



BODY-WORN CAMERAS IN LAW ENFORCEMENT IN MEXICO: WHAT DO WE KNOW?

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Abstract

In the last decade the use of body cameras in security forces has become more widespread in the Anglo-Saxon world with the aim of reducing cases and accusations of abuse in the use of force. Police in Mexico and Latin America have, in addition, other problems, mainly they are accused of being corrupt. In the region there is little research on the implementation of body cameras in police forces, their effect on corruption allegedly committed by police officers or, more generally, their effect on police work. In the case of Mexico, no research on the use of body cameras in police institutions was identified. Thus, by means of three case studies with municipal police and data obtained through more than 1,000 requests for information, this study presents the panorama of the use of body cameras in Mexico and the lessons learned from the implementation processes. The results of the exploratory research seem to suggest that cameras can serve to mitigate the current problems of Mexican police, especially in terms of corruption, only if their adoption is accompanied by a complementary strategy to reinforce controls, as well as clear and specific objectives for their incorporation as an additional tool for police officers.

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EXECUTIVE SUMMARY

In 2021, the LAB-CO team¹ carried out research regarding police body-worn cameras use in Mexico. Using case studies, reviews of the media and the academic literature —alongside more than one thousand requests for public information— LAB-CO got close to the phenomenon’s magnitude throughout the country, identified the main problems for its implementation and came up with recommendations for police departments that currently use or plan to incorporate police bodycams (also known as body-worn cameras or BWC). The study seeks to contribute to the debate surrounding Mexico and the rest of Latin America’s police officers’ use of bodycams, a little-studied phenomenon, despite having a great potential to reduce human rights violations, police-related offences, acts of corruption, etc.

The United States, various European countries —and recently Latin American countries like Brazil, Uruguay, Chile and Colombia— have adopted police bodycams, mainly to prevent discriminatory practices and unjustified use of force.

Despite their widespread use, studies undertaken regarding the effectiveness of using police bodycams have delivered mixed results. On one hand, some studies conclude there are no statistically significant changes in police officers’ behaviour or the public’s perception of police officers.² On the other hand, studies in the United States and Brazil demonstrate that bodycam use **positively impacts reductions in the use of force**,³ from 12.5% in some cases, to 45% in the case of a specialized Brazilian police unit. **Other research does not manage to**

demonstrate that cameras deliver a use-of-force reduction.⁴ Additionally, research has documented reduced citizen complaints —up to 90% in some police departments— starting with the introduction of police bodycams.⁵

Even without counting on unequivocal evidence regarding its effectiveness, bodycam adoption is growing and is very popular with police officers and the public at large. Some research documents, for example, show that in the United States up to 90% of the general public supports police officers wearing body cameras.⁶

By 2021, in Mexico, at least **168 police headquarters (158 municipal, 10 state)** already had bodycams. Given those institutions’ geographic distribution, the tool was used by police departments that cover over 10% of Mexican territory, inhabited by 45% of the overall population. Moreover, the research reveals that the Public Security Provisions Fund (Fondo de Aportaciones para la Seguridad Pública; FASP by its Spanish-language acronym) as well as the now-defunct Mexico Public Subsidy for the Strengthening of Public Security (Fortalecimiento del Desempeño en Materia de Seguridad Pública; FORTASEG in its Spanish-language acronym) invested more than 142 million Mexican pesos purchasing 12,096 cameras between 2017 and the middle of 2021.

Unlike developed nations where bodycams are used to reduce police abuses, many Mexican police departments adopted the cameras **for the main —but not exclusive— purpose of mitigating corruption**, with some hopeful indications of their effectiveness to do so. In

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² This will be detailed later in the text, based on Lum, et al., *Research on Body-Worn Cameras: What We Know, What We Need to Know*, 2019.

³ This will be detailed later in the text, based on White and Malm, *Cops, Camera and Crisis: The Potential and Perils of Police Body-Worn Cameras*, 2020.

⁴ This will be detailed later in the text, based on Savarese, M. and D. Janet, “Brasil usa câmaras corporales para menor violência política”. AP, 2021.

⁵ This will be detailed later in the text, based on Peterson and Lawrence, *Do the Effects of Police Worn Body-Worn Cameras on Use of Violence and Complaints Change Over Time? Results from a Panel Analysis in the Milwaukee Police Department*, 2020.

⁶ This will be detailed later in the text, based on Eakins, *Policing in America: Understanding Public Attitudes to the Police: Results from a National Survey*, 2016.

three case studies in municipal police departments of various Mexican states, LAB-CO examined BWC's incorporation process, and, together with the rest of the investigation, made recommendations for the proper and effective adoption of bodycams in police facilities.

The case studies were conducted in the Mexico City's municipal "borough" known as Álvaro Obregón; in Ciudad Juárez in Chihuahua state; and Colima, in the state of Colima. Consistent with the previously revised literature, those interviewed inside police institutions manifested satisfaction with the use of bodycams, devices they considered **essential to improving internal controls and for promoting police-actions transparency**, above all in cases that smacked of public polemic. During interviews, police officers explained the multiple uses to which the recordings were used, like, for example, in internal disciplinary processes, proofs presented before prosecutors, use on social media, etc., as well as a potential for future inquiry.

In addition, during investigations, **no robust normative frameworks were found**, nor guidelines or parameters for using the bodycams, where fundamental aspects are regulated such as recorded people's rights to privacy or privacy for police officers, public access to the videos or the possibility that the recordings will be used in criminal trials, etc.

While bodycams **possess a great potential for mitigating corruption, and reducing police officers' use of force**, as well as closing the gap between police forces and the public at large, we recommend that their adoption include additional actions to expand their effectiveness. Such actions include:

1) DESIGN AND DEFINE OBJECTIVES, USES AND GUIDELINES. Prior to the acquisition and incorporation of body cameras, it is recommended that police institutions clearly establish the objectives and expectations for their use; that those who will use the cameras be designated, together with the responsibilities that this implies; that the parameters under which the cameras will operate, i.e. their institutionalization, be established; that the mechanisms for supervising their use and control be defined; and that the indicators with which their impact will be adequately measured be designed.

2) ESTABLISH A HOLISTIC STRATEGY OF MECHANISMS CONTROLS. Body cameras must be understood as a tool that contributes to solving problems that afflict Mexico's police departments, not just as an end in themselves. In this sense, we recommend developing additional internal control measures, especially strengthening protocols for discipline, as well as others for external controls, to maximize outcomes from bodycam use.

3) INSTITUTIONALIZE THE INITIATIVE. Using bodycams requires permanent collaboration and communication from multiple operational and administrative areas, to respond to needs that can arise. For example, at the organizational level, police departments require enough personnel to monitor and supervise the cameras. Those employees should be provided with use protocols, training and ongoing capacitation. At the budget level, departments should consider related activities that arise from maintaining and storing hardware and software. At the judicial level, police require agreements for exchanging information with local courts, public prosecutors and other institutions. At the technological level, police require a sufficient broadband capacity, video storage space and compatibility with other systems, among other considerations.

4) DRIVE REGULATORY DEVELOPMENT. To guarantee bodycams' correct and legitimate use, as well as guarantee privacy rights, we recommend developing or updating regulatory frameworks in addition to designing protocols and guidelines that provide legal protection for police officers as well as for the general public.

5) ASSERTIVE COMMUNICATIONS. To minimize internal resistance among police officers, police departments should properly manage expectations within their institutions, as well as with the general public; and not least of all, effectively coordinate with other justice system agencies. Ongoing, permanent assertive communication with all parties implicated in the bodycam implementation process, is recommended.

This executive summary contains ideas that will be widely developed in the complete study. The research seeks to be a starting point for a larger debate regarding the use and effectiveness of bodycams in Mexico and throughout Latin America, to take on problems associated with human rights violations, corruption, and other irregularities within police institutions. While early news is encouraging—especially when it comes to mitigating corruption—further complementary evaluations and research is needed.

If you wish to learn more about this important research, we cordially invite you to contact us at contacto@lab-co.org.

1. INTRODUCTION



Image: Morelia Municipal Police

In recent years, bodycam use may have been one of the fastest-growing technologies in the entire public-security realm. That said, we do not know much about its use in Mexico. How many are used there? Which Mexican states have more police using bodycams? In which states' municipal jurisdictions is there a greater proportion of police who use bodycams? What has characterized the implementation process of bodycams in Mexico? What justification do decision-makers express to implement them? What problems do they take on? What objectives do they seek? Is bodycams' incorporation into policing working? To respond to this and other questions, LAB-CO has produced the present investigation in which we examine the current state of bodycam incorporation and implementation, in some of

Mexico's police departments, to come up with recommendations that improve their use and adoption. Through visits to some municipal jurisdictions that are already using bodycams, the analysis of more than 1,000 requests for information, a review of the current literature and interviews with key players, our research explores the objectives and expectations that reside in bodycams' purchase and incorporation at police headquarters, as well as the use to which they are put and the factors that at once hinder or facilitate their adoption.

2. THE COMPLEX WORLD OF BODY-CAMERAS: WHAT DO WE KNOW?

2.1 HOW AND WHERE DID IT START, WHERE ARE THEY USED AND HOW WIDESPREAD IS THE PHENOMENON?

The first use of cameras in police departments goes back to the second half of the twentieth century, notably as regarded the use of closed-circuit television (CCTV) in 1960s London. Years later, police in the United States, the United Kingdom and Australia started installing “dash-cams” on squad-car dashboards to register police activity in the field (Taylor, 2016). And not long after these uses, spread to other countries. These early technologies’ limited vision and poor capacity for capturing sound, later led to bodycam invention and incorporation.

Currently, bodycams are the most rapidly propagating technology in modern police history. Though it is difficult to determine how many bodycams are in circulation today, a few estimates have been proposed. In the **United Kingdom**, an evaluation by a privacy watchdog organization discovered that **in 2019 more than 70% of police forces had already acquired cameras**. The objectives underlying this strategy seek to improve oversight, reestablish citizen trust and assure a registry of polemic or controversial encounters between police officers and the public (Coudert, et al., 2015).

It’s recognized in the **United States** that currently, **80% of police departments with 500 or more officers use bodycams** (Peterson and Lawrence, 2020). Other sources—like the United States Justice Statistics Office—declare that from 2016 on, **60% of local police departments and 49% of county sheriffs’ departments had distributed bodycams** to all their officers (Hyland, 2008). The phenomenon has undergone such rapid growth that **camera use has doubled in recent years** (Lum et al., 2020).

In Spain—particularly Madrid—police officials have begun testing this brand of technology to protect them from attack and mistreatment on the part of the general population, and at the same time, evaluate police officers’ reactions to the aggressions. Cameras are turned on for risky operations, everything from patrolling neighbourhoods home to rowdy bars and restaurants to high-speed chases (Coudert, et al., 2015). As well, in August of 2021, it was announced that the Spanish Chamber of Deputies would debate a legal proposal that agents of the National Police Corps and the Civil Guard would wear bodycams.

In 2013, the Belgian government acquired more than 4500 bodycams with the idea to supervise and control police activities, after a case that involved police elements involved in a citizen’s negligent homicide (Coudert, Butin, Le Métayer, 2015). Similarly, in France, the Ministry of the Interior acquired more than 30 thousand bodycams for the Federal Police and the regular Gendarmerie, after a series of complaints of police abuse and racism. Not least of all, Latin America has become a fertile field for police bodycam use. Officers in Columbia, Chile, Argentina, Brazil and—coming soon—the Dominican Republic have recently acquired the technology.

2.2 WHAT MOTIVATES THE WORLD'S POLICE FORCES TO PURCHASE BODY-CAMERAS?

In general, police authorities have justified bodycam acquisitions with the argument that they seek to improve police-activity transparency, i.e. gain more clarity on what happens and how it happens. In numerous cases, the cameras' implementation happens after scandals surrounding police brutality that call officers' actions into question. Such is the case of many police forces in the United States, where **the increase in the use of these devices is mainly due to the prevention of discriminatory behavior and the unjustified**

use of force, especially towards the African American and Latino communities.

In many cases, using bodycams also responds to an objective of **overall improvement in public safety institutions**. As an example, according to its website, London's Metropolitan Police started using bodycams to facilitate crime-investigation protocols and writing up reports, conveying transparency during detentions and registry of persons and vehicles, or even to help agents elaborate ex post facto reports.⁷



Image: Juárez Municipal Police

⁷ More information on this issue can be found at <https://www.met.police.uk/bwv/>

2.3 ARE CAMERAS USEFUL? AVAILABLE EVIDENCE ON THEIR EFFECTIVENESS

Through an empirical lens, the hypothesis behind implementing bodycams among police officers is that their use is associated with:

- Reducing irregularities
- Reducing abuse-of-force cases.
- Reducing complaints and denouncements of police officers.

These objectives claim to **limit police discretion, improve police behaviour and raise indices of police forces' perceived legitimacy**. It is also expected that **cameras will incentivize better behaviour from the public** during its encounters with the police since civilians perceive they're being video graphed by bodycams officers wear.

2.3.1 BODY-CAMERAS EXTENTS AND LIMITS

During recent decades, a series of investigations have related perceptions of social self-consciousness with law-enforcement and have offered evidence that **people adhere to social guidelines but that their behaviour changes when they discover someone is watching them** (Ariel, et al., 2015). This entails that cameras are conceived of as dissuasive instruments for keeping people from breaking the law or failing to comply with guidelines or even socially established codes.

What's important for police operations is that cameras can lead to behaviours on both sides of the police-citizen interaction. In other words, the fact that cameras act like a neutral third party could have an impact on both actors' behaviours, propitiating a possible "double" self-consciousness that, on the one hand, could motivate the police to abstain from irregular performance while, on the other hand, might induce suspicious persons to act more rationally (Ariel, Farrar and Sutherland, 2015).

