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jamaica Security strengthing project

Vehicle tracking report

Report Delivered on 14th August 2017

Dr Mark Iliffe

[markiliffe@gmail.com](mailto:markiliffe@gmail.com)

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# Executive Summary

This report provides a brief breakdown of the current systems architecture employed by the JCF to support the 119 Operations Room and the wider Vehicle Tracking system. Currently, the systems in place are not used to their potential, due to a combination of lack of integration (i.e. 5 different systems used by 119 Operators) or purchased equipment not being underutilised (130 – 200 GPS trackers fitted to vehicles, over “1600” ready to be installed).

There are challenges with the existing technology used. This ranges from technology not being fit-for-purpose (i.e. the ability to turn off GPS trackers/technology failing when using the system to radio dispatch) or being dated and potentially unable to be scaled within the new ‘Big Data Analytics’ environment currently being pursued by the SSP.

Considering these challenges, the recommendations of this report are distilled into four pillars:

1. **Perform a full system requirements analysis;**
2. **Improve mapping and location accuracy;**
3. **Integrate systems to support data sharing;**
4. **Implement vehicle tracking across all vehicles;**

These recommendations should help support both the design, implementation and sustainability of the SSP, in the scope of the project and beyond.

# Introduction

This report details initial findings and recommendations of a mission to Kingston, Jamaica. This mission involved discussion with the IDB task team and meetings/interviews with SSP stakeholders in the Government of Jamaica during the 8th to 15th of August 2017.

This report is structured by establishing the extent of current systems and provides a summation and basic evaluation of the challenges and opportunities that arise out of this project. Finally, a basic proposed systems architecture is presented with recommendations, with the intention of supporting the development of continuous police vehicle tracking and to support a wider systems thinking approach within crime enforcement in Jamaica.

This information was elicited by the review of numerous documents, including:

* 119 Assessment Report, International Narcotics and Law Enforcement Affairs United States Embassy Kingston Jamaica, U.S. Department of State, May 2017;
* As-Is - Anti Crime Technology Report, Lt. Col. Stacy Thompson, Ministry of National Security, Jamaica, May 2017;
* Future States - Anti Crime Technology Report, Lt. Col. Stacy Thompson, Ministry of National Security, Jamaica, May 2017;
* Crime and Violence in Jamaica, IDB Series on Crime and Violence in the Carribean, Technical Note IDB-TN-1060, June 2016;
* The Costs of Crime and Violence, IDB, Note IDB-MG-510, 2017

In addition to these documents, extensive interviews were undertaken with government stakeholders, including the Jamaica Constabulary Force (JCF). Details and transcripts of these meetings are in Annex 1.

# Establishing Extent of Current System(s)

This section examines the current state of the 119 Operations Centre and its vehicle dispatching capacity. It attempts to lay the ground work for understanding the requirements of 119 operators to improve efficiency within their work.

## 119 HQ Operations Room

The main dispatch/CAD hub is at Police Headquarters, Kingston. At this centre[[1]](#footnote-1), there are 98 trained personnel working 3x8 hour shifts per day, all year round. There are 13 workstations for dispatch calls. Per day, there are roughly 32,000 calls, with 70-80% of these calls being pranks/non-emergency calls[[2]](#footnote-2). While at the centre during midday, there was no respite for officers answering calls, with a call backlog. For operator/dispatchers, these means almost constant answering of calls. For genuine callers, a wait time before their emergency call is answered.



Figure 1 Operations Room In Action

An illustrative workstation setup is in Figure 1. Upon receiving a 119 emergency call, the operator utilises the various systems to provide operational intelligence to officers on the ground and to receive crime information from the general public.

In addition to the systems used by operators, supervisors also have access to an analytics system monitoring the backlog and efficiency of call dispatchers. Basic statistics is also provided to dispatchers in the form of their “Service Level” (a metric combining wait time, average call time and other factors) and number of waiting calls. Supervisors also have access to Cyclops, a new crime information system, however, this is not yet operationalised within the centre.

## Systems

There are main five systems are used on a frequent basis on receiving a 119 call. These are detailed in Table 1 Crime Systems Utilised by 119 Operations. Each of these systems is apparently separate, running on individual computers, and is not integrated. Due to the five separate keyboards and mice to utilise each system and no system integration. Information lookups are conducted independently, allowing for inefficiencies of time as operators physically use other systems and human error and other common errors of a high-pressure workplace.

Table 1 Crime Systems Utilised by 119 Operations

|  |  |  |  |
| --- | --- | --- | --- |
| System | Owner | Software | Notes |
| CIMS (Crime Information Management System) | JCF | Unknown | In the process of being replaced by Cyclops (see below) |
| Vehicles of Interest | JCF | Unknown | - |
| Vehicle Identification System | Inland Revenue | Unknown | System “operated by the Inland Revenue”. Unsure how this interface, network connection is established. |
| Traffic Ticket Management System | JCF | Unknown | - |
| Computer Aided Dispatch | JCF | Motorola Premier One | Current supporting dispatch operations and vehicle tracking |

## CAD Process

On receiving a call, the operator establishes whether this is a prank phone call and starts the dispatching process. They establish the location of the incident verbally from the caller[[3]](#footnote-3) and input this into the CAD system. They will then dispatch an officer to this location. Concerns have been raised about the inefficiency of provided location data by the public, either being in the vernacular location (ie. Commonly known location to the public of that area, but not to operators) and the map of locations not being a current representation of the current geographic reality.

Dispatch of officers to incidents is prioritised according to resources available and assigned to officers who patrol said geographic district (see Figure 2). This leaves the potential that the closest potential responding officer is not called upon to respond. Roughly 136[[4]](#footnote-4) cars are fitted with GPS tracking devices (that integrate with the Motorola Premier One CAD) system. Accordingly, it is not currently possible to view the position of all cars currently on patrol.

