system.</li> </ul>	<ul style="list-style-type: none"> <li>Options, costs, and processes to retain current ICDV evidence on Arbitrator system or migrate to another system are unknown and unbudgeted.</li> <li>Options, costs, and processes for a new ICDV system (including testing, implementation/ transition, operational impacts/ outages, etc.) are currently undefined, unbudgeted).</li> <li>New ICDV vendors have adopted a subscription model which shifts the costs from a capital expenditure to an annual operating expenditure. Any new ICDV system will require funding through operating dollars on an ongoing basis.</li> </ul>

## Recommendations

Using a best practice approach to risk management, the evaluation recommendations were organized by outcome area and prioritized based on level of risk and impact.

Factors considered in this analysis include:

- Workforce: employee transitions, labour relations with unions and associations, workplace environment, culture, and morale.
- Organizational objectives: strategic, operational, compliance, and reporting goals.
- Community safety: citizen satisfaction, perception of and actual safety, citizen interactions, employee misconduct, and clearance rates.
- Legal & regulatory: compliance with legislation (including the Charter and Criminal Code), common law, trade agreements, contracts and memoranda of understanding, collective agreements, code of ethics and other professional standards.
- Infrastructure & assets: safety, security, and maintenance of organizational infrastructure and assets.
- Financial loss or costs.
- Business/ operations: business continuity, and the availability, maintenance and security of information.

#	Evaluation Recommendations	Priority
<b>Operations</b>		
1	Due to the investigative and evidentiary value of ICDV footage, and cost implications for liability, claims, and settlements, CPS should continue to use and invest in its ICDV system.	High
6	Develop lifecycle plan for the ICDV system. This may include system performance and issue data tracking, future performance of the system scenarios, resource investment requirements and feasibility (e.g. system memory cards are propriety and may not be available for purchase without a contract), and maintenance strategies.	High
7	Develop a Service Level Agreement with the ICDV team (Information & Risk Management Division), Information Technology & Infrastructure Division, and Finance and Fleet Division to address any and all issues to maintain system reliability.	High
8	To improve operational efficiencies and the reliability of ICDV, explore options to replace the ICDV system. Informed by lifecycle planning for the current system, create a business case to update the ICDV system and operational funding requirements for midcycle budget adjustments in July 2021 and the next budget cycle (2023-2026). Include information on vendor hardware, software, and/ or proof of concept requirements, CPS system requirements, and transition planning for a new system, including videos retained on the Arbitrator system. The development and implementation of the business case will be a collaborative initiative	Medium

#	Evaluation Recommendations	Priority
	incorporating subject matter experts from ICDV, IT, and the Telecommunications/ Network Unit.	
<b>Policy</b>		
4	Update ICDV Policy to reflect current practice and expectations for use, including system checks to ensure ICDV reliability and alignment with relevant policies (BWC, Code 600, 700).	Medium
3	Ensure any changes made to minimum retention schedules as per BWC Evaluation recommendations are also applied to ICDV retention.	Low
<b>Accountability</b>		
2	In collaboration with ICDV stakeholders in Driver Safety & Compliance, PSS, Finance, Risk Management and Claims, data tracking systems should be developed to monitor and report on ICDV outcomes and better quantify the value of ICDV. This may also include working with judicial partners to track metrics for reduced trial time, early case resolutions, etc.	Medium
5	Develop a system to monitor and manage ICDV Policy compliance.	Low
9	Evaluate the ICDV program annually to monitor and report on ICDV Policy objectives and outcomes. This may involve developing a multi-year evaluation framework and/ or reporting plan that identifies key performance metrics, evaluation resources, stakeholder engagement schedule, data quality improvements and development, report back on ICDV lifecycle and transition planning, etc.	Low

### Next Steps

In December 2020, the BWC/ ICDV Governance Committee was established to provide strategic oversight and direction for all BWC and ICDV operations at CPS. The Governance Committee will take a unified and proactive approach to communicating evaluation results and actioning evaluation recommendations in 2021. This includes coordinating ICDV program improvements, ICDV lifecycle planning, and business case development for a new ICDV system.