In line with research published in the Harvard Law Review in 2015, video-cameras act like objective and impartial observers that increase events' transparency, an unprejudiced

reproduction of reality.⁸ **Bodycams act as mechanisms that impulse constraint and self-discipline among both the general population and the police**, which may maximize police departments' limited resources to supervise the form and conditions in which innumerable interactions between officers and civilians occur.

In this context, academic literature focused on using video-recording technology in law enforcement has expanded in the last decade. A recent article examined seventy empirical studies related to the impact of bodycam use in different law-enforcement settings, mostly those associated with behaviour and perceptions both on the part of police officers and civilians (Lum et al., 2019). Per the findings of Lum et Al, while both police and civilians seem to support using these types of devices, the reality is that **bodycam use has not yet proven to have a statistically significant effect on either officers' or civilians' behaviour nor in people's perceptions of the police**. The study concludes there are still major information and knowledge gaps concerning bodycams' real impact on law-enforcement agencies and their relationship with the public at large.

⁸ Harvard Law Review, vol. 128, 2015. "Considering Police Body Cameras." Available at <https://harvardlawreview.org/wp-content/uploads/2015/04/Considering-Body-Cameras.pdf>

In contrast, published authors White and Malm took on an exhaustive 2020 revision of different studies published in recent years that sketch a more promising vision by underlying cases whose outcomes appear largely positive, notably at police departments in Phoenix, Orlando, Tampa and Las Vegas. Elsewhere, William et al. (2021) published research that carried out a bodycam cost-benefit analysis. **The results of**

the study are positive with respect to this ratio (5:1) after the acquisition and use of the body cameras. Bottom line, there is no conclusive evidence of the cameras' effectiveness.

The next sections will examine the most relevant findings regarding three areas: (a) use of force (b) citizens' complaints (c) trust in the police.

2.3.2 USE OF FORCE

Several United States and United Kingdom police agencies have completed different studies and varying research that points to **reductions in use of force as a result of bodycams' incorporation.** For instance, Rialto, California, has seen a relevant decrease in the use of force after implementing the devices while also noting that on police shifts that did not use bodycams, there were twice as many use-of-force incidents than on shifts where cameras were used (Ariel, Farrar, Sutherland (2019); Flight (2021).

Additionally, the Las Vegas Police Department conducted a randomized control trial in which it discovered a **12.5% use-of-force decrease** among police officers that carried bodycams, in comparison with those that did not (Peterson and Lawrence, 2020; White and Malm, 2020). Along similar lines, officers equipped with bodycams in Orlando reduced the use of force by 5% more than the control group (Peterson and Lawrence, 2020; White and Malm, 2020).

Nonetheless, Lum et al. (2019) assert that available evidence is indeterminate. While indeed they refer to the six studies' findings that demonstrate that officers who wear cameras use force less often than officers who do not—including the Rialto, California case in which the researchers discovered sustained effects reducing the use of force over time—they contrast with outcomes from another **eight studies that do not show statistically significant differences in police use of force between officers that wear bodycams and those officers that do not.** These last cases include Washington, DC and Milwaukee (Peterson and Lawrence, 2020).

Another relevant point is some studies suggest bodycams can make police feel less willing to get involved in certain law-enforcement activities (Jennings, et al., 2014; Ready and Young, 2015), particularly those that may imply some kind of complaint risk in interactions with civilians.

2.3.3 CITIZEN COMPLAINTS

In matters of citizen complaint, researchers like Pyo (2020) **affirm most studies on bodycam impacts prove their effectiveness in reducing these kinds of reports.** Lum et al. (2019) back up the claim, pointing out less ambiguity in outcomes from eighteen reviewed studies that largely reflect a reduction in complaint numbers

among police departments that wear bodycams. Peterson and Lawrence (2020) point out concrete examples like Plymouth (England), with a reported 40% reduction in **citizen complaints**; Phoenix, which reported 23% reductions; Rialto (California), at 90%; Orlando, at 65%; while the UK's Isle of Wight came in at 11.5%.

Even Milwaukee saw a 51% decline in comparison to the control group, that did not wear cameras.

Researchers like Koen (2016) and Goodall (2007) underline something important, declaring having observed other practices that could be behind the decline, say, showing footage to potential complainants as a bargaining technique to discourage them from lodging

possible complaints. Lum et al. (2019) also take up police departments' arguments that consider that BWCs specifically reduce malicious or unfounded complaints since civilians realize there is enough evidence on the recordings to discredit such complaints. If that is the case, say the authors, then what the decline in complaints is showing us would be a change in behaviour for the complainants and not necessarily in that of the police officers.

2.3.4 PERCEPTION, TRUST AND LEGITIMACY

At first, it would seem that from the time police started using bodycams, they have been the object of considerable support by citizens. In the English city of Plymouth—in one of the very first inquiries on this issue in the world—more than 70% of the surveyed population considered wearing bodycams a “good” or “very good” idea (James and Southern, 2007).

Later studies, like a national survey that took place in the United States in 2015 (Sousa, et al., 2015) concluded that almost all the interviewees believed that bodycams led police officers to behave more respectfully with the members of the community at large (86%) and also improved police transparency (91%). A year later, another United States national survey resulted in **more than 90% of surveyed individuals supporting a demand that police officers use bodycams**, while 81% of those surveyed were convinced the devices would protect both cops and civilians (Ekins, 2016).

That said, more recent studies revealed that support for BWC can vary depending on the perspective it is considered. Some researchers have found that **citizen support can depend as much on context and background as it can on the surveyed people's disquiets about the police**. In other words, it depends on who you

ask. Crow et al. (2017) identified that groups of “non-white” young women and men recognized fewer benefits in bodycam use. But those who perceived the police were fairer in procedures⁹ and had more positive perceptions of police performance saw more benefits to wearing cameras. Lum et al. (2019) also concluded there was a disparity in the legitimacy that police ascribe to different social groups and bodycams are not bridging the gap.

The available information also reveals that some social circles consider bodycams can help improve transparency, accountability and, in general, police officers' behaviour, but without necessarily translating into an increased trust or overall legitimacy¹⁰.

As Wright II and Headley point out (2020), **the bodycams are not by themselves tools for ginning up legitimacy**; BWC will not increase legitimacy if they don't go hand-in-hand with community engagement and other confidence-building actions. These researchers conclude that the absence of something negative (e.g., bad behaviour) does not automatically translate into something positive (improving the public's perceptions) so **bodycams are not in themselves a sufficient element for improving the legitimacy of the police**.

⁹ Different researchers (Tylor, T. 2003; Bradford B. et al., 2014) state that law-enforcement's legitimacy comes from the justice people perceive when police exercise their powers. Equity of actions as well as transparency and impartiality in decision-making are some of the pillars of criminal justice that would lead to citizens more willing to comply with the law and cooperate with police.

¹⁰ Some researchers have questioned bodycams' reach, when it comes to improving transparency and accountability, because, given the police are the data (i.e., video) administrators and controllers, access to that data is limited and far from transparent.

<https://www.diariolibre.com/actualidad/politica/las-ocho-medidas-con-las-que-abinader-pretende-reformar-la-policia-nacional-HB29394276>

Table 1 shows a summary of the discoveries about bodycams’ impacts in terms of the studies and investigations we’ve described in the above section.

TABLE 1. STUDIES ON THE USE OF BWC

Study	Notable discoveries regarding bodycam use
Goodall, 2007. <i>Guidance for the police use of body-worn video devices: Police and crime standards directorate.</i>	<ul style="list-style-type: none"> - Citizen complaints are down, but it also has to do with police officers’ irregular practices, e.g., officers who show a video to negotiate with civilians.
James y Southern (2007). <i>Plymouth head camera project: Public relations evaluation.</i>	<ul style="list-style-type: none"> - Civilians hold a largely positive (“good” or “very good”) perception when it comes to police carrying bodycams.
Jennings et al., 2014. <i>Cops and cameras: Officer perceptions of the use of body-worn cameras in law enforcement.</i>	<ul style="list-style-type: none"> - Police officers evince willingness to adopt and implement bodycams. - Police officers do not believe camera use has a significant effect on willingness to respond to service calls. - Police departments have a positive perception of camera use when it comes to use of force as well as both external and internal complaint levels.
Ariel et al., 2015. <i>The effect of police body-worn cameras on use of force and citizens’ complaints against the police: A randomized controlled trial.</i>	<ul style="list-style-type: none"> - They reduce police-related use of force. - They reduce the incidence of citizens’ police-related complaints.
Ready y Young, 2015. <i>The impact of on-officer video cameras on police–citizen contacts: Findings from a controlled experiment in Mesa.</i>	<ul style="list-style-type: none"> - Police are more risk-averse and take more care in their actions. - Officers wearing police cameras issued significantly greater numbers of administrative sanctions. - Officers who wear police cameras initiate more approximate actions with citizens, without increasing use of invasive strategies. - It’s more likely police officers see the cameras’ utility when their use becomes mandatory and in encounters where officers must engage in coercive measures.
Sousa et al., 2015. <i>Body worn cameras on police: Results from a national survey of public attitudes.</i>	<ul style="list-style-type: none"> - Some 85% of civilians think police should wear bodycams. A similar number believes that with camera use officers would be more respectful, that it would reduce the use of force and improve gathering evidence at crime scenes. - Some 50% of the general public believes that because of bodycams police would act more respectfully and 75% percent believes that false civilian complaints would be reduced. - 40% of civilians think witnesses might not cooperate if they knew they were being taped. - 61% of civilians indicated that it would expand their trust in police officers. - Only 36% of the population thinks racial tensions with the police will go down.

Studio	Notable discoveries regarding bodycam use
<p>Ekins, 2016. <i>Policing in America: Understanding Public Attitudes Toward the Police. Results from a National Survey.</i></p>	<ul style="list-style-type: none"> - 89% of civilians support using body-cameras. - 75% of civilians believe cameras protect both police officers and their fellow citizens. - 52% of the general public believes officers should be able to see camera recordings before their final statements about a given violent confrontation.
<p>Koen, 2016. <i>On-set with body worn cameras in a police organization: Structures, practices, and technological frames.</i></p>	<ul style="list-style-type: none"> - There was an increase in police accountability, through activities like job-training, drafting and handing in reports, discretion and interactions with civilians. - Police officers accepted police camera use now that they saw they were not used as supervision devices, but rather, a tool to protect and support cops on the shift.
<p>Crow et al., 2017. <i>Community Perceptions of Police Body-Worn Cameras: The Impact of Views on Fairness, Fear, Performance, and Privacy.</i></p>	<ul style="list-style-type: none"> - Positive perception of bodycams depends on the surveyed person's context and background. The authors point out that non-white young adults recognize fewer benefits in bodycam use.
<p>Lum et al., 2019. <i>Research on body-worn cameras: What we know, what we need to know.</i></p>	<ul style="list-style-type: none"> - It has not been shown that bodycams have a significant, consistent statistical effect on officers' or citizens' behavior.
<p>Peterson y Lawrence, 2020. <i>Do the effects of police body-worn cameras on use of force and complaints change over time? Results from a panel analysis in the Milwaukee police department.</i></p>	<ul style="list-style-type: none"> - Citizen complaints go down in number. - At first, officers cut back on using force but gradually re-expand it.
<p>Pyo, 2020. <i>Understanding the Adoption and Implementation of Body-Worn Cameras among U.S. Local Police Departments.</i></p>	<ul style="list-style-type: none"> - Citizen complaints go down in number.
<p>White y Malm, 2020. <i>Cops, Cameras, and Crisis: The Potential and the Perils of Police Body-Worn Cameras.</i></p>	<ul style="list-style-type: none"> - Police use of force reduces between 5 to 12.5%.
<p>Wright II y Headley, 2020. <i>Can Technology Work for Policing? Citizen Perceptions of Police-Body Worn Cameras.</i></p>	<ul style="list-style-type: none"> - Body cameras are not in themselves tools that give rise to legitimacy; they should go hand-in-hand with social approach or trust-building actions. - The average citizen thinks bodycams can improve transparency, accountability and police-officer behaviors.

Studio	Notable discoveries regarding bodycam use
<p>Flight, 2021. <i>Taking off the blinders. A general framework to understand how to bodycam work en Police on Camera. Surveillance Privacy and Accountability.</i></p>	<ul style="list-style-type: none"> - Reduces police officers' use of force.
<p>Williams et al., 2021. <i>Body-Worn Cameras in Policing: Benefits and Costs.</i></p>	<ul style="list-style-type: none"> - The cost-benefit (5:1) of acquiring and using the bodycams is positive. - Police officers' changes in use of force represent the best part of the benefits.

Source: LAB-CO based on a revision of the literature.



Image: Juárez Municipal Police

2.4 THE REGIONAL EXPERIENCE: LATIN AMERICA

Bodycams' rapid adoption in Anglo-Saxon countries has also given rise to a growing trend toward accelerating their importation to Latin America. In the region, bodycam use has multiplied in light of a need to find new tools that allow taking on —practically and quickly— problems that a lack of large-scale democratic reform has led to, notably, arbitrariness, lack of transparency, corruption and a break with the population at large, evidenced in high distrust levels and even rejection of police departments.