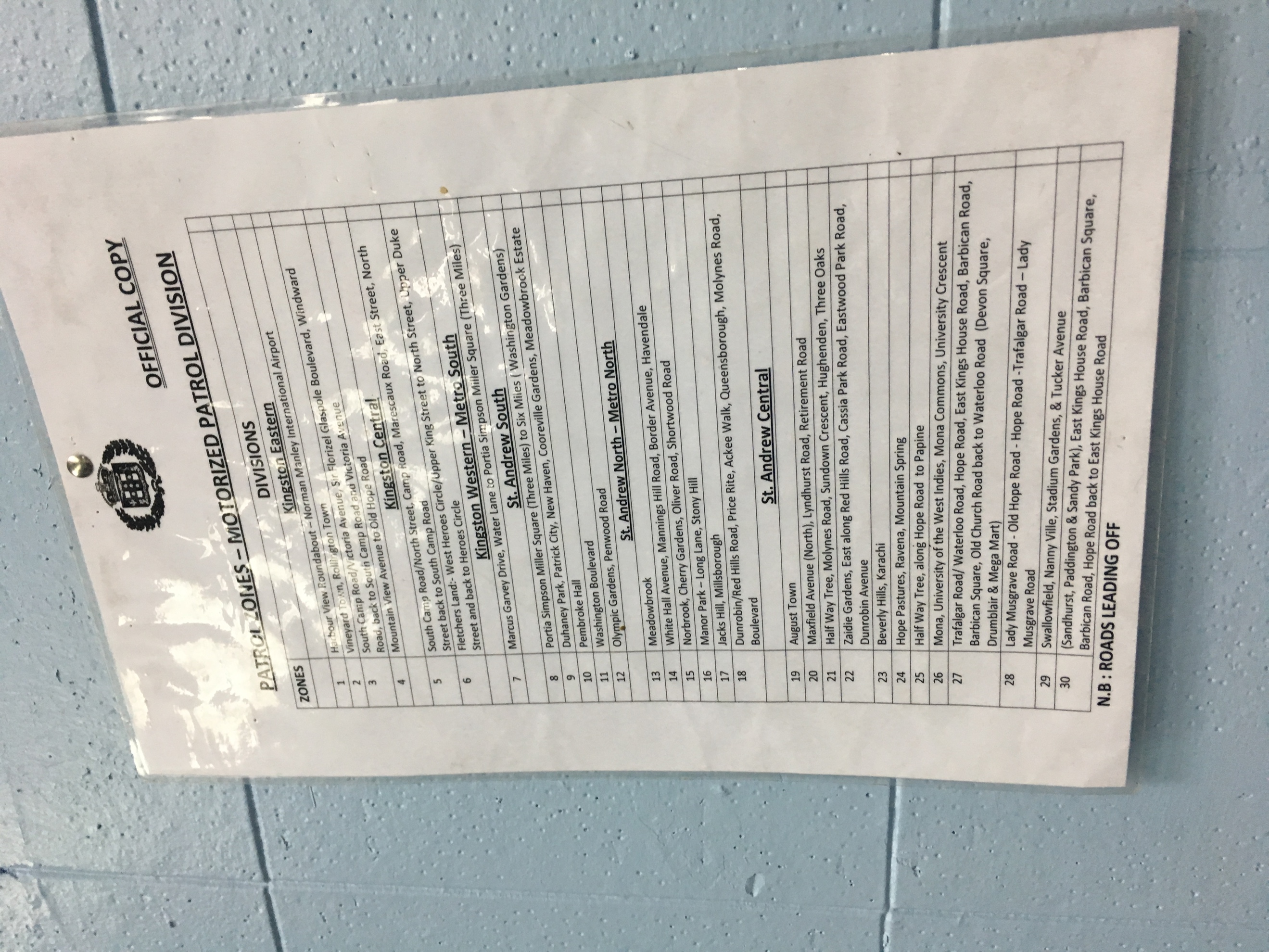


Figure 2 Patrol Zone Locations

The frequency of updates was given as “every 2 seconds”, and this location is shown to operators through the CAD system. This is communicated by the radio installed within the police car.

This however presents a partial story, with two challenges imbued with the current system: 1. It is possible to turn the GPS tracking off; and 2. When an officer is utilising the radio location updates are paused – as the same frequency that communicates the voice also communicates location data to the CAD.

As operations increase in complexity, for example a police car in pursuit of a vehicle, the officer will require the operator to provide supporting information over the radio. For the operator, this requires the use of multiple systems to achieve this result and while the radio is being used, the location of the incident is not being tracked or recorded. This situation desperately needs to be improved.

It was unknown how often data in the CAD was updated by interviewed personnel. How often the geographic information was updated would be a key factor to support the growth of Kingston (and other areas where such a system is to be rolled out). The number of cases put through the system daily was also not discussed.

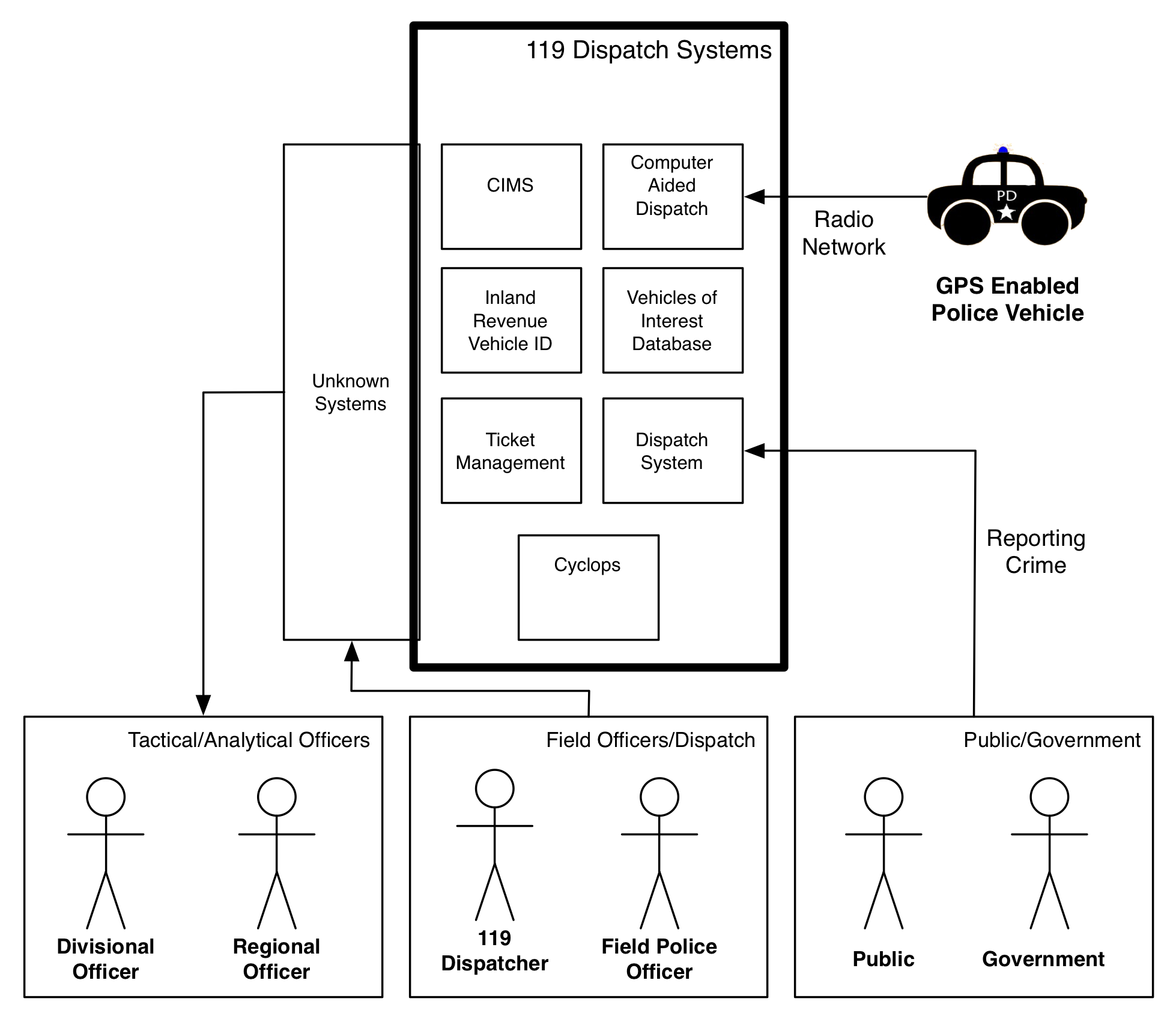


Figure 3 Current Observed Architecture

A basic systems architecture of how these systems operate with respect to vehicle tracking and management is detailed in Figure 3. Here the data flows are poorly understood, in part due to siloed systems with a complete lack of integration. With the current state of the systems, it is unclear (with some such as the Vehicle ID System being a terminal based system) how these systems could be either integrated or functionality added as required by the JCF. This presents a challenge to understand the requirements and approach of future systems. This needs to be established prior to the implementation/roll out of other systems to reduce complexity as much as possible.

## Cyber Security

The vulnerability of these systems to cyber security issues is also unknown, however, this is likely to be high due to the legacy state of some of these systems running Windows 7. Ongoing support to the security and maintenance to these systems will end on January 14th 2020[[5]](#footnote-5). As this is within the SSP timeline and within the next 2 and a half years, this should also be considered a contributory factor to supporting change and integration of these systems.

# Proposed (Basic) System Architecture

## User Needs and System Requirements

There are multiple data generators and data users within the JCF. Each officer in their own way is a generator of data. These data streams include generating vehicle locations to police case work data.

Factors for constant vehicle tracking include:

* **System Uptime**: i.e. Is it possible to turn off the vehicle tracking units;
* **Embedded GPS Hardware** in vehicle (e.g. through an in-car radio or under the hood)
* **Communications mechanism**, i.e. how will car information be transmitted to HQ
* **CAD system** that both dispatches officers and visualizes the current extent of police operations;
* **Integration** with other systems, either Information Management Systems (such license plate/vehicular ID systems) or Decision Support Systems (checklists for special operations i.e. shootings/car pursuit – ensure Ambulance is dispatched to location, watch commander informed etc.).
* **Access levels** to this information. Which users of the system should have a “global system” perspective? How are traditional security concerns, such as undercover vehicles tracked and managed?

Prior to the realisation of these factors into a deployable system, understanding the who the users will be crucial. These range from Patrol Officers, 119 Operators, Senior Staff etc. Detailing their precise requirements and current processes will support the design of the future system and facilitate buy-in by rank and file JCF officers through the requirements gathering process[[6]](#footnote-6). This is advised due to the existence of technology already *in-situ* (such as Motorola Premier One CAD System) but is not used to its full potential. This raises concerns about ensuring that technology is appropriate for the task at hand.