## Introduction

### Evaluation Purpose

The Calgary Police Service (CPS) implemented the In-Car Digital Video (ICDV) program in 2012. According to CPS ICDV Policy (Ref #IN-007-3), the system enhances officer safety during calls for service by recording an independent audio and visual account of an incident and the circumstances surrounding the incident. The ICDV system will also:

- Help capture evidence that can be used in legal proceedings,
- Capture an unbiased account of events to help resolve citizen complaints surrounding officer conduct, and
- Assist with civil claims against the Service.

In 2020, CPS's ICDV system is no longer vendor-supported and the contract cannot be renewed according to public-sector trade agreements.

The main goals of the evaluation are to:

- Determine whether ICDV benefits outweigh the costs, and ultimately bring value to the Service and relevant stakeholders.
- Identify current and future requirements for ICDV at CPS.
- Inform decisions to:
  1. Continue using ICDV.
  2. Continue using the current unsupported ICDV product.
  3. Go to market for an ICDV product that meets CPS needs.

### Evaluation Scope

This evaluation provides an overview of the current state of ICDV operations in 2020 to determine opportunities for improvement, inform high level strategic direction for ICDV operations, and communicate impact of ICDV to date.

The evaluation was designed to assess both ICDV operations process and impact.

### Evaluation Context & Limitations

#### Data Considerations

Each CPS team, unit, or section that works with ICDV has independently developed its own data management processes and systems. As such, data is available for different timeframes based on when the unit started tracking information. Data quality, reliability, and validity was assessed for all data sources and the best data available is presented in this report.

#### Officer Engagement

The evaluation did not review any videos recorded by officers or the specific conduct of any individual officer as it relates to ICDV.

Although 70 officers took part in the engagement sessions for the interviews – and their feedback was generally consistent across districts and interview methods – the findings may not represent the perspectives of all CPS officers.

### **Evaluation Methodology**

The ICDV Evaluation was conducted June – November 2020 as part of the Body Worn Camera (BWC) Evaluation project. The evaluation includes qualitative and quantitative data collected through November 2020. More detail about the evaluation methodology is available by request.

Information was collected and analyzed from the following:

- Interviews with internal and external stakeholders (n=41):

#### Internal CPS Stakeholders

- Access & Privacy Section
- Chief Crowfoot Learning Centre (CCLC)
- Court & Disclosure Unit (CDU)
- Driver Safety & Compliance
- Homicide Unit
- IT Technical Services
- Legal Services
- Patrol District & Traffic Section Commanders
- Procurement & Asset Management Unit
- Professional Standards Section (PSS)
- Public Affairs/ Media Relations Unit
- Records and Evidence Management Section (REMS)

#### External Stakeholders

- Alberta Health Services (AHS)
- Alberta Crown Prosecution Service (ACPS)
- Alberta Serious Incident Response Team (ASIRT)
- Calgary Police Association (CPA)
- Calgary Police Senior Officers Association (CPSOA)
- Public Prosecution Service of Canada (PPSC)

- Eight (8) focus groups and four (4) small group interviews with 70 patrol members
- ICDV administrative data analysis and document review:
  - Training data and documents
  - ICDV Policy, operations, and procedure documents
  - Media disclosure data

## Background

### ICDV Operations

Panasonic hardware and their Arbitrator software system has been in operation at CPS since 2012. It was first deployed into traffic vehicles and then expanded into districts, with full implementation in August 2016. Currently, 430 vehicles are equipped with ICDV. In-car cameras are mounted on the dash or windshield facing forward and in the back seat. Forward-facing cameras provide wide-scene coverage and back seat cameras provide coverage for subject or arrestee transports. In-car cameras are automatically turned on when lights/ sirens are activated or through g-force sensors upon any vehicle impact, and upon activation, the camera records the previous 30 seconds. Officers can also manually activate/ deactivate the camera system.

The original ICDV hardware deployed the MK2 standard definition camera (HD 720p). Midway through the roll out, the Panasonic hardware was changed to the MK3 high definition camera system (HD 1080p). The intention was to complete the deployment with the MK3 systems, then replace the MK2 systems as they reached the end of their 3-year warranty. However, this was not completed as the budget to replace the MK2 cameras was reallocated.

The contract with Panasonic ended in June 2020, wherein no new MK3 systems can be purchased. Fleet began reinstalling previously retired MK2 camera systems in early 2020, so the number of MK2 cameras in use is growing.

### ICDV Team Mandate

The ICDV team supports the installation and maintenance of the ICDV system and ensures the production of critical evidence through the Arbitrator software.