Such is the case in **Colombia, which began to implement bodycams in 2018**, when it acquired 90 devices for the Medellín Police Department as a means of promoting transparency, strengthening chain-of-custody protocols and laying hands on evidential material regarding officers' behaviour in a variety of penal and disciplinary procedures.¹¹ **In 2020, Chile acquired more than 600 bodycams, while Argentina purchased a total of 720.** Along those lines, in 2021, **the Sao Paulo police depart**

¹¹ "90 cámaras entran al servicio de policía en la Estación de Policía Candelaria, Policía Nacional de Colombia", available (in Spanish) at <https://www.policia.gov.co/noticia/lanzamiento-plan-piloto-camaras-corporales-bodycam-medellin>. Consultation date 12 November 2021.

acquired 7000 bodycams and 22,000 more in Brazil for the Rio de Janeiro police, designed to reduce civilian deaths at the hands of police officers.¹² Another recent example is the Dominican Republic, where the president announced a bodycam acquisition for all police officers in the hopes of expanding police legitimacy and mitigating potential acts of corruption.¹³

Just like in the United States, Latin American police departments have taken to bodycams at a quick rate, without having any conclusive evidence of their effectiveness. What's more, they do so in a highly complex institutional and social context.

One of the few studies that have been realized in Latin America (and, generally speaking, in countries whose official language is not English) took place in Uruguay. Its authors measured the impact of bodycam use on the number of civilian complaints received in five of the nineteen transit police headquarters. Outcomes—published in mid-2018—reveal major differences in control groups (ex-ante and ex-post and between groups) **by observing an 86% drop in complaint numbers in the same officer groups before and after wearing bodycams, as well as a five-times additional difference between police that did not wear bodycams during the study and those that did (Mitchel, et al., 2018)**. While some methodological weaknesses have been reported,¹⁴ the study is considered a pioneer, both for its geographic placement—the first in Latin America—and its focus on traffic cops, not preventive or reactive police officers.

More recently, Stanford University researchers (Magaloni, et al., 2019) published the results of a study conducted in 2015-16 designed to measure the impact of bodycams on Rio de Janeiro police officers' behaviours, particularly explosions, detentions, registries and other forms of police behaviour. The study examined bodycam use effects in the case of agents that belonged to a tactical operations group in one of Brazil's biggest slums, Rocinha.

The study reveals administrative and operative limitations associated with police departments' resistance to turning on cameras as well as little existing video-recorded footage. The data also indicates that these devices' use **had a major effect in reducing the number of gunshots police officers made**, especially within members of the tactical unit known as GTTP, most often assigned to armed encounters. Per outcomes, **bodycam use among those officers reduced munitions use by more than 45%**. On the other hand, a result was **that bodycams inhibit police actions**; officers who wore bodycams had significantly fewer interactions with the public,¹⁵ unlike supervisors that found even greater pressure to improve officers' performance and productivity.

¹² Savarese, M. and Jeanet, D. "Brasil usa câmaras corporales para menor violencia policial," October 31, 2001, AP News. Consulted on 12 November 2021. Available (in Portuguese) at <https://apnews.com/article/c39d66398655af5e3cc903be6ddfb9e>.

¹³ Hilario, S. "Las ocho medidas con las que Abinader pretende reformar la Policía Nacional", Diario Libre, October 17, 2021. Consulted 12 November 2021. Available (in Spanish) at <https://www.diariolibre.com/actualidad/politica/las-ocho-medidas-con-las-que-abinader-pretende-reformar-la-policia-nacional-HB29394276>.

¹⁴ The authors, for example, had no access to the sorts of complaints that were lodged, thus there is no way to examine if there were changes or effects in the professionalization of behavior or a decrease related to frivolous complaints.

¹⁵ In line with the authors, the database comes from 2016 administrative registries of all events or "occurrences" police officers responded to or got involved with, including calls and requests for assistance; arrests and inspections, casual or chance encounters and all the facts agents get involved with, like public disturbances, direct aggressions and run-ins with delinquents.

3. FINDINGS. CAMERAS IN MEXICO: WHAT DID WE FIND?

The outcomes from the previously presented literature review permit us to affirm that there are few studies in Spanish about bodycams' use and incorporation in Latin American police departments and that these are practically nonexistent in Mexico. It implies the present document addresses a lack of information on the issue, with findings from field investigations presented below.



Image: Colima Municipal Police

3.1 SCOPE AND PREVIOUS WORKS

To estimate the realm of police officers who use bodycams in Mexico, we start with an initial investigation made up of two principal lines:

- (1) A media review from 2015 to 2021 to find records about law-enforcement institutions that have acquired bodycams, and;
- (2) Public information requests lodged with the Executive Secretariat at Mexico's National Public Safety System as well as with all municipal jurisdictions in Mexico that are home to more than 100,000 inhabitants.

The media review included an extensive digital media outlets and government reports search. It included all 32 of Mexico's federal jurisdictions, plus the 272 municipal jurisdictions, akin to counties, that have populations of one hundred thousand or more inhabitants.

Open-source searches used keywords like “[Municipal jurisdiction or state] police department” as well as “body worn cameras,” “body-cameras” and “bodycams.” The review is made up of a sample of municipal jurisdictions that are home to more than eighty-four million inhabitants, sixty-six per cent of the nation's entire population. This allowed us to find eighty-five law-enforcement institutions that had indeed acquired bodycams in Mexico.

3.1.1 THE TIJUANA KICKOFF AND THE INCLUSION OF BWC IN FORTASEG AND FASP

According to the media review, the first body cameras purchase in Mexico occurred in 2015.¹⁶ That year, the Tijuana Police Department bought 1,500 devices from the Baja California Business Trust (FIDEM, by its acronym in Spanish).¹⁷ It was not possible to turn up later media items or evidence recounting this project's advances or outcomes. In 2018, however, the same law-enforcement agency purchased 212 additional bodycams.

We can suppose the very first purchase was an isolated case since there is no additional available information up until 2017 when eleven municipal jurisdictions and federal states bought more body cams. From that year forward, Mexico's federal government provided funds for these devices' purchase using federal security funds, specifically a Federal Subsidy for Strengthening Performance in Matters of Public Safety (acronym in Spanish: FORTASEG) and the Public Security Contributive Fund (acronym in Spanish: FASP), a reality that likely incentivized more municipal jurisdictions and state governments to seek financing for their first purchases.

To acquire such funds, municipal and state governments had to propose security-related projects and actions, e.g., commissioning more squad cars, better work conditions for police officers, infrastructure-building, amongst others, that —once budgets were in place— the federal government would finance. As gathered data attests, municipal jurisdictions purchased body cameras thanks to programs favouring “tech, infrastructure and support equipment for law-enforcement operations,” and even “police development, professionalization and certification” that federal subsidies offered.

To date, no studies, evaluations, diagnostics or related documents have been found in the abovementioned federal agencies that might support arguments or make technical justifications for bodycam purchases or suggest these constitute an area of opportunity.

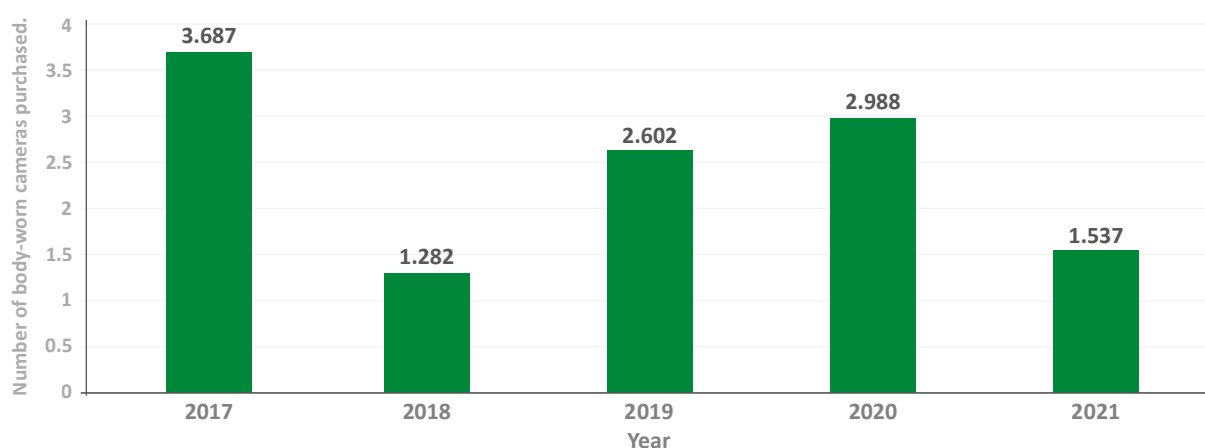
¹⁶ Broadcast news copy (in Spanish). “Funcionando las cámaras de solapa de policías de Tijuana,” *Uniradio Informa*, 28 July 2015. Consultation date: 7 June 2021. Available at <https://www.uniradioinforma.com/noticias/tijuana/353843/funcionando-las-cameras-de-solapa-de-policias-de-tijuana.html>

¹⁷ More information about this trust is available at <http://codeen.com.mx/fidem/>

3.1.2 How may BWC does Mexico have?

Research allows us to affirm that to date there are at least **168 law enforcement agencies that have purchased body cameras, specifically 158 municipal jurisdictions and ten state governments.** Though these police departments represent less than 10% of all security institutions in Mexico, **45% of the nation’s population lives in a municipal jurisdiction where the police department has purchased bodycams in the last five years.**

FIGURE 1. NUMBER OF BODY CAMERAS ACQUIRED THROUGH FEDERAL FUNDS FOR SECURITY PURPOSES BETWEEN 2017 AND 2021.



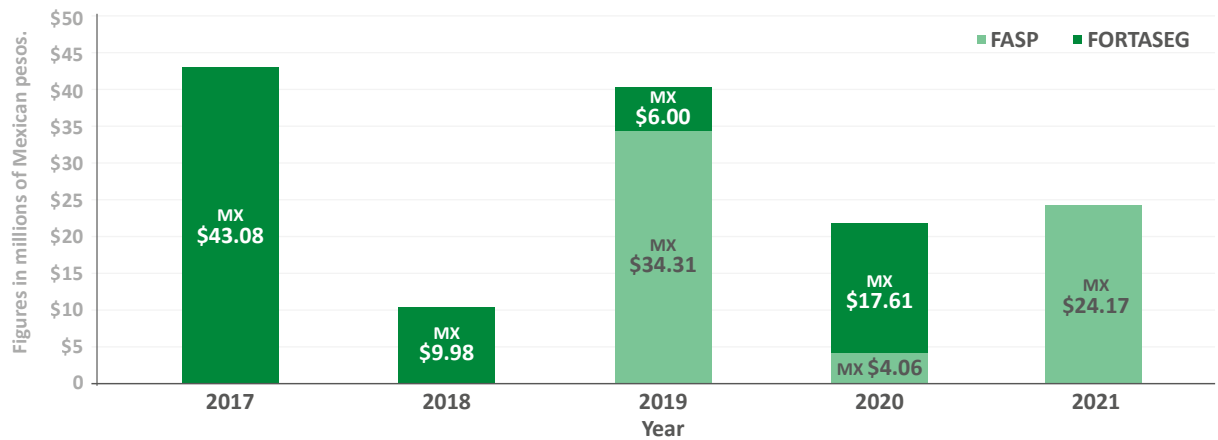
Source: LAB-CO, with data from the Executive Secretariat at Mexico’s National Public Security System.

3.1.3 Where is the financing coming from?

Between 2017-2020, the Federal Subsidy for Strengthening Performance in Matters of Public Safety (FASP) as well as the Public Security Contributive Fund (FORTASEG) financed bodycam purchases for state and municipal police departments. While FASP is a fund directed at Mexico’s federal states, FORTASEG’s benefits go directly to municipal jurisdictions. In line with data gathered through public information requests, between 2017-2021, **\$142,525,179.96 Mexican pesos were set aside by FORTASEG and FASP to purchase 12,096 cameras.**

In 2017-18, only FORTASEG provided federal funding for camera purchases; starting in 2019, FASP began offering resources as well. Given FORTASEG’s subsequent dissolution, by 2021 bodycam acquisition financing was only available from FASP (figure 2).

FIGURE 2. FEDERAL-FUND FINANCING FOR BODY CAMERA ACQUISITIONS, IN MILLIONS OF MEXICAN PESOS, 2017-2021

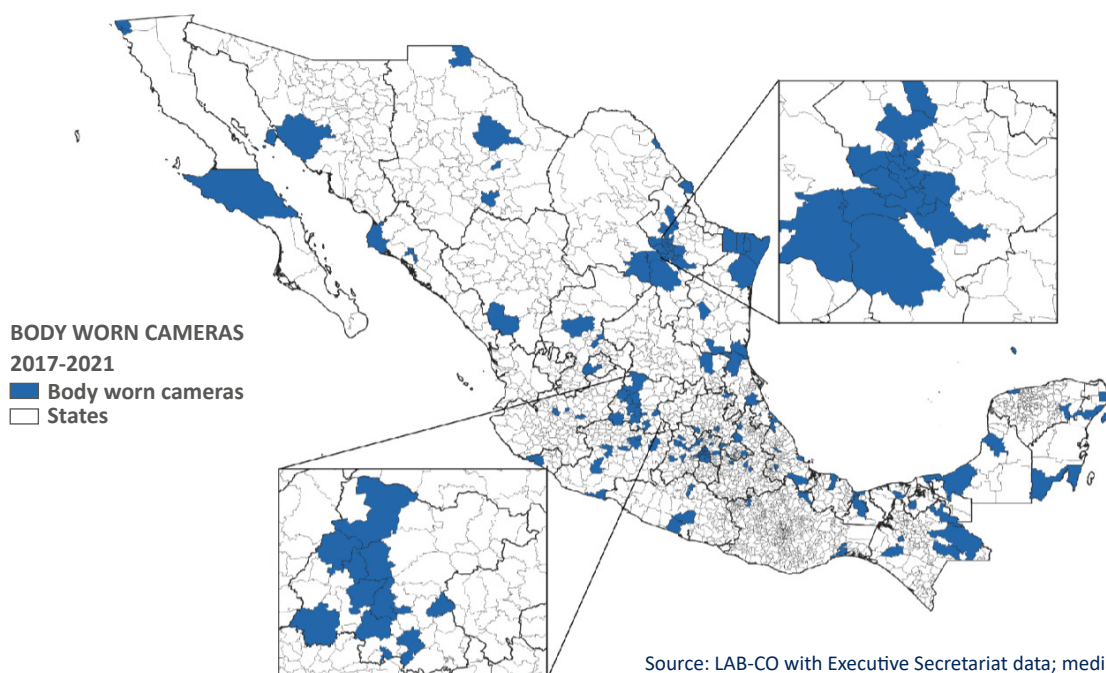


Source: LAB-CO, using data from Mexico’s National Public Safety Executive Secretariat.