## System Diagram

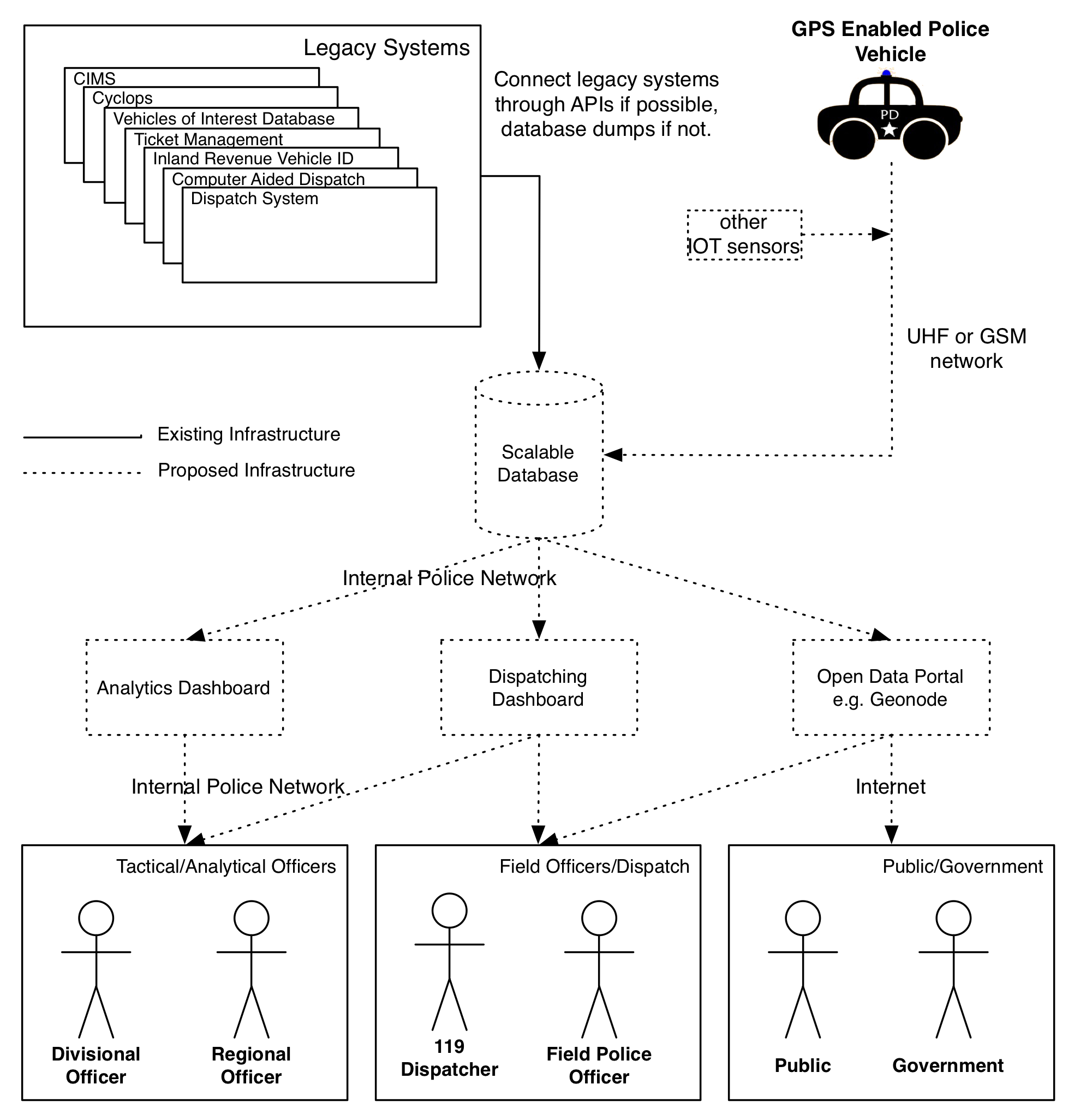


Figure 4 Draft Proposed System Architecture

A proposed draft/basic system architecture is presented in Figure 4. This is presented for discussion around the challenges and opportunities of enhancing CAD operations for both 119 operators and police officers and does not represent a final architecture. Much more detail will be required to understand the scope of the integration of this system, specifically on how information can be integrated from various sources and ministries. This architecture is presented in a technology neutral perspective and assumes that data interfaces are facilitated by open standards where possible[[7]](#footnote-7).

A clear example of this is the integration of information of vehicle taxation information from the Inland Revenue service. It is completely out of project scope for this system to be adapted, however, it will provide key information regarding vehicular ownership. Currently, this information is accessed via a terminal application through a command line interface. It is unclear how this data is stored and updated and the technology stack within the Inland Revenue that provisions this data. Integrating this data is critical to the success of the future project; as such a thorough technological requirements analysis would need to occur to evaluate the scope, usage, and data that these systems provide.

## Communications Analysis

Vehicular tracking will require consideration how the Hardware and Software elements integrate to provide location. The software, at a basic level, needs to understand the vehicle ID, latitude and longitude at a minimum. The hardware in the vehicle needs to communicate these values in a cogent manner. Given the situation of Jamaica, this leaves two potential communications mechanisms: through a mobile GSM network; or through a Microwave (UHF) network.

In each case, the GPS sensor would be fitted “under the hood” and would be unable to be turned off without physical removal. They would be activated the moment the engine is turned on. A battery and a relay would also ensure that the system is broadcasting for at least an hour after the ignition is turned off. Questions on whether tracking should be persistent should be answered by the requirements analysis. Each has benefits and negatives, these are now discussed.

### GSM Receiver

Mobile GSM networks are the same networks used by citizens for mobile phone calls, SMS and data.

Benefits:

* Cheaper, off-the-shelf hardware
* Utilizes existing infrastructure;
* Start up costs are much lower

Costs:

* Ongoing running costs, constant needs to utilize 3rd party telecom networks;
* Coverage is not universal and is variable, depending on the network provider;
* Control of the network is with a 3rd party, without guarantee of up-time and/or backup;

Table 2 below details the cost rationale for the GSM vehicular tracking option. This budgets that 2 years of GSM connectivity[[8]](#footnote-8) to be paid to a GSM network provider. This cost will be consistently incurred through this option, unless free access to a GSM network[[9]](#footnote-9) is negotiated.

Table 2 Cost of GSM Vehicle Tracking

|  |  |  |
| --- | --- | --- |
| **Item** | **Cost** | **Link / Comments** |
| ***Hardware*** |  |  |
| GSM GPS Tracker | $35 | Including shipping + customs : <https://www.alibaba.com/product-detail/TK100-Portable-Mini-Vehicle-Car-realtime_60438330508.html?spm=a2700.7724838.2017115.72.2f898c12oy26nH> |
| ***Cost for 3000*** | ***$105,000*** |  |
|  |  |  |
| **Hardware Total** | *$105,000* |  |
| ***Maintenance/***  ***Installation*** | |  |
| Installation Costs | $35 | Fitting of the device, including miscellaneous cables - conservative estimate |
|  |  |  |
| 2 Year Telecom Cost | $160,000 | ~J$250 per month, per sim with a 50mb monthly cap, using a 30sec update rate. Assuming 2 years sim cost, due to planned implementation of dedicated LTE network by Q2 2019. |
|  |  |  |
| **Maintenance Total:** | *$160,035* |  |
| **System Total** | **$265,035** | |

### UHF Receiver

The UHF option utilizes a custom microwave network, there is potential to utilise the existing microwave network - this needs to be explored and could potentially drive very significant cost reduction.

Benefits:

* Potential for universal coverage;
* Potential to utilize existing infrastructure;
* No ongoing running costs;

Costs:

* Very high initial costs;
* Requires maintenance of infrastructure to be the responsibility of the JDF;

Table 3 details the cost breakdown of the UHF option. This assumes full coverage of Jamaica and would provide a secure, dedicated communications channel for the location of police vehicles.

Table 3 Cost of UHF Vehicle Tracking

|  |  |  |
| --- | --- | --- |
| **Item** | **Cost** | **Link / Comments** |
| ***Hardware*** |  |  |
| UHF Vehicle Transceiver | $735.00 | https://www.raveon.com/m7-gx-gps-transponder/ |
| Antenna | $85.00 | GPS/Radio Antenna |
| Surge Suppressor | $35.00 |  |
| ***Cost per unit*** | ***$855*** |  |
| ***Cost for 3000*** | ***$2,565,000*** |  |
|  |  |  |
| 30 Base Transceivers | $600,000 |  |
| **Hardware Total** | *$3,165,000* |  |
| ***Maintenance/***  ***Installation*** | |  |
| Installation Costs | $100,000 | Fitting of the devices, including miscellaneous cables and of base transceivers. |
|  |  |  |
|  |  |  |
| **Maintenance Total:** | *$100,000* |  |
| **System Total** | **$3,265,000** | |

### Comparison

Prior to selecting either option, the benefits and costs would need to be discussed with stakeholders. The nature of these options means there is a balance between 100% coverage of Jamaica and the monetary cost of achieving this level of service. There is also the possibility of utilising existing infrastructure whether already existing (Microwave UHF) or planned (GovNet GSM).