Responsibilities for the team include:

- Provide timely video evidence for all traffic ticket violations and criminal code prosecutions.
- Provide timely ICDV video evidence for all City Claims.
- Provide critical evidence to major crime units and significant statements on prisoner transports.
- Support ASIRT investigations with critical vehicle evidence.
- Support police accountability through PSS investigations, including training tracking issues/ problems, and finding technical and/or mechanical solutions.

### BWC & ICDV Governance Committee

In December 2020, the BWC & ICDV Governance Committee was established to provide strategic oversight and direction for all BWC and ICDV operations at CPS. The Governance Committee will identify the impact, risks and opportunities of any changes regarding the ICDV program and will take a unified, proactive and coordinated approach to actioning any recommendations that are approved from this report.

## Evaluation Results

Stakeholders report that ICDV brings much value to CPS and that the implementation of BWCs cannot effectively replace the ICDV for vehicle-related incidents.

### Limitations of BWC for In-Car Recording

With the implementation of BWC in 2019, the evaluation investigated whether BWCs could replace the ICDV system. BWCs are worn by all patrol and traffic officers. The camera is chest mounted and provides close and personal perspectives of police interactions.

Since BWCs are chest mounted, they are not usually high enough to see over the dashboard of a vehicle. They are also forward-facing depending on the officer's position and cannot see into the back seat without the officer turning around. BWCs do however, capture in-vehicle audio information, but there are currently no automatic triggers to turn on the BWC (i.e. the officer must manually activate the camera to record all incidents).

In-car cameras provide a wide-angle view of a scene on arrival. They are consistent, stationary, and stable. Stakeholder feedback indicates that there are limitations on the angles with the BWC when in-car and BWC views can be blocked by the steering wheel and/ or dashboard. This may result in gaps in recording the following information:

- Environmental conditions: weather and road conditions, traffic volume, traffic flow/ patterns, traffic lights, and other contextual factors when police lights/ sirens are engaged.
- Vehicle-specific incidents: In-car cameras provide video coverage for pursuits, impaired and high-risk traffic stops, stolen vehicles, vehicle accident scenes, vehicles used as weapons against police, and tracking offenders that are on foot.
- Back seat coverage: In-car cameras provide steady, dedicated audio and video coverage of suspects and arrestees in the back seat during transport. This footage is important for use of force incidents, PSS complaints, self-harm, and uncovering and documenting missed concealed items such as drugs and weapons. Officers can also review the back-seat camera while recording or live without recording, providing a safe way to directly monitor back seat events.

Stakeholders report that BWCs and ICDVs often work together to provide a full picture of all police vehicle-involved incidents from start to finish. Most officers expressed the need for an in-car camera. Many officers find ICDV valuable for code 600s, code 700s, traffic infractions, as well as the backseat camera for transporting arrestees. BWCs are seen by stakeholders as complementary to ICDV but cannot replace ICDV.

## Value of ICDV for CPS

[ICDV can enhance officer and public safety through improvements to organizational learning and policy, and monitoring officer compliance.](#)

The ICDV system is used by many internal stakeholders to review driving behaviour and implement changes to policy and procedure to enhance officer and public safety. For example, the Driver Safety & Compliance (DSC) team uses ICDV footage daily to review collisions and all aspects of driving to determine if the driving is reasonable, necessary, and proportional to the incident (e.g. collisions, daily speed reviews, etc.). Many of DSC's driving safety recommendations have come from observing driving behaviours on ICDV that would not otherwise have been identified.

From a PSS perspective, ICDV has also been critical in resolving complaints and in holding members accountable for actions (e.g. unprofessional behaviour, excessive use of force, policy compliance, etc.). In addition to increased accountability, ICDV also has enabled PSS Investigators to disprove citizen allegations around inappropriate officer conduct.

ICDV allows CPS to achieve the following outcomes:

- In most cases, ICDV documents what happened in incidents, where the written statements provided by those involved (citizens or members) can be inadequate, misleading, or deceitful.
- The ICDV can be shown to supervisors and management for corrective action.
- ICDV is used to educate recruits, officers returning to work, as well as active officers about acceptable and unacceptable driving behaviours.
- ICDV reviews have led to recent changes in vehicle intervention strategies.
- For pursuit reviews (specifically in the changes to Code 600 policy), when there is ICDV, officers are not required to submit extensive reports, notes maps, etc. thereby reducing administrative workloads.
- In combination, activities to review driving behaviour and resulting changes to policy and practice can lead to safer driving practices and hold officers accountable for unsafe behaviours.