3.1.4 WHO AND WHERE HAVE BWC BEEN BOUGHT?

From 2017 to 2020, 148 municipal jurisdictions obtained financing to purchase cameras (figure 3). A handful of states are home to a great deal of these police departments. For example, Nuevo León (18), Veracruz (17), Mexico State (16) and Guanajuato (15) make up for almost 40% of the municipal and state police departments that have purchased bodycams. All in all, in 30 of Mexico’s 32 federal entities (i.e., thirty-one states and one capital district), at least one municipal jurisdiction received financing to buy cameras. Nayarit and Morelos were the non-participative states.

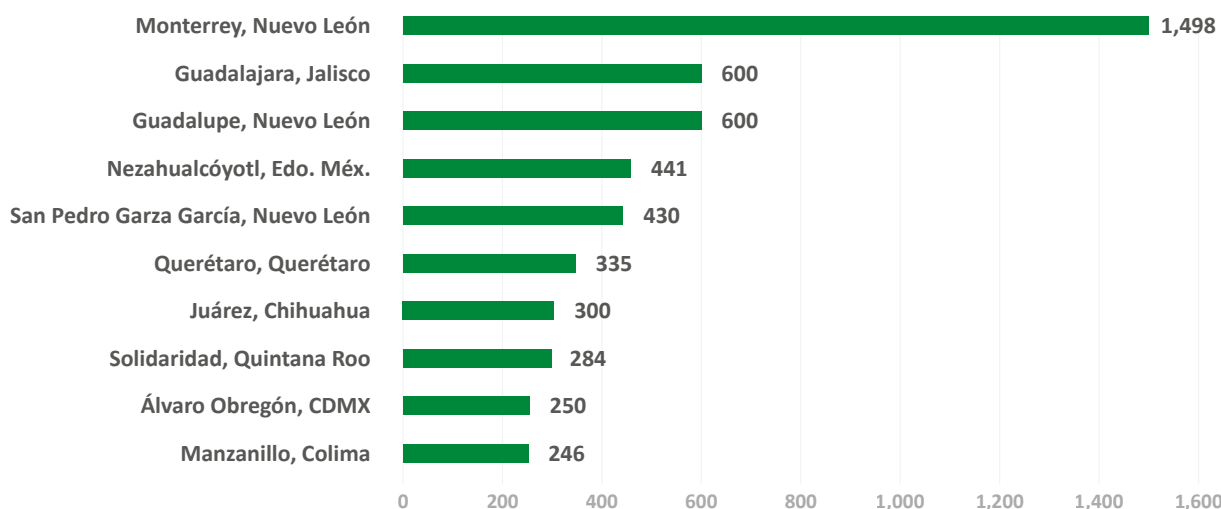
FIGURE 3. MUNICIPAL JURISDICTIONS THAT HAVE RECEIVED FASP AND FORTASEG RESOURCES TO BUY BODY CAMERAS FROM 2017 TO 2021.



Source: LAB-CO with Executive Secretariat data; media searches.

Figure four portrays the ten municipal police departments that have purchased the greatest number of bodycams in Mexico. Monterrey’s municipal jurisdiction has acquired some 1,500 cameras, followed by Guadalajara and Guadalupe, each now holding 600 devices. Greater Monterrey outdoes everywhere else in Mexico, with three police departments of the five that have bought the most bodycams.

FIGURE 4. MUNICIPAL JURISDICTIONS THAT BOUGHT THE MOST BODY CAMERAS BETWEEN 2017 AND 2021.



Source: LAB-CO, with data from the Executive Secretariat; media searches.

3.2 WHAT DO MEXICO’S POLICE DEPARTMENTS WANT THE BODY CAMERAS FOR?

Our open source research allowed us to analyze to what end bodycam purchases were used in 85 police departments that published their acquisition in official statements or the media. We decided to analyze published reasons (when available) and classify per-use types. Six different reasons emerged for buying the devices.

1. Fight corruption: mitigate or eliminate illegal acts driven by civilians or police officers.

2. Dissuade and address possible police abuses: protect the population’s human rights against any irregular or excessive behaviour on the part of police officers.

3. Document cases: have video footage from police officers’ actions that will constitute evidence to help prevent or prosecute other administrative, disciplinary, institutional or penal inquiries.

4. Generate material for institutional protection:

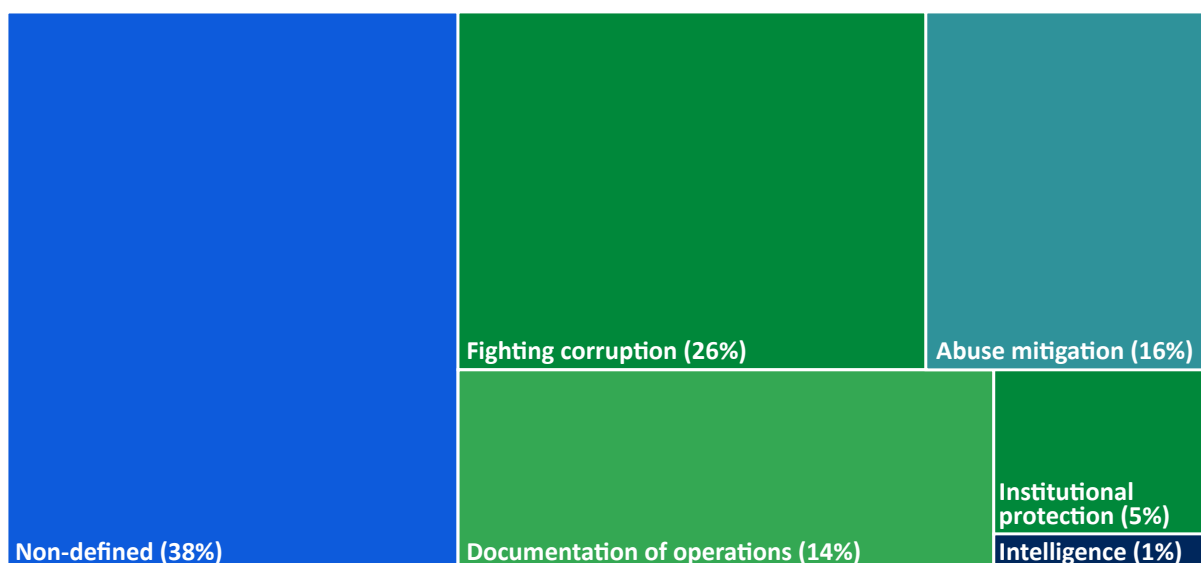
Protect police officers against false accusations, principally from citizens, using video recording technologies.

5. Expand intelligence: by generating information that is useful for decision-making.

6. Non defined: Camera buyers’ motivations are still not entirely clear. On numerous occasions, the cameras were given out with other equipment (squad cars, motorcycles, still photographic cameras, armaments, etc.). Neither authorities’ discourses nor press statements include ideas about finalities above and beyond the devices’ delivery.

Figure 5 portrays the percentage of police departments that stated one of the above as the main reason for the purchase of body-worn cameras. Among 85 police departments in the sample, corruption is the main reason for acquiring the devices, as 22 police departments indicated (26%). Doing away with abuses takes second place, with 14 police departments (16%). Third place went to protecting police institutions against false accusations, at four police departments that asserted as much (5%). Only one police department responded that it bought the cameras to gather intelligence. The rest of the surveyed police departments (32, equaling 38%) didn't say or weren't clear on purchase motivations.

FIGURE 5. PERCENTUAL DISTRIBUTION OF THE REASONS BEHIND POLICE BODY CAMERA PURCHASES IN MEXICO.



Source: LAB-CO with open source data.

Additionally, 71% (37 of 52) of the police departments from the sample mentioned more than one objective for the purchase of BWC.

While in the United States, Canada and Western Europe body cameras acquisitions looked to disincentivize abuse or the use of force or to avoid frivolous charges against police officers —as was revealed in our consideration of the literature— in Mexico, cameras get bought (beyond cases where buying motives are unclear) to face down corruption. These are important considerations when it comes to Mexico and Latin America.

3.3 CAMERA IMPLEMENTATION IN MEXICO: HOW ARE CAMERAS ADOPTED AND USED?

To understand the relevance of body camera use, the team conducted inductive research through case studies. To choose the cases, we made a theoretical sampling (Eisenhardt and Graebner, 2007) where we chose subjects who were appropriately informed to answer our research queries.

For this theoretical sampling, we considered several criteria:

- **The police departments’ geographic distribution.**
- **The institutions’ size.**
- **Generalized bodycam use (i.e., that all officers on duty use them).**
- **The study’s replicability (in this case, studying different municipal police departments with similar characteristics allowed comparing discoveries between them).**

Taking those criteria into consideration, at first, five institutions were selected for fieldwork. When several decided not to participate—despite the fact they had themselves actively publicized bodycam use—access to others was requested. Ultimately, a total of fourteen police departments would be study subjects. The final selection depended in large part on institutions’ openness and information availability. In the end, there were only three feasible cases: Mexico City’s Álvaro Obregón borough, Colima (capital city of the namesake state), and Ciudad Juárez in the state of Chihuahua. Refer to Table 2.

TABLE 2. CASE STUDIES

Characteristics / Police Departments	Álvaro Obregón, Ciudad de México	Colima, Colima	Ciudad Juárez, Chihuahua
Geographical location	Central Mexico	Western Mexico	Northern Mexico
Jurisdiction	Municipal	Municipal	Municipal
Size	Medium (500 police)	Small (100 police)	Medium (300 police)
Functions of officers who use bodycams	Public Safety	Public Safety and Transit	Transit
Percentage of officers that wear body cameras on the job	100%	100%	100%
Site visit	August 2021	August 2021	August 2021
Interviews and focus groups	12	11	6

In August 2021, the Team conducted site-visits to the three municipal jurisdictions. In each case, the interviewers arrived at police headquarters and observed the use of cameras as well as the components that support their functioning. The Team conducted semi-structured interviews and

focus groups with personnel from different areas and levels. The interviewees included police chiefs and directors who use bodycams, employees charged with camera administration, senior and intermediate department brass, plus rank-and-file officers.

TABLE 3. CASE-STUDY GENERAL INFORMATION

Dimensions	Álvaro Obregón (CDMX)	Colima (Colima)	Ciudad Juárez (Chihuahua)
Purpose	Mixed: corruption and abuse mitigation	Institutional protections	Fight against corruption
Police force size	520 oficiales	180 officers	210 officers
Work shifts	12 hours of service and 24 hours off	12 hours service and 24 hours off; 8-hour on-foot shifts	8 hours
Funding	Proprietary	FORTASEG	FORTAMUN
Purchased cameras	270	106	300
Brand and model	Hikvision	AXON, BODY 2	Unknown
Unit cost	\$37,700 MXN	\$19,500 MXN (cameras plus administrative software and cloud storage)	\$11,200 MX (cameras plus administration towers)
Implementation	Pilot	Pilot	
Use protocols	None	Nothing on the books when they were first used in the field. Protocols said to be in an approval phase	“Operations Policies for Body Worn Cameras” in the Organization and Procedures Manual from the Operations Office at the Traffic Safety General Authority

3.3.1 PURPOSE OF THE CASE STUDIES

The case studies demonstrated a great deal of variation, with obvious differences that allow the Team to compare police departments and harvest a handful of additional analytical findings. Notably, the three municipal police departments pursued different goals when they purchased and started using body cams. Colima and Ciudad Juárez had clear, predominant goals; specifically protecting police institutions in Colima and eradicating or at least mitigating corruption in Ciudad Juárez. The Álvaro

Obregón police department in Mexico City sought mixed ends, combining corruption as well as police abuses mitigation.

These case studies offered a much clearer vision than what was seen in open source media. Colima's whilom Municipal Security Commissioner made clear that:

“Cameras have been a tool. Our experience has been to protect police officers from civilians when it comes to arrests. ‘He asked me for a bribe,’ [they say.] Then we watch the video [and they say], ‘okay, we can kill it here.’ We owe all this [to the fact] that in civic justice and other questions, civilians forget there are cameras. The experience has been more beneficial to cops than to everyday citizens”. (Alejandro González Cussi, Colima's Public Safety Commissioner, in 2021.)

On the other hand, in Álvaro Obregón, bodycam implementation evinced a mixed purpose that combined fighting corruption and police abuses against civilians. According to one senior director:

[...] for upcoming tasks we wanted to take on, we had a tremendous surprise. They stoned [us], they threatened [us], trashed the patrol cars. Citizens said they were more corrupt than criminals. It was very disheartening because they couldn't manage to get closer to civilians. Police officers were very poorly regarded. And if that's the case in the provinces, it's going to be even worse in the capital. (Álvaro Obregón Borough Public Safety executive, 2021.)