Table 4 GSM, UHF Systems Cost Comparison

|  |  |  |
| --- | --- | --- |
| **Item** | **Cost** | **Link / Comments** |
| UHFTotal | *$3,265,000* | *Most conservative scenario, assumes no existing UHF infrastructure* |
| GSM Total | $265,035 | *Assumes 2 years of paid GSM connectivity* |
| Systems Integration | *$750,000* | *Dashboard component, and integration of systems into dashboard* |
|  |  |  |

Table 4 details the cost comparison, with the addition of a “Systems Integration” component. This component includes the design, construction, and implementation of this proposed system that integrates legacy systems, presenting a unified dashboard for operators and a Geonode for simplified data storage and analysis.

# Recommendations

Consequently, the following recommendations are made:

1. **Perform a full system requirements analysis**
   1. Understand essential coverage needs and % up time of tracking required; this will aid define requirements and rationale on the choice and roll out of vehicle tracking technology;
   2. Identify use cases and individual requirements analysis of field officers, dispatch operators and other users of such data, such as the Division of Statistics. This should be conducted through a User Centered Design approach. This will maximize the opportunity for input by rank and file officers, supporting both 1. Requirements gathering; and 2. Enfranchisement in the final developed system;
   3. Conduct a cyber security assessment of both the current 119 Operations Systems and the wider JCF information technology systems;
   4. Develop requirements in a technology and platform neutral manner. Regardless of existing systems and approaches, the requirements should identify the optimal systems and approaches available. Proceeding with current systems should only be followed if the compromises, costs, and benefits are understood by the wider SSP team;
   5. Elicit how crime and dispatch data is used by others, outside the rank and file of the JCF, these could include those within the Ministry of National Security, Government Agencies and the wider public.
2. **Improve mapping and location accuracy**
   1. Integrate call location from telecom providers. This will aid in dispatching the nearest available officer in a poorly addressed environment. This is dependent on ensuring/improving trust within the JCF, while ensuring caller privacy by not identifying precise location and call details. Integration with telecoms operators could provide geographic location at a varying granularity, potentially at a patrol or street level so to generalize a reporter’s location;
   2. Harmonization of informal map data into the CAD;
   3. Improve integration of official data into CAD, with planned updates.
3. **Integrate systems to support data sharing**
   1. Integrate all crime systems into one common interface. This will improve efficiencies within the 119 Operations Centers, improving call response times and dispatching capacity;
   2. Utilize open standards to manage data transmission within sub-systems and systems. This will allow for complementary technology to be integrated in a best practice and easy manner;
   3. Implement a data management strategy, where the data needs of the JCF are evaluated on a 6-monthly basis in an open forum to all ranks. This will allow for agile development and improvement of the resulting sub-systems/systems with constant requirements generation and evaluation of existing processes by users.

1. **Implement vehicle tracking across all vehicles**
   1. Install GPS tracking devices (dependent on the approach and infrastructure as detailed previously) into all JCF vehicles, regardless of type. The tracking of vehicles of the JCF is also an asset management application;
   2. Maintenance and capacity for device upkeep should be built within the JCF Fleet Management Centre;
   3. Access levels to this data should be reviewed, with an appropriate accessibility plans and protocols put in place.

# Annex 1: Client Interviews

|  |  |  |
| --- | --- | --- |
| **Date** | **Subject** | **Location** |
| 0900 – 1100, 10th August | Initial Meeting with Stakeholders | IDB Office |
| 1400 – 1500, 10th August | On-Site 119 Operations Centre Review | Police HQ |
| 1600 – 1700, 11th August | Analytics Meetings | IDB Office |
| 0900 – 1100, 14th August | Meeting with National Spatial Data Infrastructure Team | Min. of Econ. Growth |

## Initial Meeting with Jamaican Police Force task team

10th August 10-08-2017

IDB Office, Kingston, Jamaica

Table 5 Meeting Participants

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Position** | **Email** | **Phone** |
| Shontelle Thomson | Constable | [shontelle.thomson@jcf.gov.jm](mailto:shontelle.thomson@jcf.gov.jm) | +1 (876) 403-2892 |
| Norris Rhoomes | Superintendent - Officer in Charge ICD | [norris.rhoomes@jcf.gov.jm](mailto:norris.rhoomes@jcf.gov.jm) | +1 (876) 809-2171 |
| Orette Bascoe | Inspector - Head of GIS, Planning and Research Branch | orette.bascoe@jcf.gov.jm | +1 (876) 466-6166 |
| Donovan Anderson | Det Sgt - Analytics | [donovan.henderson@jcf.gov.jm](mailto:donovan.anderson@jcf.gov.jm) | +1 (876) 818-5446 |

**Transcript**

Mark Iliffe: Thank you all for coming today. Specifically, welcome to the IDB and thank you very much for coming. I'm on my second day on the job here, so I really appreciate that. One thing that I'd like to talk about today is sort of the geo-referencing crime aspect of the security project but also to sort of discuss the various options of the fleet management and vehicle tracking components of the project.

As you know, my name is Mark. I'm a geospatial specialist working with the IDB here. My experience is mostly around building geospatial infrastructure and I've been working with the Tanzanian government on helping support their statistical capacity programmes through understanding sort of data requirements, data needs, through to the design thinking and then the systems engineering that goes on behind it.

So, would you be able to give us an introduction briefly on what you're entrusting in the specific components of the project and then we can sort of our good summary structure discussion on where you see it going, the challenges that you have, the requirements that you need, where you see this going in a year or two years, five years and then into the longer term

Insp. Bascoe: I currently oversee the Statistics Department. Basically, for us our main challenge right now is to collect data from--I won’t say “in the fields”, but--on the ground. Basically data is captured at the stations (as it is now, it’s manual). And when you look at the Statistics-perspective, we do a lot of heavy lifting at my office. Even though we get the data electronically via Excel files, we still have to download that information, print it, and enter it in a format that is compatible with the various attributes and fields that can provide that analysis. So that manual aspect of it is one aspect we want to change as soon as possible.

In relation to GIS Data now, we do our Spatial Mapping from the data we receive from the stations. We started a pilot project where we gave some of the forensic scenes of crime officers—the investigators would go on the scene, take photographs and the forensic investigation of the crime scene (especially murder, shootings). We gave them some tablets. Some "un-GIS" devices. So they were using that to take the coordinates of the scene and email that to us.

That worked for a while until the devices went bad and as a result of that, the  project paused. So we went back to what we called “square one” when we started to do a lot of manual geo coding. The ESRI software that we use… we use ESRI [because] it has a facility to use automatic geo coding based on street address. But you would understand that for Jamaica, with our addressing system not that established. It poses a problem, even persons within the same community do not spell the community the same way. So when that data reaches to us we realise that doing so much geo coding may not work. So it uncovers some of the manual expertise, some of the manual mapping of that data which is time-consuming. So that, in a sense, delays our spatial output, in terms of timeliness consuming wide range of analysis that we’d want to produce. So in my perspective that is an area that needs capacity-building.

It’s good that you mention that you build infrastructure. We are in the process now of installing a server—a GIS Server—to ensure that we can leverage the tools somewhere by providing the operatives on the ground with the GIS software that they can assist with some of the mapping and they would utilise, or consume some of the tools.

Mark Iliffe: What GIS Server is that? Is that ESRI, or is that…?

Insp. Bascoe: ESRI – so we’re going to use our GIS Server from ESRI. Alright so the ELA: So currently, the government of Jamaica signed a four-year ELA with ESRI. This facilitates… this was done with the view of reducing the cost of each government agency in and of them self approaching ESRI for a licence. So they were approaching ESRI for a licence. So in a sense we’d get a group licence, which is cheaper. So each entity – some entities—were able to get GIS online as well as some desktop licences. Also, with the project we’ve got spatial imagery of Jamaica… I think that was Done in 2015.

Supt. Rhoomes: And it was the same grouping.