[ICDV can simplify incident review, expedite file resolution, and reduce workloads.](#)

ASIRT, PSS, and DCS report that it is "vital" to have ICDV footage to investigate vehicle-related incidents (e.g. vehicle pursuits, vehicle tactics, traffic accidents, etc.). ICDV enables quick turnaround times for complaint resolution, either through the review of the video alone, or using the video to identify next steps in the investigative process.

PSS has only recently started tracking ICDV and BWC data. However, in 2020, 67 incidents were resolved without conducting a formal investigation. PSS reports that

without ICDV, some complaints “would be a two (2) year investigation, or a 20-minute viewing when there is ICDV footage.”

ICDV has allowed DSC to efficiently manage the demands for monitoring driving behaviours. DSC notes that the loss of ICDV will require additional staffing and resources to meet CPS oversight and investigative requirements.

Patrol and Traffic officers report the impact of ICDV on complaint resolution time. Many officers recounted instances, “if I didn’t have that video that public complaint would have dragged on for two (2) years.” Timely resolution of complaints reduces negative impacts of stress, worry, and uncertainty for officers, allowing them to better focus on the job at hand.

#### [ICDV can advance criminal investigations and support prosecution/ case resolution.](#)

Many stakeholders including CPS patrol and traffic officers, major crime investigators, and the Crown Prosecution indicate that ICDV evidence is important to their work. ICDV evidence provides documentation for tickets, summonses, identification of offenders, investigations, intelligence gathering, prosecutions, and court testimony. Stakeholders note that ICDV is particularly impactful for impaired driving offences and dangerous driving incidents as the video clearly shows the physical indicators of intoxication, as well as other transportation-related offences in the Criminal Code.

The Crown Prosecution suggests anecdotally, that ICDV has led to criminal prosecution of offenders and early case resolutions. In 2020, CPS disclosed 4,695 in-car videos to the Crown (up from 4,384 videos in 2019). The ACPS notes that juries are less willing to convict individuals without physical evidence and ICDV can be very powerful.

#### [ICDV can reduce CPS liability for vehicle collision or other insurance claims.](#)

DSC reports that CPS is involved in about 400 collisions per year and that “the use of ICDV for collisions has been critical in determining the root causes of incidents.” ICDV footage allows CPS to determine liability, resolve vehicle claims and settlements, and protect officers from unfounded claims.

The City of Calgary’s Law Department Risk & Insurance Division (RID) functions as the insurance company for CPS. Like any other insurance company, they:

- Pay for property and injury claims and settlements when CPS is at fault.
- Pay for damage to CPS vehicles.
- Pay administration costs including case handling, assessments, and legal fees.
- Seek payments from other insurance companies when CPS is not at fault.

RID bills CPS for all insurance costs based a rolling three-year average, approximately 80% of which are directly related to vehicles. In 2020, CPS vehicle insurance costs were estimated at \$2.8 million dollars. The value can be broken down as:

- Property and injury claims and settlements against CPS: ~\$1.5 million
- Damage to CPS vehicles: ~\$900,000
- City insurance services (administration, legal fees, etc.): ~\$400,000

It is difficult to determine exactly how much ICDV saves CPS in vehicle-related insurance costs due to a variety of factors. Insurance costs are often based on past incidents and probabilities of future incidents, which cannot be predicted with certainty. It is estimated that CPS is at fault for about 70% for vehicle collisions and damage.

Unfortunately, RID and CPS do not specifically track the impacts of in-car camera footage on outcomes, including any insurance savings for CPS. Further, some of this data is not knowable, as cost impacts are directly related to the nature of the incident, liability, and damages. According to RID:

“It would not be possible to say this video has saved us ‘x’ dollars because if it shows the other driver is liable, what is that worth? If the other driver’s lawyer sees the video and then drops his lawsuit, how much did that save us? If the statement of claim is for \$200,000, we can’t say the video saved us \$200,000 because we know counsel inflates their numbers.”

With these caveats in mind, stakeholders do know that ICDV has saved CPS significant costs in claims, settlements, and administration. For example, RID reports that within an eight (8) month timeframe, 40 in-car videos were requested, saving \$250,000 in asset value on these claims, not including the injury portion of these collisions that CPS has been able to defend.