3.3.2 IMPLEMENTATION PROCESSES

Implementation is a vital part of a project upon which its ultimate success or failure depends. Police departments considered in the case studies give signs of a cautious implementation that implied slowly discovering what cameras to buy, how to use them, what support equipment was needed, how to promote cultural change and how to face down resistance from the organization and the shift-cops that were obliged to use them. To start using body cameras, all police departments in the case studies undertook a small pilot exercise with devices that merchants who sold bodycams lent out. Thanks to these pilot tests, police departments saw they had some major issues to be addressed, including:

a) Using the cameras. This implied field-testing how the devices would operate on a normal workday. On one hand, there was an option that police could turn the cameras on when they needed to record a civilian action or interaction. On the other hand, you could establish an instruction to record the entire eight- or twelve-hour shift.

b) Camera manipulation. Police officers could turn on and use the device's many options. All three institutions decided it was better to have cameras that police officers could not manipulate.

c) Battery life. All police departments needed cameras that could film an entire shift —eight hours in some departments, 12 in others. Pilots revealed the batteries' real capacities and requested cameras with greater capacities.

d) Image quality. Meant cameras must be able to record on night shifts.

e) Video storage. Cameras that record an entire shift produce a great deal of footage every day that needs to be stored to free up memory that allows the next day's recordings. Pilot activities helped confirm this and make consequent

decisions to purchase hard drives, recording storage towers or contracted storage services in the cloud. Put another way, Police had to choose between having physical components on police department premises or overseeing everything online.

f) Necessary infrastructure. In Colima, for example, pilot testing brought to light that internet connection speeds were notably slow. The department decided to drastically increase the quality of the contracted internet service to better store and manage the camera recordings.



Image: Colima Municipal Police

RESISTANCE AND LEARNINGS

The implementation process faced some resistance from individual officers as well as from their organization in general. For example, in one of the case studies the person in charge of the cameras was obliged to generate a registry system between the assigned camera and the police officer, to avoid any “monkey business” at the time of the assignment:

Before, they'd done it the old way and we'd had problems, officers would come in and say 'It's, um... camera 83. Oh, ok, camera 70'. They'd change it, and sign their names. Then I came up with the system. They hand over their department credential, I scan it, you tell me your name and your control number. Now I'm going to give you a camera I scan it and that's going to give me the camera number. I make a note of your handover time. When the camera shows up, I scan the credential. The registry pops up. Now there are no screw-ups where they say, 'I didn't bring my camera'. (Systems Manager, Colima Public Safety Department, 2021).

Other institutions faced much more serious obstacles. Directors at one of the case studies discovered the entire system had been coopted by a clique of officers that included a very senior police official.

We started seeing that in the Monitoring Area, which controlled the bodycams, they were telling them at 'what time they were going to be turned off', the handed them off early [...] It was a real issue that they brought in a network from the area head to the guy in charge of the bodycams. Then we began to figure it out. I said, 'You're not going to see those, they're being repaired.' From then on we controlled the cameras, made observations, did the monitoring, outreach, started watching them and we figured it out. This whole group was contaminated (Senior executive, 2021).

Police institutions had to overcome this resistance to implementing police bodycams. This investigation only mentions a handful of identified challenges but supposes by no means an exhaustive list of barriers confronted in the bodycams' implementation phase.

To a greater or a lesser degree, the body cameras' implementation was achieved thanks to leadership insistence, setting up internal controls and sanctioning officers unwilling to use the cameras.

3.4 DESCRIPTION OF THE USE OF BWC WITHIN POLICE DEPARTMENTS

WHO USES THEM?

In Colima and Álvaro Obregón, all police use cameras, whereas in Ciudad Juárez only traffic cops wear them. The use instructions for the devices are simple: officers are typically instructed to put the camera on their bullet-proof vests, record during the entirety of their shifts and refrain from manipulating the devices. We observed two ways of assigning cameras:

- a) A hand-written record of the camera number and the name of the officer who will use it, and
- b) An ad hoc system was created in Colima that acts automatically and uses barcodes on the cameras and a special ID officers carry. As commented above, the second option was created after some officers gave bogus numbers to cameras to avoid being documented.

HOW LONG ARE THEY USED? HOW MUCH IS ACTUALLY RECORDED?

In all three cases, cameras recorded during the entirety of the shift or —to be more precise— what battery endurance allowed. The shifts hovered between eight hours (this is more common for traffic cops) and twelve hours (more common in the case of security officers). In Colima, faced with the express question of why police officers shouldn't be given discretion to solely record the interactions they have with civilians, supervisors, department higher-ups and fellow police officers, they were told that officers often did not remember they had to turn on cameras as events or actions came to the fore. For this reason, the final order was non-stop recording. There seems to be a continuum between the amount of knowledge on camera function and the discretion to be given to police officers, in order to get useful footage.

At first, they gave us turned-off cameras, it was a challenge. For example, if it's red, you're recording, green is that it's just turned on; if you hit the side button it pauses, to make sure you've got an event, to make it easier for systems to review. Then you started having these little problems. 'You had it on, but not recording'. That's why the order came down to just hand them out already turned on (Camera Supervisor, Colima Public Safety, 2021).

That said, one of the mentioned reasons to avoid discretion when it came to turning cameras on and off was related to curbing acts of corruption and abuse that occur when that faculty is granted. For example, at one police department, some of the leadership commented they were aware some of the police officers had for some time taken measure of the battery's duration and had been well-behaved during recording hours while taking advantage of the remaining hours to "misbehave."

While in every case there were comments that cameras turned off before shifts ended, the problem was more acute in one specific police department.

There, say interviewees, the cameras only lasted during a little more than half the shift, leaving out the possibility of recording events in the second half. It happens because batteries drain over time, recording capacity wears down with time's passing and the cameras' repeated and heavy use.

RECORDINGS AND STORAGE: PROPRIETARY VS. CONTRACTUAL

Storage protocols for video footage and other data body cameras gather vary greatly. We see the least storage capacity in Ciudad Juárez, where videos can only be stored for fifteen days, since the storage towers that are used max out after a half-month. Álvaro Obregon stores video footage for four months, in line with their hard drives capacities. Lastly, Colima stores videos for a full year, thanks to cloud storage included in the cameras' purchase price.

Determining video storage times depends on several factors and has not been standardized due

to a dearth of legislation, regulation and protocols on the matter. Storage times decisions respond to resource-related factors rather than to technical or institutional requirements, in addition to the fact that different areas rarely dialogue about including other areas' requirements, excepting, say academies or analysis units. One of the most determinant factors for establishing video storage times is the type of procurement method in which cameras are acquired. Put another way, it varies depending if they are bought as equipment or as part of a service. Differences between both modalities imply important issues, notably:

TABLE 4. BODY CAMERA MODALITIES.

Category	Service	Equipment Purchase
Video footage and data storage	In the cloud, where there is typically greater capacity as well as facility for longer storage periods	Directly associated with hard-drive space
Replacement cameras	A benefit that is often included as part of the service, alongside a predetermined replacement calendar	The institution must make new purchases
Maintenance	Included in service	Will be the institution's responsibility
Additional functionality and versatility	Remote access to videos, independent tracking, etc	Functionality is hampered by preexisting infrastructure characteristics
Price	Higher cost (e.g., in Colima the unit price for cameras went as high as \$19,500 MXN)	Lower cost. (e.g., In Ciudad Juárez the cameras unit price was \$11,200 MXN)

Source: LAB-CO based on conducted case studies.

Concerning who holds custody of the videos, once officers hand in their cameras, those in charge of their administration and maintenance download the recordings, and store them in the cloud (as is the case in Colima), or in the tech infrastructure of the corresponding police department (like at Álvaro Obregón or Ciudad Juárez). Cloud storage offers the advantage that supervisors need nothing more than a stable internet connection to download and watch the videos, as well as create custody chains by sharing the recordings with other authorities. That said, individual police departments may not be able to hold on to new technological infrastructure—for example servers—that could be used later.

HOW ARE THE RECORDINGS MONITORED OR REVIEWED?

The police institutions we visited produce an enormous number of recorded footage, that renders impossible thorough scrutiny of every recorded moment. Therefore, institutions conduct random camera revisions, to see if there has been any illicit act. The percentage of cameras whose recordings are reviewed this way

hovers around 7 to 10%. People in charge of performing the task state they focus on parts that portray encounters with civilians or when they see something “abnormal.” These reviews are performed manually and there are no protocols nor tech resources that could help out with a sub-sample of the recordings.

BOX 1. FROWNED-UPON PRACTICES FOR POLICE OFFICERS WHEN USING BODYCAMS

- **TURNING OFF THE CAMERA.**
- **PUTTING HANDS OVER THE CAMERA LENS.**
- **FRAMING IRRELEVANT OBJECTS IN FRONT OF THE CAMERA.**
- **“FORGETTING” THE CAMERA IN THE SQUAD CAR.**
- **EMITTING BLANK TICKETS OR CITATIONS (AS HAPPENED IN CIUDAD JUÁREZ).**
- **STOP TALKING WITH CIVILIANS (I.E., MAKING CORRUPT DEALS IN SILENCE OR USING GESTURES).**
- **WASTE CAMERA FUNCTIONS (E.G., A FLASHING LIGHT) TO RUN DOWN CAMERA BATTERIES MORE RAPIDLY.**
- **ASKING SOMEONE TO “KEEP AN EYE” ON YOUR CAMERA WHEN YOU VISIT THE RESTROOM OR ATTEND TO SOME OTHER PERSONAL MATTER.**
- **TURNING YOUR BODY TO AVOID THE CAMERA FOCUSING ON A CIVILIAN.**

Source: LAB-CO, with data gathered in case studies.

The case studies make clear that effective video reviews mostly happen when it’s time to take on specific cases or accusations. This is a major area of opportunity since, for example, a tech solution might be able to detect patterns of unacceptable behaviour and facilitate effective recordings review.

WHO ADMINISTERS AND MAINTAINS THE CAMERAS?

The cameras require specific administration, maintenance, monitoring and connection with the agencies in charge of looking into and judging irregular behaviour seen on the recordings.

Due to budgetary restrictions, we observed that many maintenances, administration, and even supervision functions, tended to be carried out by a single person or highly reduced teams. In cases where police departments acquired cameras only, with no connection to a service agreement, it falls to staff to find time and resources to repair and maintain the cameras while they remain responsible for their habitual

tasks. It’s a source of disadvantage when it comes time to finish an array of other tasks.

In many cases, police officers are more worried about losing or damaging the bodycams’ accessory equipment than using them correctly; they feel nervous about having to shell out their own money to repair or replace a device in case of partial or total damage. That said, the information that interviewed police departments provided revealed that there is no charge for damaged or lost cameras when they are damaged on the job, just for evident carelessness on the part of the officer. If a camera malfunctions or evinces serious flaws,

these devices are returned to their manufacturers for repairs or replacements in activation of the product’s guarantee.

We observed that in the bodycam adoption process there was no significant design consideration made for police officers as camera

subjects (active participants) rather, in most cases, they were seen as little more than camera receivers (passive elements). It translates to an absence of certain pedagogic or institutional considerations that respond to specific needs and support proper implementation.

Table 5 portrays a summary of what was presented in the above section.

TABLE 5. CAMERA AND RECORDING USE.

Dimensions	Álvaro Obregón (CDMX)	Colima (Colima)	Ciudad Juárez (Chihuahua)
Camera assignments	Hand-written registration diary	Automatic connection between the camera’s barcode and the police officer’s badge number or ID	Hand-written officer registries and the numbers of the cameras they will use
Established recording time	Complete 12-hour	Complete 8 or 12 hour	Complete 8 or 12 hour
Real recording time	6 to 8 hours	Up to 12 hours	Up to 12 hours
Video administration	On-site	SUM SERVICES software for administration in the cloud.	On-site
Storage	4 months	Up to one year (six months required by law)	15 days
Access to recordings	Restricted. Access is granted only to judicial and ministerial authorities	Restricted. Access is granted by Public Safety Commission	Restricted. Access is granted by appeal to an assessment judge or by the Thoroughfares Safety Coordinator
Monitoring	Random recordings inspections (7% of cameras per)	Random recordings inspections (10 per hundred cameras per shift)	Random recordings inspections (7 per hundred cameras per shift)

Source: LAB-CO, based on information gathered in case studies.

3.5 CAMERA USE AS A MECHANISM FOR DOCUMENTATION, SUPERVISION, CONTROL AND INSTITUTIONAL LEARNING

Bodycams can serve to document, supervise and control the work of police officers in the field. Their uses are described below.



Image: Colima Municipal Police

3.5.1 DOCUMENTATION

Documentation refers to the audio and video of a police action that is used as evidence in an investigation, in an internal affairs process, or

with parties outside the police department. There are various documentation scenarios, as evidenced in the case studies, notably (a) public

prosecutor’s offices, (b) administrative courts, (c) arraignment and civic judges and (d) instances of online scandals that threaten to go viral. Though in the case studies we didn’t see it, there are other potential uses for documentation, such as personnel training.

When presented to the prosecutors, recordings serve as evidence to strengthen investigations or processes. This was a recurrent argument about the cameras’ utility. As a supervisor who was interviewed in one of the case studies said:

That was a big help, because afterwards there was an arrest warrant; the DA said, ‘...that video was good. It was good because we managed to get the judge to hand down the warrant for a likely suspect. You see it all’ (Álvaro Obregón Public Safety Coordinator, 2021).

Cameras can also work, for example, to strengthen processes relating to contesting fines, in which police officers can use bodycam recordings as evidence.