Insp. Bascoe: Right, group purchase as well.

Mark Iliffe: So the aerial imagery: was that planes, was that satellite imagery?

Supt. Rhoomes: It was planes

Mark Iliffe: So with that, do you know what the quality of the imagery is? Is it high quality, are there clouds?

Insp. Bascoe: It’s high quality for some areas, but based on their specifications I think they wanted a 5% cloud cover. That was the accepted level. So there were some issues until that was rectified. So only in some areas you may have some cloud cover but for the most part the imagery is good. So it’s just about now how we utilise.  We want to expand the scope. Even the team itself. We have about three persons in terms of GIS. We would want to expand that in terms of more training for all of the technical staff currently. And persons on the ground consuming some of these GIS products. You want them to get familiar with the products so that can easily understand. Not necessarily be able to map, but to be able to understand and to read the map to make sense of them and assist in their operational activities.

Mark Iliffe: How do you envisage that working? Do you imagine people using the software to generate these insights or do you imagine dashboards that you can just go to and requires no technical knowledge?

Insp. Bascoe: Dashboards, we just want to keep it as simple as possible. We don’t want to give them any additional work that they don’t need. As it is now, the dashboard comes with the licencing package that we have now. It comes with it. So as I’ve mentioned one of the biggest challenges is to get the data that is being recorded on the ground to us already mapped.  There is another project that may see us receiving about 50 or 60… GPS... some tablets. So, that again will offer us some rugged tablets.

Mark Iliffe: So in sort of an ideal world. the case management and the reporting of crime would be done on a tablet which automatically geo-rectifies the data so that when it comes to you the entire system is just end-to-end with the location.

Insp. Bascoe: Right. So the analysis can reach our end and lay in on the data set to provide more insight on the data instead of us mapping data and then mapping again.

Det. Sgt. Henderson: My name is Donovan Henderson, I am Detective Sergeant in charge of case management, and of last night, crime analyst.

Mark Iliffe: Just to recap what we've discussed so far, we've looked at some of the software that's being used for analytical capability, understanding where the hardware is. There's three staff within the GIS?

Det. Sgt. Henderson: GIS, mm-hmm (affirmative).

Mark Iliffe: It would be quite good to know how many people are in the crime analytics team, and then see where these teams intersect, but then from that wondering how you see the vehicle tracking and the monitoring of police to support the hot spot mapping and crime management across the city and across the country.

Det. Sgt. Henderson: Well, the build out of my unit will be about seven persons, but are working closely with another six from CID HQ. Our perspective is a little bit different, it adds to what you have said, but we want to drill down, wherein the officer at the station is able to maximise the use of GIS. Meaning, I did a demonstration the other day, he can utilise his phone to photograph gang spots, problem areas, that kind of thing, and overlay it on the bigger data to see the effectiveness of his patrol. To see the effectiveness or the response of his unit at the station level, and to see how best he can be more effective for, let's say the next day or a week later, that kind of thing. It's really at the tactical level that we are seeking to maximise with GIS data.

Mark Iliffe: Sort of from a basic systems perspective, that the level of insights that the GIS team are building and the infrastructure that they're creating would be used-,

Det. Sgt. Henderson: More than sufficient.

Mark Iliffe: Those dashboards would then be used by the officers at the tactical level.

Det. Sgt. Henderson: Yes.

Mark Iliffe: To understand where to go, where the hot spots are.

Det. Sgt. Henderson: As well as to add their data, because they're on the ground. They can add their data.

Mark Iliffe: It's a two-way conversation. You want the data to go up and the data to come down?

Det. Sgt. Henderson: Yes.

Mark Iliffe: Okay, great. Where do you see the tracking and the location of personnel and assets? I know that there are about 136 vehicles, I believe, at the moment that are being tracked, or have been fitted with GPS units.

Det. Sgt. Henderson: Yeah, about something like that.

Mark Iliffe: Is that data currently used in any decision making?

Supt. Rhoomes: No.

Mark Iliffe: How is it being used, who's the controller of that information?

Supt. Rhoomes: That information is managed at the control centre, 119, but that is only done in Kingston. There are plans to have it at various other 119 locations, one is in Montego Bay, one is in Mandeville and one is in Saint Mary. I know there is plans to put it, so if something is going on out there, you can tell where the nearest car is and send that vehicle out there. That thing is only being done in Kingston right now, and we're working on the one in Montego Bay.

Mark Iliffe: How many police vehicles are in Kingston?

Supt. Rhoomes: I forget that.

Mark Iliffe: I believe that about 136 vehicles have been fitted with the GPS units.

Supt. Rhoomes: Yeah, but we need to be mindful that all of them is not at just one separate place. We have different units running out of Kingston, so I'm not sure on the breakdown of that 136 cars. You have motorised patrol, you have traffic, you have Kingston East, Kingston West, St. Andrew Central in that, all these different, and all of them are a very different job.

Mark Iliffe: That's like a matrix that you have, the specialties.

Supt. Rhoomes: And zone, and all of them have their own zone that they have to work in now.

Mark Iliffe: Okay. Is it possible that the GPS tracked vehicles are distributed to a specific location or a specific sector?

Supt. Rhoomes: I think it is the radios that are in the vehicles that are being tracked, that are being used as a part of the tracking, some Motorola radios. They are using that software from Motorola to track the vehicles. Sergeant Ramsey, at HQ Operations is an expert of the use of the software and how it's been used.

Mark Iliffe: Does the centres, or do the centres utilise that information in any way? Is there like a television screen like we've got here that shows where all the vehicles are?

Supt. Rhoomes: Some of the mobiles have a screen, a terminal that they will look to see where the cars are, and if they give out their time to say they are in a zone, they will know the zone that they are in.

Mark Iliffe: Do you know if there are any analytics that gets fed up off that data?

Supt. Rhoomes: No, no I don't have that.

Mark Iliffe: Is that something you'd want?

Supt. Rhoomes: Yes.

Det. Sgt. Henderson: If I can add to that, I think at Montego Bay they are actually doing some tests on a system to see how well it would function on the microwave network. They did some tests in Kingston and they extended it to Montego Bay, because initially they had an issue because voice took priority over the GPS data, so there was a little lag time for the car units to be fed up. They did some tweaking to the system, just to ensure that was sorted out. In terms of the analytics, the plans are there to do that, but initially it was just a pilot phase just to see how the vehicles function on the system in terms of a couple city basis. There was an issue with that.

Supt. Rhoomes: Just to answer that, we looked at several software to track the vehicles, based on speed, the geo-fencing location, and a number of software we used, and all of that. We're still looking at software where that is concerned.

Mark Iliffe: Because there's a specific component of this, of the IDB that will support that. Do you have any documentation that you could make available that would help support the construction of that component in the project?

Supt. Rhoomes: Yeah man, yeah, I'll see if I can find the documentation.

Mark Iliffe: Great. Within the control centres, when the vehicles are being tracked are you also looking at the monitoring of police officers that are on foot patrol, or is it just the vehicles?

Supt. Rhoomes: Just the vehicles so far. We haven't done it with the police officers, monitoring the police officers.

Mark Iliffe: Would that be something that you'd look to do from a safety perspective?

Det. Sgt. Henderson: Yeah.

Supt. Rhoomes: Mm-hmm (affirmative).

Det. Sgt. Henderson: The bigger plan that they have now is the officers going out will be equipped, the idea is officers going out to be equipped with mobile devices, phones or tablets. With these tablets, because you have the GPS on the phone, you will get a sense of where the officers are. In terms of the mobile devices as it is now, the intention is to correlate the locations of the crimes, but also there is intention for it to be submitting intermittently different feeds giving the location of the officers, just that you can get an idea where they are. Right.

Supt. Rhoomes: This is one of the proposed phones, I'm trying to find another one. The other one is a Cat-S30.

Mark Iliffe: This is a pretty sizable ... [Shows phone]

Supt. Rhoomes: Yeah, it's somewhere in my big purse here, but the other one is a Caterpillar S30 phone.

Mark Iliffe: This will automatically track and feed analytics back?

Supt. Rhoomes: Yes.

Mark Iliffe: Okay.

Supt. Rhoomes: Hopefully.

Mark Iliffe: Do you imagine using this in conjunction with radios or still using the GSM network, or do you want to move over to the microwave network?

Supt. Rhoomes: That I could not answer. The advance that I know is that it's able to send data more than what a radio could send, as well as to access information in the field.

Mark Iliffe: Do you think we've missed anything in establishing what's there already? Anything that you think you'd like to add to that?