ICDV can reduce insurance costs by:

- Determining fault: if CPS is shown not to be at fault, this can reduce/ remove outgoing claim payments, and increase incoming claim payments from third parties.
- Reducing administrative time: review of ICDV footage can decrease the time spent investigating claims and settlements; and decrease time spent in litigation when CPS is at fault, moving directly to claim payment or settlement negotiation.

Stakeholders from Finance, Risk Management and Claims, and Legal Services suggest that removing the ICDV system would significantly reduce CPS’s ability to defend claims or avoid liability. This may translate to an increase in insurance premiums and claims payments that may eliminate any savings from the removal of ICDV.

### ICDV can impact public perceptions of CPS accountability, transparency, and overall reputation.

Many stakeholders said the current reality is that the public expects police vehicles are equipped with recording devices. Particularly given recent social and political perceptions of police accountability and transparency, removing the ICDV system may cause the public to ask, “what are they trying to hide?” Patrol and Traffic officers frequently noted that they would not want to work without ICDV, as “no one believes the officer without the video.” Police agencies are under increasing public scrutiny and video evidence is perceived as an objective tool to hold the Service and its officers to account.

### **Recommendations**

1. Due to the investigative and evidentiary value of ICDV footage, and cost implications for liability, claims, and settlements, CPS should continue to use and invest in its ICDV system.
2. In collaboration with ICDV stakeholders in Driver Safety & Compliance, PSS, Finance, Risk Management and Claims, data tracking systems should be developed to monitor and report on ICDV outcomes and better quantify the value of ICDV. This may also include working with judicial partners to track metrics for reduced trial time, early case resolutions, etc.

### **Current ICDV System**

The CPS ICDV, using the Panasonic hardware and their Arbitrator software system, has been in operation since 2012. It was first deployed into traffic vehicles and then implemented in all districts in August 2016.

All in-car videos are captured and collected by the Arbitrator system. These videos are managed in compliance with CPS’s Records Retention Schedule which specifies the retention period for all records and information. ICDV, which is primarily case file information, is retained either permanently (e.g. major case files such as homicide, robbery, sex crimes, etc.); 40 years (e.g. non-major case files such as break and enters, drugs, criminal traffic, etc.); and 10-years for non-criminal traffic cases. At minimum, all in-car videos are retained for 13 months and if the video is not assigned to a case file it is deleted at the end of 13 months.

Should the current ICDV system be replaced or decommissioned, all case file videos stored on the Arbitrator system must be retained on that system or migrated to another system for the retention period.

## **Stakeholder Feedback**

Generally, internal stakeholders consider the ICDV Panasonic hardware to be robust as many cameras from 2012-2014 are still functioning. However, due to the limited supply of current hardware, CPS could not properly equip additional vehicles with high quality cameras (CPS does have older camera stock available, but these offer standard definition/ low video quality, and may not work with peripheral CPS systems).

Patrol and Traffic officers had mixed feedback on the ICDV system. Some officers also stated that ICDV is “easy to use,” “straight forward,” and have had no issues. Some think the quality of the video is good, while others think the resolution is “garbage.” Many officers expressed the current ICDV system is outdated and unreliable. Some officers report the cameras don’t work, and some vehicles do not have both front and backseat cameras. Many said the system “is archaic,” “doesn’t work half of the time,” is “hard to log into,” “always crashes,” or “logs you out and you don’t realize that [the video] is off.” Many noted challenges with uploading video, saying it “takes forever on the backend,” and that it can be difficult to find and disclose ICDV.

## **ICDV System Issues**

The common documented issues with the cameras follow.

### Memory Cards

There have been documented issues with the memory cards on these systems. The useable lifespan of a memory card is three (3) to five (5) years, and most of the cards are now beyond that. The ICDV team reports that they are seeing more incidences of corrupted video, increasing the risk for ICDV recording failure.

### District Wi-Fi

ICDV videos are uploaded over Wi-Fi when the vehicle reaches the district, at APS, or in the prisoner transfer area behind Westwinds West. The vehicles cycle through this upload process daily as they collect video evidence. Wi-Fi uploads at the district level are known to crash on a regular basis, approximately 2-4 times per month. The main issues are at districts 2, 5 and 6. Other issues are environmental and include location of where the antenna is mounted, interference from other antennas, and vehicle antenna receiver fault and defects.