Regarding criminal and civil arraignments, cases evidence big contrasts when it comes to camera use, everything from spaces that forbid police from using them to spaces that are used to a significant degree. For example, in the Álvaro Obregón municipal jurisdiction, the Office of Civic Justice belongs to the Mexico City Government, such that there was no way to connect Civic Justice and cameras or recordings to the hearings. In Colima, links do exist, but civic

judges do not have immediate access to the videos. Interviewees affirmed videos were only requested when civilians were “very insistent on seeing them.” In line with administrative data from Colima, in more than 35,000 hearings, recordings have been used a mere three times. In contrast, in Ciudad Juárez, they’ve managed to use bodycam recordings in almost 50% of civic justice hearings.

The recordings **can also be used to take on traditional or social media scandals**, as exemplified in a statement by one of the brass in our case study institutions:

There’ve been some very serious, very direct accusations, aimed at certain elements, and the civilian presented his version to the public, that everyone wanted to film on their telephones. And when it comes time to review the information it’s totally different. The first time we had to use cameras in that situation, there was a moment when a lady stood her ground, recording to the front and calling out, ‘All of you, don’t touch me. Do not touch me. Yours truly was a few meters in front of her and in bodycam recording you clearly see there’s not anyone else on the scene. The closest person was like ten meters away. You can see the different ways they calumniate the authorities (Commandant, Public Safety, Álvaro Obregón, 2021).

3.5.2 POLICE OVERSIGHT AND DISCIPLINARY SYSTEMS

Police Department oversight is normally carried out using two measures. One is the chain-of-command in the field, i.e., from supervisors over walky-talky, WhatsApp or in person. At the same time, there is a group, unit or directorate charged with revising, in the field, that police officers are effectively executing their assigned tasks. These last groups can be external or internal.¹⁸

Faced with an interview question about how the in-the-field oversight environment had changed with cameras' incorporation, most interviewees responded that nothing had changed. That said, other interviewees declared that behaviour had changed among police officers. The underlying supposition is that camera use in some way simplifies oversight tasks since now cops on the shift —as a matter of course— avoid inappropriate actions because they feel like someone is watching them. One officer's testimony supports this notion.

Additionally, from the minute we start wearing the camera —if we've got bad or shifty habits— I think from the moment we start wearing them there's a restriction, a fear, that they're watching me. I don't know if they review all the cameras every day. But from that first moment, I'm nervous, 'What if they check them?' Most of all, I'm not so anxious that a supervisor follows cops around as I am about the fact that just by wearing a camera we feel like someone is surveilling us (Commandant, Colima Public Safety, 2021).¹⁹

Other statements about changes in police work have to do with a **perception that recorded supervision seems more equitable**. When everything is recorded, senior officers' arbitrariness seems reduced. In a police officers' focus group, we made note of the following statements.

Police Officer 1: Now everything gets recorded and they're also measuring you. Even if you're high-ranking or one of the very biggest players, they're still going to measure you (Police Officer, Álvaro Obregón Public Safety, 2021).

Police Officer 2: There could be times when they arrest you without justification, but since we all have cameras now, they can evaluate you better as you go on to justify what you were doing. That yes, you were working (Police Officer, Álvaro Obregón Public Safety, 2021).

Several testimonials also point out that this improvement in monitoring occurs even when the monitoring unit is external. This is the case in the Internal Affairs Unit at the Álvaro Obregón (Mexico City) municipal police department.²⁰ Some police officers spoke of problems. They insist that sometimes certain internal affairs agents have been incentivized to unjustly accuse them, but they have seen a change in that sort of behaviour, in relation to camera use.

One day they said I fell asleep and [later] was playing with my cellphone like nothing was going on. A coworker told him to check the camera so Internal Affairs would see I was doing a card and say, 'Ok, this time I'm going to let you off the hook.' Since then, Internal Affairs abuses have been avoided.

[...]

We don't know if it's all about the cameras, but fewer have come up. We get fewer now. Before it was more like harassing us, they could dictate your shift, they were crazy to sanction us. I don't know if it was because of the cameras, but yes, these things have gone down notably (Police Officer, Álvaro Obregón municipal public safety authority, 2021)

¹⁸ These units, groups and directorates may also be called inspection, internal affairs, amongst others.

¹⁹ The testimony evidences a supposed improvement in control, thanks to the also supposed deterrence of misconduct that camera carrying could bring about, rather than a de facto change or improvement in command supervision.

²⁰ The Internal Affairs Unit reports to the Ministry of Public Safety and not the Álvaro Obregón municipal jurisdiction.

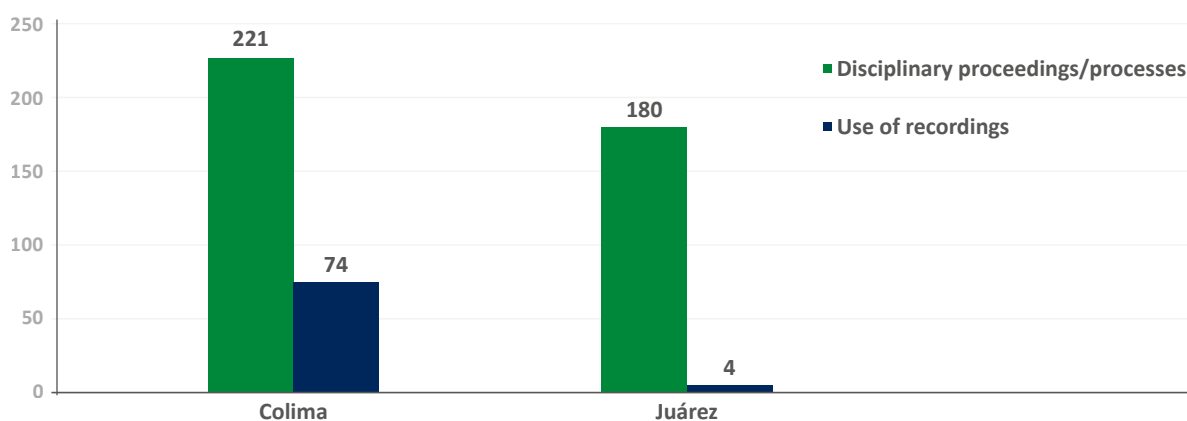
DISCIPLINARY SYSTEMS

The objective of disciplinary systems is to ensure that members of the police organization comply with their duties following the applicable norms. When a police officer fails to comply and this is reported in civilian complaints or is noticed by a supervisor, the disciplinary system must act, meaning it must open an internal disciplinary procedure and, if necessary, inform the Public Prosecutor that a crime may have been committed.

The case study findings were remarkably heterogeneous regarding the impact bodycam usage can have on their disciplinary systems since they vary greatly. On one hand, the Internal Affairs Unit (UAI in Spanish) of Ciudad Juárez, as well as that of the Álvaro Obregón, are external; the first one belongs to the municipality, and the second one to the Mexico City Citizen Security Secretary. Colima, on the other hand, does have an Internal Affairs Unit as a part of the institutional structure of the Municipal Public Safety Commission, which appears to be a relevant factor in the link that can exist between wearing cameras and the use of that material for investigative and sanction processes, respectively between the UAI and the Honor and Justice Board.

When we compared the outcomes using administrative data and those obtained in interviews, we concluded that the police department that enjoys the best connection between its camera systems and recordings, and its disciplinary system, is the Colima Municipal Jurisdiction. The number of open disciplinary cases in Ciudad Juárez and Colima is nearly the same. However, as Figure 6 shows, the proportion of recordings used as evidence is much higher in the second case.

FIGURE 6. BODYCAM RECORDINGS USED AS EVIDENCE IN DISCIPLINARY PROCESSES IN THE POLICE DEPARTMENTS OF COLIMA AND JUÁREZ.



Source: made by LAB-CO with data obtained using information requests.

One hypothesis is that the “distance” in the institution’s organic structure impedes coordination and linkage for using recordings as evidence in disciplinary procedures or at least makes more resources necessary for adequate linkage. Put another way, camera use is an interdependent activity with using recordings as evidence in disciplinary processes. Moreover, the areas responsible for these activities can be closer (e.g., internal to the police department), or further away (e.g., in other municipal or state institutions). The “further away” they are from one another, the more likely greater efforts will be needed to link them.

3.6 EVIDENCE SUPPORTING EFFECTIVENESS. DO BODYCAMs WORK IN MEXICO?

In the case studies, we could not observe conclusive evidence supporting cameras' effectiveness; this will require rigorous impact evaluations that measure whether or not the tools do or do not enjoy effects associated with

their end-uses. However, we were able to detect some potentialities with the devices, for mitigating certain chronic problems in Mexican police departments, as well as for influencing civilians and other authorities.



Image: Morelia Municipal Police

3.6.1 CONTROL OF POLICE BEHAVIOUR

Most of the interviewees in the three case studies agreed that cameras have been successful and work to control police officers' behaviour.²¹ From the testimonies we can pull away some signs that some police departments did change their behaviours by using the cameras. For example, a senior officer interviewee commented that since the camera batteries were not able to record entire shifts, police officers changed their behaviour depending on whether they were being recorded or not.

I take [the camera] calmly for 6 or 8 hours because, after that, the bodycam starts making a noise, and beeps a sound that means the battery is running out. That's when they say, 'after those hours, it's on to other things (Executive, Álvaro Obregón Citizen Security, 2021).

This reveals two important issues. First, cameras do work to a certain degree when it comes to controlling police officers' behaviours —assuming the battery allows recording and that there is effective oversight and sanctioning mechanism— and that it is important to prevent technical and complementary issues. This seems to be consistent with research conducted in the anglo saxon world: bodycams do have an impact on police behaviour.

CORRUPTION

The clearest indications that cameras can serve to mitigate corruption are found in Ciudad Juárez. Interviewees mentioned there was a wide-ranging corruption scheme in the General Coordination of Traffic Safety, which led to the September 2018 designation of a new coordinator responsible for bringing down that scheme. In light of his plans to implement a corruption-control system, at the end of November 2018, dozens of traffic cops staged a riot and took control of General Office headquarters.²² Body cameras were implemented as part of this effort, specifically starting in January of 2020. Three indicators suggest corruption could have been reduced thanks to

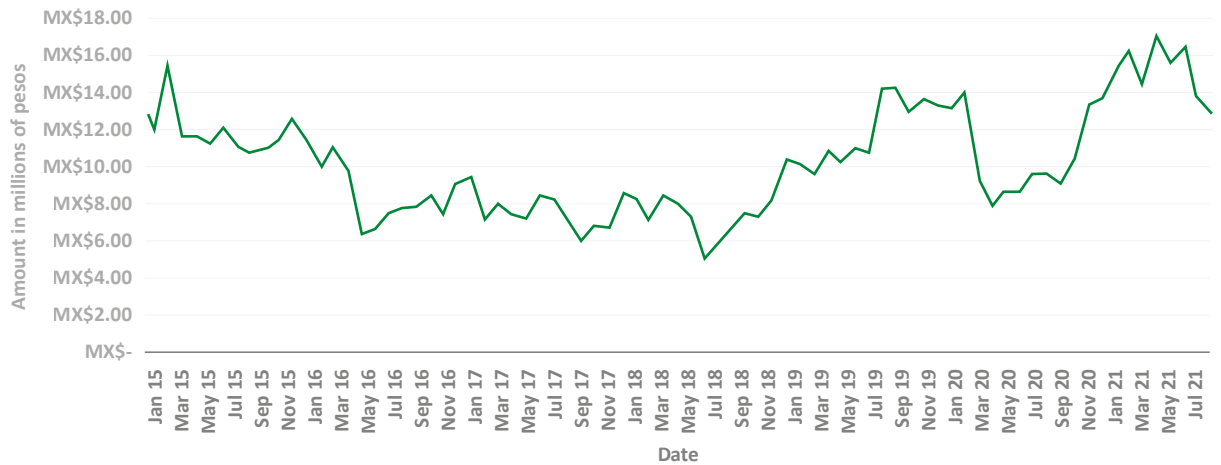
the plan put in place in Ciudad Juárez. (1) Increased revenues due to traffic citations; (2) there were fewer complaints lodged against traffic cops for acts of corruption in municipal internal controls headquarters; and (3) and considerable reductions in interviewees cited in the National Survey on Urban Public Safety (Encuesta Nacional de Seguridad Pública Urbana, or ENSU, by its acronym in Spanish), in the period from September 2020 to June 2021, from people who affirmed having an encounter with law enforcement officers that had requested money from them. Figure 7 portrays the evolution of the amount paid in fines in Ciudad Juárez.

²¹ That said, these are mere perceptions; no interview subject was able to provide concrete data regarding what happened previous to bodycam use in contrast to what came later.

²² Press item: "Riot Organized by Traffic Cops in Ciudad Juárez Has to Do with Almaraz's 'Iron Fist' Against Corruption," *Diario 19*, 27 November 2018. Consulted on 17 February 2022. Available (in Spanish) at

<https://diario19.com/2018/11/27/motin-organizado-por-agentes-de-transito-en-cd-juarez-obedece-a-la-mano-dura-de-almaraz-contra-la-corrupcion/>

FIGURE 7. AMOUNT PAID IN TRAFFIC IN FINES IN CIUDAD JUÁREZ FROM JANUARY 2015 TO JULY 2021



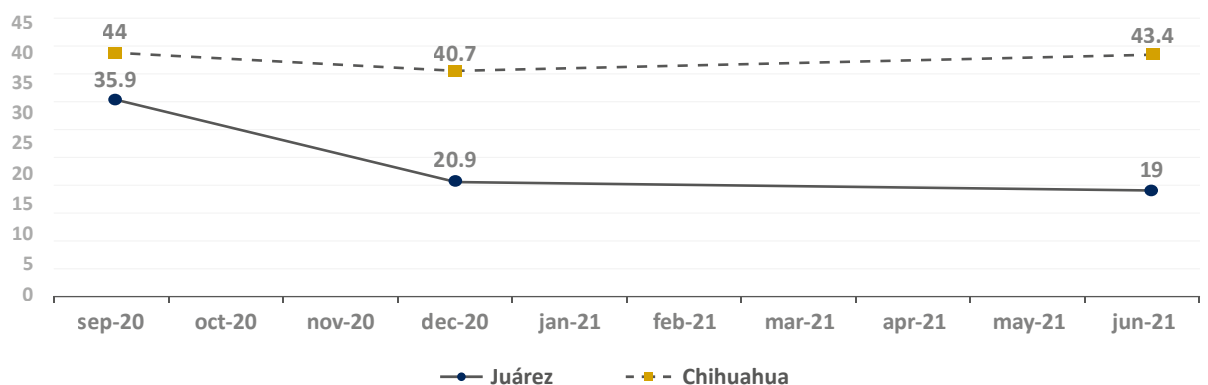
Source: made by LAB-CO with data provided by the General Coordination of Traffic Safety.