Det. Sgt. Henderson: Well, it's just that along the line data collection and GPS, there are a few projects about going on now, that I'm hoping that there will be some synergy between the different projects, because at the end of the day we have the same goal. We're all aiming for the same outcome.

Supt. Rhoomes: One other thing, that we're all over the place and stepping on each other.

Det. Sgt. Henderson: Very much so.

Mark Iliffe: That sort of leads me to two things. The first would be understanding the data structures that are in place, and the data flows. One thing that I'd like to establish is what are the existing data flows, both in terms of the vehicle tracking, but I know colleagues will be interested in the case management and how that data flows through the system. Specifically, what sort of data do you want to capture, how is it tagged, what metadata is needed to be associated with it to drive the analytics that we want to create.

The second point would be what do you want, what's the vision and the future that you'd like to drive within the JCF? Instead of thinking about the implementation, what's the end goal? Because superintendents and inspectors don't want to be messing around with a GIS server, to be blunt, detective sergeants that run a crime analytics division want to be doing their job appropriately. The tech in the background should be in the background, you shouldn't be worrying about licencing. It's great to know, but not really optimal.

Det. Sgt. Henderson: One of the ideal goals is just to make sure that everything that we hit with our system managers to plan what is happening, to do proper planning when we are sending out the team to work. They have a proper idea of what they have and what they don't have, and what is needed for whatever duties they are to perform. Whatever we are doing, we need to have the manager's buy-in to say, "This is what the goal is, and to achieve this goal we need these things to happen."

Mark Iliffe: What does this look like for you in a year? Because you've already mentioned that you want your own centre, and I'm assuming a massive video wall in the command centre.

Supt. Rhoomes: Yes, that is ideal.

Mark Iliffe: That would show, similar to the map on the wall, like this, big map of Jamaica, all the police cars, all the police officers, what crimes are going on in realtime, crime hot spots. What's missing from that map?

Det. Sgt. Henderson: Other factors external to policing, the social factors. Let me see what you could look at.

Supt. Rhoomes: To me, one of the things, and we're working with the U.S and they are going to give funding to computerise all 119 control rooms in the bureaus here that I spoke to you about, to make sure that we have ... I'm not sure about that nice video wall, but they can see where the cars are, do a geo referencing and referencing where the cars are, and have a proper Cat system there so you could dispatch a car and to take information from persons out there.

One of the things that we need to do, which is different from what I have seen out there, is that everything that somebody wants to be there when they call 119. We need to have the fire support, the ambulance support, and any other thing, so when you call 119 it's for a specific police thing. That thing, funnily enough, we get it from the U.S Embassy. It's not later, it's now, and we have been working with them for some time now.

Mark Iliffe: Where's the pilot area for that?

Supt. Rhoomes: The pilot area is going to be in Kingston, and I don't think it's going to be a pilot, I think they're just going to just go and do everything.

Mark Iliffe: They're just going to do it?

Supt. Rhoomes: Yeah.

Mark Iliffe: Great, okay. Do we understand the system that they're planning to use?

Supt. Rhoomes: Two persons from the control room are going to look at the system that they have, and two of their personnel came down here also recently and we went all the places, and I think they have written something they want to send back on what needs to be done. They have asked for some information up to last month. That is something that is going to happen, not will happen, but that is going to happen, and I'm a part of that.

Mark Iliffe: Fantastic. For what we're trying to do, I think that there are some symptomatic challenges here, and then if we solve the larger problem we can actually make these things be coordinated. I would really like to understand what the data structures and the interoperability between these systems is going to be, because you've got different systems, you've got the Premier One with Motorola, you've presumably got whatever the U.S government is going to give.

Supt. Rhoomes: The one that they are going to buy needs to work with the same system from Motorola. It is going to be something that can interact with it, because we are sending all of the information from Motorola to make sure whatever we're buying will work with the Motorola system. That's a must.

Mark Iliffe: Yeah.

Supt. Rhoomes: So we show them those consoles that they are using with the Motorola system. I think they're going to buy from the same Motorola supplier, but something that's going to work for the Motorola, something that can talk to each other. Definite on that.

Mark Iliffe: Do you know the system that they're proposing, how many cars that they're going to track with it, whether it's going to be embedded within the car, whether it's just going to be a tablet?

Supt. Rhoomes: I'm not sure on that part. I can get information that I could pass on.

Mark Iliffe: Okay, because what I'm wondering is how can we create systems that are interoperable with each other, and how do we either extend at a minimal cost what's already there. If you're going to have this system in Kingston with Motorola, are the resources there to scale that to the entire country?

Supt. Rhoomes: Well, what I know they are going to do is not only for Kingston, for the entire island. It's not for Kingston, for the entire island.

Mark Iliffe: Okay. Would you be able to send me some documentation on that?

Supt. Rhoomes: I could, and I could pass you the person that I work with from the U.S Embassy.

Mark Iliffe: Great.

Supt. Rhoomes: Alright, that's not a problem. What you don't want to do is to be stepping on each other, and if they are doing that every day, I don't see the sense we asking you to do it again. It doesn't make sense, it is a waste of time, why are you spending money there. I don't believe in that.

Mark Iliffe: I agree, completely agree with that.

Det. Sgt. Henderson: Just for clarity, your aspect of the project focuses on what?

Mark Iliffe: My aspect is focusing on the vehicle tracking and the data analytics piece. For me, the tracking the vehicles is one component, the interoperability of those systems and making sure that the data hooks together. What is it, just the vehicle alone, or do you want to track everything? When you say vehicle, you're talking cars, bike, horses, all this?

Det. Sgt. Henderson: Bicycle, cars, bicycle, the U.S is also funding a bicycle unit. Well, not also funding, they are funding, so they have given us 200 bicycles to be used across the island, of bicycles out there for people patrolling out there. Would you want to track those guys also?

Mark Iliffe: I'm happy to track anything. The question is do you want to track them, and I assume the answer is yes.

Det. Sgt. Henderson: Yeah, because they are working.

Mark Iliffe: So, what I'm trying to do is identify and establish where the projects are currently at and their different stages. Then identify where those gaps are, because hypothetically, one of the challenges of this could be that the vehicle tracking system is there; what we need to do is figure out a way of connecting the Motorola Premier One system with our GIS server which generates the dashboard to provide those insights.

Supt. Rhoomes: I know when they were looking on the system, the staff from GIS was there and we had given them our map to put in that Motorola system, so the system is inside there for the Motorola system. They did get some information from us.

Mark Iliffe: But you would want to, because you wanted the up and down movement of data, you're going to need to get the data out of the Motorola system into a much more simplified.

Det. Sgt. Henderson: For it to accept data from wherever, because for example, I use this phone whenever I'm on patrol and I just turn on the location to take photographs. The simple version is convert to KML, load it onto Google Earth so I can see where I went, and I can see the places that I took, and then I overlay the information from the GIS unit to say where crimes happened during that period of time. That is the most basic tactical level that we can go. The other benefits, and I'm speaking strictly from an investigative standpoint, not the big strategic side as Supt. Rhoomes was just saying, one of my mandates is to look at how does it benefit the narcotics division that is going into the deeper part Jamaica to scout out ganja field, how can we map those? It has benefited me in the past. Can we map where we have the marijuana fields before so that we can make provisions for future policing operations?

One of the other things that was brought out last night is, tonight, Friday night, parties will be kept at all of these locations. How do we deal our patrols still to ensure that they are shut off, because a part of the analysis is that person are being killed coming from a dance that should have shut off from 12 o'clock and is coming from the dance 3 o'clock in the morning. That is the kind of basic data, the ground level data, that they are looking to get out of it. Apart from the big, the strategic level thing.

Mark Iliffe: Do you have any relationships with mobile phone companies?

Supt. Rhoomes: Yes, both Digicel and Flow.

Mark Iliffe: Are you doing any call data record analysis?

Det. Sgt. Henderson: I'm not sure.

Supt. Rhoomes: Call data? Yeah. But only specific cases.

Mark Iliffe: Okay. I ask because you can start to see anomalies. Instead of looking for the specific cases, I assume to establish a murder suspect, where you were, where you say you were, you are able to look at the larger data sets and start to establish what are the general movements of people and then what are deviations from the norm which could give you an indication of criminal behaviour. Just to give you an example, this isn't a crime use case of using big data, this is a transport use case, but I think that it's quite relevant.