### ICDV Updates and Bug Fixes

Since 2017, the ICDV system has not been updated with system updates and bug fixes. Regular maintenance is required for continued function and reliability of the system. Urgent requests for bug fixes and upgrades have been filed to remove some of the glitches and allow functions of the system to work reliably and efficiently. However, none of these bug fixes have been pushed to the system and now that the Panasonic contract has ended, no updates or fixes to the software is allowed.

### **ICDV System Opportunities**

ICDV technology continues to advance with vendors making smaller cameras, adding additional features such as automatic activation triggers, integration with BWCs, and improving software and other backend systems.

Patrol and Traffic members recommend:

- Simple, easy-to-use system with a single sign on.
- Reliable front and back cameras with high quality audio and video recording.
- Integrated systems where possible. This could include ICDV integration with CAD, Sentry, Axon's BWC hardware or software.
- Streamlined backend processes with no additional administrative requirements.

CPS has piloted Axon Fleet 2 ICDV system. Pilot results suggest that there are some technical issues integrating this system with CPS current ICTS systems. Axon's Fleet 3 ICDV was released in December 2020, which is expected to resolve some of the issues experienced with Fleet 2.

Many stakeholders expressed interest in having the BWC and ICDV on the same system, with some calling this a "magic solution." Having one integrated system would allow for better communication between hardware (e.g. automatic triggers to activate the BWC when vehicle lights/ siren is activated, when the car arrives at an incident, when the officer exits the vehicle, etc.), allow for camera synchronization, and may create backend and/ or workload efficiencies working with a single vendor and software platform.

CPS's options are to maximize the current BWC contract with Axon to provide a fleet ICDV system or CPS can choose to go to market to find a new vendor. If CPS were to move to the Axon ICDV system, Procurement & Asset Management recommends that this occur within the next one to two years so that there is enough time left in the full contract for Axon to replace any defective hardware. This ensures the Service receives the most value from the current contract.

The BWC implementation team report Axon:

- Axon provides solid products (more reliable hardware and software, fewer IT hours to maintain), which may lead to cost savings.
- Includes data storage costs for videos are included in the single-priced contract.
- Includes replacement costs for hardware are included in the single-priced contract.
- Is an excellent vendor that works in partnership with CPS to deliver solutions that meet the Service's unique needs.

CPS anticipates that many new vendors will likely adopt the Axon subscription model which shifts the costs from a capital expenditure to an annual operating expenditure. Therefore, there will have to be operating dollars allocated to fund this initiative on an ongoing basis.

## Recommendations

3. Ensure any changes made to minimum retention schedules as per BWC Evaluation recommendations are also applied to ICDV retention.
4. Update ICDV Policy to reflect current practice and expectations for use, including system checks to ensure ICDV reliability and alignment with relevant policies (BWC, Code 600, 700). \*\*\*In process by the ICDV team.\*\*\*
5. Develop a system to monitor and manage ICDV Policy compliance.
6. Develop lifecycle plan for the ICDV system. This may include system performance and issue data tracking, future performance of the system scenarios, resource investment requirements and feasibility (e.g. system memory cards are propriety and may not be available for purchase without a contract), and maintenance strategies.
7. Develop a Service Level Agreement with the ICDV team (Information & Risk Management Division), Information Technology & Infrastructure Division, and Finance and Fleet Division to address any and all issues to maintain system reliability. \*\*\*In process by the ICDV team.\*\*\*
8. To improve operational efficiencies and the reliability of ICDV, explore options to replace the ICDV system. Informed by lifecycle planning for the current system, create a business case to update the ICDV system and operational funding requirements for midcycle budget adjustments in July 2021 and the next budget cycle (2023-2026). Include information on vendor hardware, software, and/ or proof of concept requirements, CPS system requirements, and transition planning for a new system, including videos retained on the Arbitrator system. The development and implementation of the business case will be a collaborative initiative incorporating subject matter experts from ICDV, IT, and the Telecommunications/ Network Unit.
9. Evaluate the ICDV program annually to monitor and report on ICDV Policy objectives and outcomes. This may involve developing a multi-year evaluation framework and/ or reporting plan that identifies key performance metrics, evaluation resources, stakeholder engagement schedule, data quality improvements and development, report back on ICDV lifecycle and transition planning, etc.