The graph portrays that the Juárez Municipal Jurisdiction reached a peak in revenues from traffic tickets in March 2021. This is another indication of the cameras’ possible effectiveness since they were implemented shortly before the pandemic (January 2020). Moreover, there was a 50% discount on fines, if paid from mid-April to December 2020. Put another way, even by reducing the unit cost of the fines, their numbers increased so much that a greater revenue was achieved.

For its part, Mexico’s Urban Public Safety National Survey also shows signs that bodycams in Juárez were able to help mitigate corruption. When we compare data on civilians’

contact with public safety authorities who experienced some act of corruption from September to December 2020, and in June 2021, the Juárez numbers contrast with those of Chihuahua (the municipal jurisdiction in the same state and with the closest characteristics). In Juárez the numbers fall while in Chihuahua they do not. A defining factor between the two cases is that in Juárez an integral strategy to reduce corruption was put in place, whereas in Chihuahua this did not happen.²³ This is a promising indication of bodycams’ potential impact on mitigating corruption, though undoubtedly it will require rigorous impact evaluations to be able to be confirmed as much.

FIGURE 8. PERCENTAGE OF CITIZENS WHO HAD CONTACT WITH PUBLIC SAFETY AUTHORITIES AND EXPERIENCED SOME ACT OF CORRUPTION.



Source: made by LAB-CO with data from Mexico’s Urban Public Safety National Survey.

²³ Transit regulation in the Chihuahua municipal jurisdiction falls to State Police.

3.6.2 POLICE LEGITIMACY (IN THE FACE OF SCANDALS)

The perception of police departments and management teams is that bodycams do a good job of maintaining police legitimacy when it comes to media and social network scandals. An interviewed senior officer concludes that cameras have served more to protect police than civilians. A policewoman expressed it this way when asked if cameras had helped her:

“A lot. In fact, I don’t know if you heard about some colleagues who arrested a couple of people here, a couple with a son. Then civilians that were caught in the middle began to record, almost at the end of what happened and from here they took the other video as well. So then people also notice the other version. And without the video, they [would have] lowered all of us to literal pigs. Why? Because there was a minor involved. Then when they saw, they could see the father was putting the kid’s life at risk.” (Police Officer, Colima Civilian Security, 2021).

Mexico lacks impact evaluations on the cameras’ relationship to final goals. In neither of the three case studies is there sufficient information to observe a clear correlation between bodycam use and increased trust, or in the perception of INEGI’s performance surveys.



Image: Juárez Municipal Police

3.6.3 CHANGES IN CIVILIAN CONDUCT

The case study interviewees seemed to accept cameras and be satisfied with their use. One reason for this was perceived changes among civilians when it came to interactions where police officers carried bodycams.

“Now civilians were beginning to identify the cameras, there has been a lot of talk [about them] and people were treating us in other ways. That we didn’t tend to lie anymore, that we behaved properly, and there weren’t rumours of corruption anymore. It was easy to say the officer wanted to extort me, but now, in front of the camera it is different. There are still civilians that are unaware and end up evidenced.” (A police officer before the Commission of Honor and Justice, Colima Citizen Safety, 2021).

Police perceive that BWC also contributes to some people properly receiving their fines or sanctions, without the possibility of avoiding it by means of having powerful connections.

“Only one time have I had to remit someone who was drinking 3 blocks from his house. When he saw the camera, he said “oh crap” but we had to take him in. And when we got to the Civic Judge’s headquarters, it turned out the judge did know the boy’s father and all he said was, “they have to do their job, I’ll do your ballot and then you can leave” And that guy [the detainee], with the camera, then changed his behaviour. [What would have happened without the camera?] There the guy would have whipped out his influences. “You see, my dad knows Judge...” (Police officer, Álvaro Obregón Citizen Security, 2021).

These discoveries coincide with the findings of the literature review on bodycams. Camera usage seems to be a mechanism with the potential to positively modify both citizens’ and police officers’ conduct, in terms of compliance with social and legally established rules. However, both the literature review and our case studies suggest that the success of this strategy resides in implementing cameras as yet another tool that complements and goes alongside an integral strategy to solve specific problems to be tackled.

BOX 2. EVIDENCE OF EFFECTIVENESS

- POTENTIAL REDUCTION IN ACTS OF CORRUPTION.
- IMPROVEMENT IN THE PERCEPTION OF PROCEDURAL JUSTICE IN SUPERVISION PROCESSES.
- USE IN DISCIPLINARY SCHEMES.
- INSTITUTIONAL PROTECTION MECHANISMS.
- CONTROL OF POLICE BEHAVIOR

3.7 MAIN CHALLENGES IDENTIFIED

Multiple challenges were identified and grouped into four categories: (a) Budgetary (b) Organizational (c) Technological and (d) Regulatory. These challenges are not an exhaustive list, but it is suggested that they be taken into consideration when planning the use of body-worn cameras.

3.7.1 BUDGETARY

The resources and logistics that surround the adoption of bodycams are considerable and, in many cases, hard to foresee. There are direct costs associated with acquiring the device, and there are later expenses related to hardware or software, battery replacement, or maintenance, amongst others (White, 2014). Foreseeing these resources is difficult, and some challenges include:

Foreseeing resources for purchasing body cameras for the entire group or shift that uses them: despite the fact it can be a major expense, institutions that planned that all police officers use cameras in their shifts appear to have been the most successful in their implementation processes.

Forecasting resources to buy enough storage capacity, per organizational objectives and normative obligations: the lack of storage capacity can impede compliance of other objectives and legally imposed obligations.

Lack of resource provision to maintain, replace and renovate the cameras: these are expenses after the implementation, difficult to foresee, but that are fundamental to continued bodycam use.

3.7.2 ORGANIZATIONAL

At the organizational level, some of the identified challenges are:

Absence of clear objectives and evaluation mechanisms for camera use: since there are no objectives or explicit and quantifiable goals (e.g., reduced complaints, reduced abuse complaints, etc.) associated with body cameras, it becomes very difficult to evaluate their effectiveness and basic planning aspects like training-designs, internal and external information campaigns, etc.

Absence of communication and collaboration mechanisms between administrative and operative areas: a lack of communication

between administrative and operative areas makes the implementation of body cameras difficult. In our case studies, we observed this lack of communication led to not being on the same track when buying cameras with police officers' operational needs.

Lack of training: we never observed training processes that might be able to prepare police officers, supervisors, and all other bodycam users in institutions on their use, administration/distribution, relation to civilians, and legal base, among other issues.

Lack of clear definitions regarding the adequate use of bodycams: many police departments do

not establish clear and detailed procedures regarding the correct use of bodycams during interactions with civilians, which can allow too much discretion or confuse police officers.

Lack of formal policies and procedures: policies and procedures within police organizations allow the reduction of police discretion/arbitrariness, the orientation of police officer’s actions, and the endowment of institutional policies that benefit both police personnel and civilians.

Lack of internal and external socialization regarding camera implementation: impedes

the understanding, acceptance, and adoption of bodycams for police and civilians.

Organizational and individual resistance: both from certain groups inside organizations, as well as from police officers on an individual level. This could be observed in several case studies.

The link between body cams and surveillance mechanisms: where body cams are incorporated as tools for the existing mechanisms or, otherwise, new surveillance mechanisms are created, which use these devices.



Image: Colima Municipal Police

3.7.3 TECHNOLOGICAL

Several challenges were identified when it came to technology.

Absence of the necessary technological infrastructure surrounding cameras: it was observed that police departments did not build, or took a long time to build, the needed infrastructure to use and manage the cameras. Some of these basic elements include adequate internet connection, computers or equipment to download videos, battery chargers, equipment for assigning body cams to specific police officers, and servers.

Purchase of cameras with minimum functionalities in accordance with the objectives and purposes of the use of body cameras: the functionalities of the purchased cameras must be in line with the organizational objectives that are expected to be achieved by using them. If the image quality is bad, the possibility of recording at night is inexistent, and the lack of a recording with decent sound quality and the battery capacity to record the whole shift fails, the projects will have a high probability of failure.

Lack of sufficient storage for video recordings: it was identified in the case studies that the storage of recordings and data was a limitation to the potential usage time and consultation of the recordings.

Lack of sufficient battery power for recording entire shifts: This challenge was identified in all cases. Since police institutions maintain relatively long hours —usually 12 hours—, batteries ought to be able to last that whole time, or protocols for camera usage must be changed to administer their use throughout the whole shift.

Lack of tools for the systematic review of recordings: recording hundreds of hours of video footage makes it impossible to systematically revise videos on the lookout for bad behaviour. Technological solutions could help police officers automatically monitor recordings featuring interactions between civilians and police officers. This could improve the cameras' effectiveness in supervising police personnel.

Interconnections of cameras with areas inside police stations and with parts of town that will consume those recordings: police stations do not consider the effort needed to technologically link the cameras' use and the footage with areas such as internal affairs, judicial departments, civic justice, among other areas of the police and the municipality. Interconnecting those systems could reduce the transaction costs between the areas and increase the chances of success of implementing the project.

3.7.4 REGULATION

Mexico lacks a normative framework that regulates issues of privacy and access to information for the use of body cams by the State, which means police institutions enjoy wide discretion/power to make their regulations about when they can publish a video and when not. For example, a police chief commented to us:

Intimacy and minors are respected, faces are blurred. We believe in the idea of alleged innocence... It's a topic with a very thin line. When we go out to the media or social networks, it's because someone already published the video. If the [person in question] allowed for the video to be published, why can't we? (Executive officer, Colima Citizen Safety, 2021).

Therefore, on a normative level, police departments that implement body cams face many challenges, listed and explained below:

Absence of a normative framework that protects civilian privacy: bodycam use affects the privacy of police officers as well as that of civilians (including victims and offenders). The possible increase in transparency brings with it a decrease in privacy (White & Malm, 2020)²⁴. Other disjunctives prevail in the academic and operational spheres, like determining when the agent ought to turn the camera on or off (Lippert & Newell, 2016), the fact that keeping the camera on in certain spaces (like hospitals, private homes, dressing rooms, among others) may give rise to grave privacy violations.

Absence of a normative framework that protects the privacy of female and male police officers: in the case studies we observed how privacy for male and female police officers is affected by camera use. Cameras frequently record officers' personal life actions, like talking to their loved ones, eating or going to the bathroom. Other actions recorded, such as chit-chat with fellow officers, are restricted for fear that their superiors can hear their comments.

Absence of a normative framework that ensures the right to information: in the case studies, it was observed that access to the video recordings was strongly restricted. Usually, only the institution's boss and two or three other employees had access to the videos. In that sense, there is no regulation that would limit when a civilian or an external actor could or could not access the video recordings or even request their elimination.

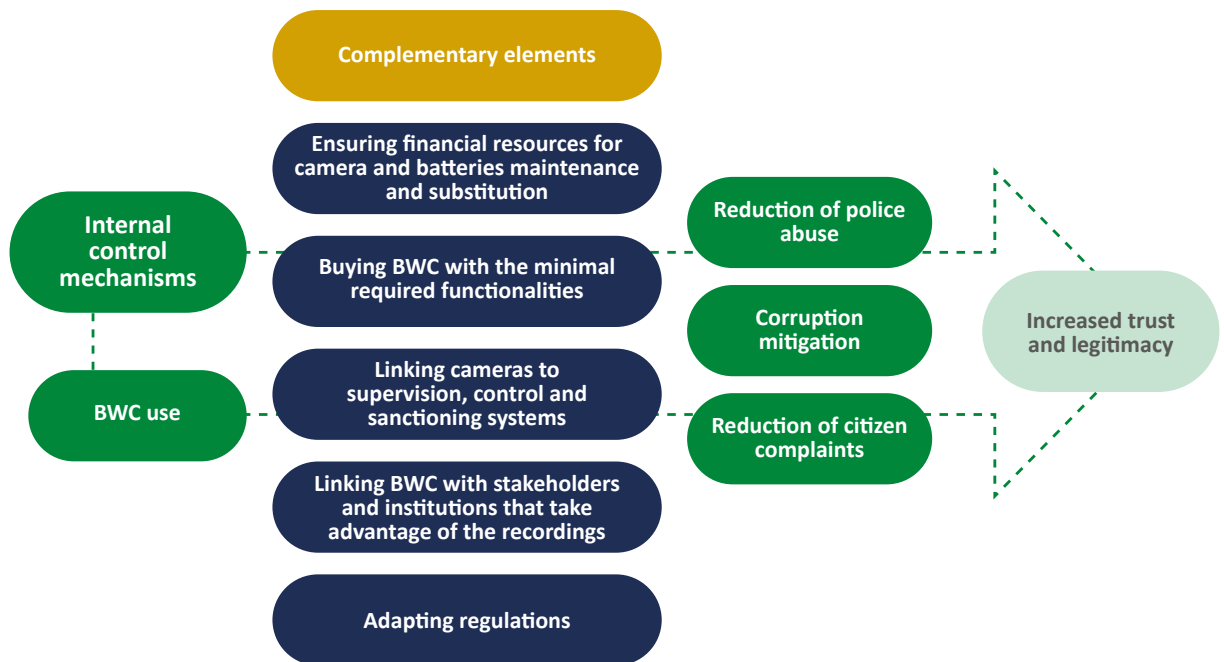
²⁴ In the cases, we observed how access to recordings was very restricted, for which reason the object of making police work more transparent does not necessarily translate into reality, once the cameras are implemented.