This is Dar es Salaam in Tanzania, and what you can do is you can see the mobility across the city. You can see the common routes and the routes that people most often take, and unsurprising, a lot of the traffic is along the main roads of the city. However, a lot of people are also going through smaller roads.

Det. Sgt. Henderson: To avoid the traffic.

Mark Iliffe: To avoid the traffic. A simple thing, the conclusion that I'm making to the transport ministry based off this graphic data is you want to improve mobility in the city, you've concentrated your spending in these arterial roads, you also need to focus on these feeder roads, because if you focus on the feeder roads you'll alleviate congestion around the city. Simple impact.

For crime, people usually move like this. All of a sudden, people are moving like this, why? It doesn't have to be that a crime is occurring, it's simply a tool that if you had that live link of data, and this is where we start to get into big data analytics. Friday night Kingston looks like this. All of a sudden, a load of people are going to this random area in the middle of nowhere. Why? Is there a rave? This is another tool for gathering intelligence. I don't know whether that's something of interest that would support.

Det. Sgt. Henderson: For me, yes, over a period of time, over the long term more specifically it would be to also look at amalgamating the various cases that we currently have, to understand the commonalities between each. So yeah, down the road, yes. Hopefully not too far down the road, because it's data that is needed.

Mark Iliffe: Okay.

Det. Sgt. Henderson: But currently, one of the problems that we have is we are unable to, and the blame is on equipment, crime scene giving us the data from the crime scene from a seizure, from any incident, the focus is always on the bigger crime, the category one crime. We need it for everything.

Mark Iliffe: Yeah.

Det. Sgt. Henderson: The simplest of crime would mean that because the person who commits the robbery is the same person who would do the murder, kind of a thing, so we want everything. The assault, whatever. Right now, one of the problems is that we have turnkey systems, which is what the GPS thing that sees the crime have, and persons are saying that this is not working, when actually your phone can be used for this very same thing.

Supt. Rhoomes: I think one other thing is knowledge and training, because the basic phone can tell you where you are.

Det. Sgt. Henderson: Where you are. It was started when persons didn't want to use their personal phone, because we did a session in area four, and persons said until they get the phone, they won't use their personal phone for police work. That was the reason, through the JSF, the tablet thing came about and stuff.

Mark Iliffe: Is there an opportunity to adapt the standard operating procedures and drive this change through the regulations?

Supt. Rhoomes: Yeah, we can do that. Yeah, if we do that and we put it out there and say this is how we are supposed to do things. You know, what is happening out there, one of the things we are looking also, and it started back when I was overseas, another country said that they were doing it. They said, "This is one that we have tried, is to go to some of our major health locations, because myself and this guy had a fight, you know, going to a medical station."

Mark Iliffe: Oh, please. Thank you.

Supt. Rhoomes: "We had a fight, so I stab him and he went to that medical facility to get treatment, no police will no go there." We know later on when the time is now right, he's coming back for me with a barrel gun or something else, so we need to capture those data that are not on the police radar. Those are critical data.

Mark Iliffe: That's going to be something that's going to be really interesting, both in terms of the geo location of the crime and the statistics.

Supt. Rhoomes: Yeah, because some of these things are happening in the inner city, and thing will lead to another. I know that we have started that some time ago, but I don't know where it's leading, that part.

Det. Sgt. Henderson: Well, the crime observatory, they have some data sharing agreement, JCF is a part of it. The Minister of Health, who is responsible for the hospitals, health centre, they are a part of it as well. One of the challenge why Minister of Health wasn't actually participating in terms of providing more data to the crime observatory, is because some of their systems are manual and the format that the crime observatory wanted the data, they weren't able to adapt or provide the data in such a manner to them. But I know that work is far advanced, and to the crime observatory they are supposed to supply data to them on a monthly basis. I think that's something that eventually we can tap into.

Supt. Rhoomes: I think one month is kind of too long, because by the time ...

Det. Sgt. Henderson: Well, no they mentioned that it was resource issue.

Supt. Rhoomes: Yeah, and I think that's one of the things. They say everything is the police, they didn't mentioned the minister needs to tell you, because they are going to say that they have staffing and all of that. But that little crime there can lead to a bigger thing, because get better from stab me up, chop me up, Bascoe now, who knew me very well and who is a gang leader now go shoot up everybody in the area.

Mark Iliffe: I must say, I find it very hard to believe Bascoe is a gang leader, but maybe that's what he wants us to think.

Supt. Rhoomes: Well, you know, they are interlinked, and that one here, we are having some serious crimes in Trinidad, they were the one that we were discussing. Bahamas, St. Louis, I was sitting in on all of those guys, and when I hear the speaking, I say we are bad, but some people there are worse.

Mark Iliffe: Okay. On the vehicle tracking piece, is there a timeline in place for the American support?

Supt. Rhoomes: I could get that, I could inform you where that is concerned, because I know I can specifically say that funding is terrible. Yeah, it is not more time needed, but funding.

Mark Iliffe: The remit here very much to augment what's going on. We don't want to be a sledge hammer that just brushes away things, but the thing that I would have a concern with the Motorola system is just making sure that it's not a closed system.

Supt. Rhoomes: No, it is not. It is not a closed system.

Det. Sgt. Henderson: They did mention that it can integrate well with ESRI, but it has been implemented initially where we had to do some manual upload, upload data in stages, because we didn't have a GS server. That was one of the challenge we have. With that infrastructure being put in place now, more discussion can be had where integration is concerned, with the call for service data and other data, or we can put that together on the server to do some more analysis.

Supt. Rhoomes: And based on what I've seen, I went to the RCMP, that is a Motorola system that they are using there, I went to the U.S and most of the systems there are Motorola, and any software we are buying is coming out of Canada or the U.S. There would be something that would work. Because they would put themselves at a disadvantage.

Mark Iliffe: Just trying to understand, because the vehicle tracking piece is part of our project so it's quite a critical component, it's quite a large piece, but I would imagine that there are going to be further analytics that need to be explored.

Supt. Rhoomes: Yeah, where the vehicle thing is concerned I will have to check and get some more information, and I could tell you where that is concerned, because some of the things also is that we have some vehicles that this thing would never work inside of. We have some, you would have seen the cars now on the road, so we would have to get modern vehicles that radios and whatever, and we also have some places that our microwave system don't work. Sometimes the phone signal will drop also, so we have to look at all of those things.

Mark Iliffe: That's a concern that I have, I really think the GSM networks can be really powerful, especially for gaining big data insights, but in terms of a communication mechanism there's a connectivity consultant who you will meet in twenty minutes who will discuss that piece further, but my personal view is that potentially that GSM internet is not the final solution here.

It's a good intermediary step, so in terms of tracking all the vehicles and giving your office a dashboard that shows here are all the vehicles now, with hot spot mapping. Giving tactical officials, you know, this is the past 24 hours, so when the superintendent receives the report of what's going on in his division, he's able to see this is what happened ...

Det. Sgt. Henderson: And then this is our policing response.

Mark Iliffe: Exactly, and then being able to adjust and set priorities from that. For the operational office, knowing that they are driving around in a much more secure environment and understanding how those data flows increase. The tracking of the vehicle is the first step, it's easy to track a vehicle, there's applications that you download on your phone. How that changes the method of policing, how that changes the approach as the data goes up is one thing, but that data comes down and will change the way the police work. Just understanding what that looks like is something that we need to look at as well.

Supt. Rhoomes: So, I'm going to leave you, right, or you are finished?

Mark Iliffe: I think we're finished for this meeting unless you would like to discuss anything else?

Det. Sgt. Henderson: I'm sort of satisfied my concerns have been fleshed out, because the discussion at my level is we have tried a number of systems before and it's not translating to the man on the ground. It's just not happening. There's an emphasis on change management, there is an emphasis on training, and with this meeting, even though GIS has been around for a long time, there is also an emphasis on how we get this down to the patrol level, how we get a better response tactically. Because it must translate to, and I tell you, at the end of the day, it must focus on crime reduction.

Mark Iliffe: Yes. The one thing I'd be interested in, is have their been any user requirements? Because what it seems is that a lot of the work before was driven by the technology, that the reason why the impacts at the local operational level have not necessarily been achieved, because no one's really worked out what does the operational officer want.

Supt. Rhoomes: Yes, I think we're working on that now. That was one of the biggest struggles, because past things have gone on, and I tell him that, you know, we can have a Benz. You can give us a Benz, I can give us a Lada, and I tell him that the police will drive the Lada so it can do more things than the Benz, if they did not have a proper buy-in. So I think that's where we're going to get it from, a buy-in, as you said, the constable that is going use the thing to the officer, and it has different level, because what the constable is doing and what the senior man is two different things.