4. CONCLUSIONS AND RECOMMENDATIONS

Based on the available international evidence and the case studies analyzed in the present document, it would seem that body cameras have an important potential to contribute to mitigating corruption, reducing civilian complaints, protecting police institutions when it comes to scandals, and, in general, improving the legitimacy of the police through better control of their actions.

Nevertheless, for that to be a reality, the adoption of bodycams must happen as part of a widespread institutional initiative, composed of several policies, strategies or improvements and strengthening actions, all of these complementing each other, and being simultaneously anchored by transformative processes that are appropriated by every member of the police institution. In the coming pages, some of the main recommendations are established, which decision-makers should take into account during and before the adoption of bodycams.

FIGURE 9. INDISPENSABLE COMPLEMENTARY ELEMENTS FOR THE EFFECTIVENESS OF BODY CAMERAS.



Source: made by LAB-CO.

4.1 BUDGETARY ASPECT

Aside from the initial budget for the purchase of the body cameras, prior to the acquisition of equipment, a budgetary plan must be designed, which contemplates the different elements associated with their use, across time.

Some costs must be considered and that will be determined, amongst others, by:

- **Rate of camera replacement.**
- **Rate of battery replacement.**
- **Costs of technology for linking the cameras to other institutions and other services.**
- **Technological adjustment within the police institution.**

In sum, we provide a table with recommendations regarding budget and a checklist for decision-makers.

FIGURE 10. RECOMMENDATIONS AND CHECKLIST FOR BUDGET MATTERS.

Recommendations and verification list	Check off items you are considering the following in your body cam implementation project.
BUDGET	
Do we have the resources to buy cameras for every officer on duty?	
Do we have the resources to buy or hire a storage method for the video recordings?	
Do we have the resources to hire maintenance for the cameras and the storage equipment?	
Do we have assigned resources for replacing cameras which no longer work?	
Do we have assigned resources for replacing batteries?	
Do we have the resources to connect the different systems of the areas which will use the video recordings within the police and the municipality?	

4.2 ORGANIZATIONAL ASPECT

The organizational design of a police department’s strategy —the decisions on work selection and division and the integration of efforts by different actors within the police to achieve institutional objectives— may have elements that help the achievement of the police’s objectives or that make them more difficult. This is not an exception for BWC implementation. Some recommendations drawn from the literature review and case studies are as follows:

1. Defining objectives: what is expected of body cameras? what are they going to be used for? what can they not achieve?

Decision-makers must clearly define the objectives of implementing body cameras to trace a critical path that incorporates action for planning, diagnostics, execution, evaluation, and feedback, consistent with those objectives. This will also serve to raise awareness of institutional and operational necessities to be addressed, as well as the availability of some basic work resources, for example, possible information sources that allow us to evaluate if cameras are fulfilling the purpose for which they were purchased.

Similarly, there must be some clarity regarding the factors behind the problems to be tackled. In this way, one can put into perspective the reach and limitations of the cameras, as well as the measures or complementary policies that will be required for the integral implementation of body cameras.

In the case studies, as well as the literature review, the following objectives are highlighted:

- a) Decrease in civilian complaints.
- b) Decrease in corruption acts.
- c) Mitigation of police abuses or irregularities.
- d) Documentation of acts to present evidence in disciplinary and administrative processes, and criminal proceedings.

The chosen objectives must guide decisions regarding the use of the body cameras' recordings. Hence, it is fundamental that the designation of the camera users (will only a group within the police use them —tactical group, traffic— or the whole police?) is designed in accordance with the objectives to be reached.

2. Planning the adoption of body cameras

Based on the literature review and the case studies, it is recommended that police institutions implement them in phases. Broadly speaking, these phases must consider:

- a) A diagnostic of institutional necessities.
- b) Implementation route.
- c) Inter-area work process.

- d) The project's internal communication.
- e) Having a pilot project.
- f) Feedback.
- g) Training.
- h) Implementation.
- i) Social pedagogy.
- j) Evaluation.

3. Organizing the talent: training, job profiles, and usage evaluation

Police institutions must organize their personnel in relation to the use of cameras and recordings. It is recommended to:

- a) Design and carry out training for police and administrative personnel about the use of body cameras and the handling of recordings through the Police Academy.

- b) Define job posts and assign persons that fulfil the basic competencies for handling the inventory of the cameras, administration and use of the video recordings, and supervision through the revision of the videos.

- c) Define mechanisms for the evaluation of the personnel using the cameras and the video recordings.

4. Communicating the project internally and externally

The organization must also define an internal and external communication plan regarding the cameras and their effects. External communication can help inform civilians about the use of cameras and can be used to notify them that certain behaviours will now be observed and can be sanctioned. It could also help project an image of greater proximity and trust.

On the other hand, internal communication would serve to inform police officers about when and how the body cameras will be used, and what the rules between them and the organization will be regarding the use of the cameras, their objectives, and their reach. One can also inform about sanctions in the case of misdemeanours after the implementation of body cameras, and when possible, give police officers a say and listen to and tend to their concerns. This could help deactivate future conflicts sparked by uncertainty when used to the advantage of groups dedicated to sabotaging the implementation of the cameras.

5. Strengthening and linking the mechanisms of internal control

The cameras should be thought of as a tool immersed in the supervision and control systems, and not as a substitute for these. Various elements within this aspect can be recommended.

1. Design a supervision model: the implementation of cameras must be paired with a design or redesign of the supervision model. This requires answering questions such as: who supervises? What do they supervise and how do they do so? to improve systems of control, sanctions, and learning.

2. Link camera usage to control from the chain of command: body cameras can help the supervision the chain of command undertakes. However, operational changes must be made to adapt the use of cameras to that objective, in a way that senior leaders can supervise more strategically, supported by the camera. For example, they check the recordings of police officers suspected of bad practices more often, and they leave the revision of special cases to police officers with a history of good conduct, but with a report of an atypical situation.

3. Link the output of the cameras with the work of the Internal Affairs Unit and the Commission of Honor and Justice: the recordings might serve to improve investigations in the first case and as evidence for the second. When the units are external to the institution, additional efforts must be made to link the recordings with those actors, under formats that protect personal data and any given process.

4. Link the use of cameras with Civic Justice: to strengthen the system, and at the same improve the effectiveness of the body cameras, civic judges must have at hand, and as quickly as possible, the recordings of the body cameras. This will allow the revision of citizen complaints in audiences and dispose of them, or allow access to the units of internal affairs if needed.

Figure 11 portrays a summary of the given recommendations regarding the organizational aspect.

FIGURA 11. RECOMMENDATIONS AND CHECKLIST OF THE ORGANIZATIONAL ASPECT.

Recommendations and checklist	Check items off if the following aspects are considered in your project for the implementation of body cameras.
ORGANIZATION	
Is the problem to be tackled clear, which we seek to solve with the implementation of body cameras?	
Have we defined the objectives and goals we seek to achieve with the implementation of the cameras?	
Do we have an implementation plan for body cameras?	
Do we have mechanisms to evaluate the effectiveness of the project of implementation?	
Does the police have a normative framework for the use of the recordings?	
Do we have a manual or protocol for the correct use of body cameras?	
Have we established a mechanism for the systematic revision of the video recordings?	
Do we have an established process to check the video recordings when there is a citizen complaint?	
Do we have a mechanism to assign body cameras to the police officer that carries them?	
Have we carried out a pilot project to test various models of body cameras?	
Have we made adjustments and purchased body cameras that align with the results of the project?	
Have we assigned personnel to administer the distribution of body cameras?	
Have we assigned personnel to administer the body cameras and the video recordings?	
Have we assigned personnel to systematically check the recordings, as well as to check specific cases?	
Have we trained commanders on supervision methods complementary to the usage of body cameras?	
Have we communicated the project of implementation of cameras to all police officers?	
Have we provided training to our police officers on the use of body cameras?	
Have we provided training to our police officers on the interaction they must have with civilians when using the body cameras?	
Have we established a procedure to link the use of video recordings to organizational learning?	
Have we communicated the project of implementation of body cameras to citizens?	
Have we linked the usage of cameras and video recordings to the system of civic justice?	
Have we linked the usage of cameras and video recordings to the unit of internal affairs and the commission of Honor and Justice?	

4.3 REGULATORY ASPECT

One of the challenges identified based on the literature review and the case studies, is the lack of normative adaptations and of institutional policies in the police institutions that implement body cameras. In that sense, there are four recommendations described next:

1. Create or adapt the norms related to the body cameras.

These cameras are an innovation and are not regulated in detail in Mexico. Therefore, it is necessary to create or adapt the norms to contribute to the judicial security of the users through legislation that defines the suppositions and conditions under which the recordings can be made to protect the privacy of certain spaces and groups (for example, minors). The success of the body cameras (independent of the objective for which they were implemented), will depend in great measure on the obedience police officers have towards the policies and procedures (Flight, 2021).

2. Define protocols and procedures for the usage of the cameras.

To reduce the different effects the cameras can cause, mainly on privacy, it is fundamental that the organization designs, publishes, and supervises the policies and procedures that give way to the use of cameras in determined moments and in various circumstances²⁵.

3. Define a protocol of divulgation in the face of scandals.

The police organization must think about and define the steps to follow in the face of social media scandals. The recordings of the body cameras can be used to respond to these scandals with the objective of maintaining the trust and legitimacy of the police organization. A protocol for these cases could make this process more efficient, and it could provide security of response to the police organization and civil society.

4. Define criteria to share videos and information about the video recordings.

The police institutions must take care of the police legitimacy and the legitimacy of the projects for the implementation of cameras. The increase in police transparency that the use of body cameras allows, evolves until civil society can access the video recordings under certain conditions. This increase in police transparency also allows for the surveillance of the behaviour of the institution. It is therefore important to think through the criteria that will regulate civil society's access to the recordings, from the beginning of the implementation of the cameras.

Figure 12 shows a list of recommendations for this axis.

²⁵ Policies and procedures for the use of body-worn cameras should serve as basic inputs to guide the actions of police officers in different areas, such as: determining when to turn the equipment on or off, what procedure to follow in case of loss or damage, spaces or times when it cannot be recorded, and also policies and procedures for future review of the images.

FIGURE 12. RECOMMENDATIONS AND CHECKLIST FOR THE NORMATIVE ASPECT.

Recommendations and checklist	Check items off if the following aspects are considered in your project for the implementation of body cameras.	
REGULATION		
Is there an adequate normative framework to protect the privacy of police officers and people from the use of body cameras by our police officers?		
Did we adapt the normative framework to establish the cases in which the video recordings can be shared with police officers, civil society, or other actors?		
Have we created a protocol of divulgation of the videos in the face of social media scandals?		

4.4 TECHNOLOGICAL ASPECT

Our specific recommendations in this sphere should be considered.

1. Build or adapt technological infrastructure.

The technological infrastructure consists of the storage equipment, the camera chargers, the software to manage the recordings, the screens and the computers to be able to watch the recordings, the system to link the cameras to the police officers they were assigned to, the system through which the recordings will be sent to the actors or the institutions that will make use of them: all of this must be considered at the time of defining a project for the implementation of body cameras. There are related topics that must also be considered, such as the internet connection speed or the adaptation of facilities **to store all the necessary equipment.**

2. Foresee the data management and the storage of recordings.

The police institution must consider how it will store recordings —on the cloud or physically—, and which will be the system through which the recordings will be managed— also using physical systems or the cloud. Hence, the institution must diagnose what its level of infrastructure is, to assess whether it is convenient to purchase cameras as devices or to hire a complete service (cameras, replacements, maintenance, storage and management on the cloud, amongst others).

3. Define the characteristics of the equipment and the necessary functionalities.

There are body cameras with very different characteristics from each other. At the moment of purchasing them, some necessary characteristics must be considered: the field of vision of the recording, the number of continuing hours the camera can record, and the download speed of the recordings, amongst others. The police institution must choose cameras with certain capacities adequate for field work: good quality of the image, good sound quality, ability to record at night, weather resistance, and shock resistance, amongst others.

4. Link the use of cameras and recordings to internal and external systems.

When purchasing body cameras, one can previously consider how to link them to existing computer systems of the police. It can be verified, whether the cameras are compatible with these systems or if there is a way to make them compatible. This can facilitate the use of recordings by actors within the institution that need them. Moreover, there are external systems that can connect the systems of the police to send recordings. Taking this into account can help other actors to own the project of implementation of body cameras.

FIGURE 13. RECOMMENDATIONS AND CHECKLIST FOR THE TECHNOLOGICAL ASPECT.

Recommendations and checklist	Check items off if the following aspects are considered in your checklist project for the implementation of body cameras.
TECHNOLOGY	
Have we defined the characteristics and base functionalities of the cameras in accordance with the objective we set?	
Have we chosen a system to manage the body cameras in accordance with our needs? (product vs. service)	
Can the battery of the camera record during the whole shift? (8 to 12 hours)	
If we purchase the cameras as a service, do we have an adequate internet connection? If we purchase the cameras as a product, do we have enough installed equipment to download the videos?	
Have we linked the technological systems of the body cameras with other police systems, and with those of other institutions?	

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