Mark Iliffe: Completely agree. The way that I would institute and work in this process would be by holding forums with officers, with sergeants, with inspectors, with superintendents and with the commissioners to sort of go and ...

Supt. Rhoomes: Yeah.

Mark Iliffe: Because the commissioner, are you aware of Uber?

Supt. Rhoomes: Mm-hmm (affirmative).

Det. Sgt. Henderson: Yes.

Mark Iliffe: In the CEO's office of Uber, there is a video wall with something called 'God View', and that shows the entire planet.

Supt. Rhoomes: Okay, so he's got ...

Mark Iliffe: No, he can sit as the CEO and go, "How is Uber globally? Show me the world," and you see these little dots and a heat map of how many Uber trips are happening around the world. You've got the sunlight, daylight, sunlight, nighttime, and then he can go, "I want to see Bangalore." Into Bangalore, people riding around, cars without drivers, average wait time, average trip time, average time from accepting the trip to going to pick the person up, average time of the person being in the space before the person gets into the car. These sorts of analytics.

Supt. Rhoomes: It's a very good service, I use it.

Mark Iliffe: Does the officer want that?

Supt. Rhoomes: Cheaper than anything else, too. Yes, man.

Det. Sgt. Henderson: For me, yes.

Mark Iliffe: No, no, no I mean the patrol officer.

Supt. Rhoomes: Yeah, but your supervisor.

Det. Sgt. Henderson: Supervisor.

Mark Iliffe: No, I'm talking just the guy driving the car. He doesn't need to have that, he or she has a different…

Det. Sgt. Henderson: Area of operations, the area he's responsible for - right.

Mark Iliffe: What does he need to see, he or she need to see, locally? Common crimes, priority.

Supt. Rhoomes: Right.

Det. Sgt. Henderson: Hazards.

Supt. Rhoomes: Or even if you call him and sending him on a scene, you would like to know if that person is a violent person, if that person has a firearm, if there is a past history with police on that, so he can go with a mindset to say, "This is how I'm going to approach this situation."

Insp. Bascoe: Commanders know, would be able to see what's the response time. Call for service, what's the response time.

Mark Iliffe: But all of that information is fundamental data. You don't need to create, you can do that with the analytics. From you receiving a 999, or is it a 911?

Supt. Rhoomes: 119.

Mark Iliffe: A 119 call, the clock can start. The ticket gets raised, the case management conversation comes later, so I don't want to prejudice, sort of speak words for my colleagues who are much more experienced in the case management aspect, but from a geographic aspect the call comes in, you use a gazetteer to establish where is that event, where is that person, get the location. The clock starts, because that comes in at a time, that time is noted down, police officer gets dispatched, you have an understanding of the time between the call coming in to dispatch. At the dispatch time, that car has a location, somewhere in the city. What is the estimated time to get to the place? What was the actually time? When does the police officer go, "PCO-135 on scene", as opposed to responding?

You're getting there and then all of that data can be aggregated to the commissioner, this is what's going on, to the patrol officer going, "Last week, we responded in eight minutes. The target is six, maybe I need to not do these things." You know, you don't need to necessarily enforce it, but making these statistics aware enables improved performance.

Supt. Rhoomes: Targets.

Mark Iliffe: Putting it into the SOPs, you help drive performance reviews based off this data.

Det. Sgt. Henderson: So there's some satisfaction as well, better service, service delivery. The car itself now, it does that level of monitoring, it's only that the officer in the car who is being dispatched is without a display, a device. He just has a radio, but from the call, comes in and it's taken by the call taker, the timer starts running in the call system and based on the type of call, they have different wait time of that period of time. If it's not dispatched, some indicators start flashing on the screen to alert the supervisors. The data is there, right, it's just to start consuming it.

Mark Iliffe: That's where, broadly, I think that we're in this position that we've definitely got the ingredients here. In contrast with a country like Tanzania, they don't have the ingredients, they don't really have the fundamental components to pull this out. I think that we're about 80% of the way there.

Det. Sgt. Henderson: I wouldn't say 80%, because one of our biggest challenges, connectivity to persons on the ground, because not all police stations have a direct connection to the HQ.

Supt. Rhoomes: They don't have phones right now.

Det. Sgt. Henderson: Right, they don't have phones, so we still have a gap there.

Mark Iliffe: Really?

Det. Sgt. Henderson: Yes.

Supt. Rhoomes: Yeah man, wait a bit on Mill Bank.

Insp. Bascoe: For Mill Bank.

Supt. Rhoomes: We'll wait a bit.

Det. Sgt. Henderson: I guess the projects now are surrounding pushing more technology down to the ground to minimise the level of duplication, and getting the rich data coming up, because a lot of data is being lost during transmission because persons are doing things that manual way. We're losing a lot of data because of that, so the focus now is see how many devices and the right technology to get that data coming to us.

Mark Iliffe: Okay, fantastic. Thank you very much, I really appreciate that. Thank you for this meeting.

## Dispatch Operations Analysis Meeting

10th August 10-08-2017

Dispatch Operations Room, Jamaican Police Headquarters

Table 6 Meeting Participants

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Position** | **Email** | **Phone** |
| Norris Rhoomes | Superintendent - Officer in Charge ICD | [norris.rhoomes@jcf.gov.jm](mailto:norris.rhoomes@jcf.gov.jm) | +1 (876) 809-2171 |
| O’Neil Ramsay | Sergeant - Dispatch HQ, 119 Operations Room | oneil.ramsay@jcf.gov.jm | +1 (876) 548-9910 |

**Transcript**

Mark Iliffe: Yep, perfect. Okay. So I'm here to specifically talk about the vehicle tracking system and understand how the vehicles are going to be tracked, and sort of integrate it with the crew at the command centre. What I'd like to do if possible is get an understanding of where things are right now. I just saw your command centre, how the computer dispatch system is working, how many people are using that system, how many people are trained to use the system, and what the flow of information from the 119 system all the way through to a police officer being dispatched and being on the scene. This is to support the IDB's learning operation to the ministry of national security. There's a component in that, which is based on improving the tracking of vehicles to help support the reduction in crime but also enhance the enforcement of crime to sort of perversely increase the clearing numbers and the incarceration numbers. Just a sort of broad; this is where I'm coming from.

Supt. Rhoomes: We did meet earlier this morning. I told Mark about the work you are doing.

Sgt. O’Neil: All right, we have, this centre here is the headquarters, and we have three other sub-centers. One is in area one but that is in Montego Bay. I have one in area 2 which is in St. Annes Bay, and you have one in Mandeville. Presently the CAD is only installed in Kingston and Montego Bay.

Supt. Rhoomes: This is where, outside the US Embassy you will going to buy additional things for us, for the other locations, to expand it.

Sgt. O’Neil: How it works for us though, is that we have call takers here who answer the 119. We call it 119 Emergency Line. Whenever they get an assignment, they would enter it into one of the CAD machine and it will go directly to another person we call a dispatcher.

Mark Iliffe: The person makes the 911 call, all right, it goes through to somebody, who then puts it through to the dispatcher.

Sgt. O’Neil: That's correct.

Mark Iliffe: Okay.

Sgt. O’Neil: This country is equipped with one of the CAD machine. They are able to see all information that is placed on the machine, by the call taker. They in turn know who to respond it by using the radio to call the units over there on the field, in the field.

Mark Iliffe: The 911 dispatcher, the 911 operator who receives the first call, makes the decision whether it's a prank phone call. Do they collect any information apart from passing it to the dispatcher; the location, what it is?

Sgt. O’Neil: That's correct. If it is an emergency, they collect the basic information; what is happening, who is involved, as much information as they can gather in a short space of time.

Mark Iliffe: How is that information captured? Is there a form? Is it text? Is there any like ...

Sgt. O’Neil: No, via the telephone, call is populated with a drop down list and there are areas that you type in the information. For instant, if you have a dispute, you indicate what is it that, the drop down lists as a dispute, and then you type in what is happening there. The dispatcher would have seen that and be able to inform the patrol what is happening, probably who is involved if that information is there.

Mark Iliffe: Is that data structure documented?

Sgt. O’Neil: I think there is a manual that came with CAD.

Supt. Rhoomes: Yes, I think that it's documented.

Sgt. O’Neil: Yes, I think it's documented.

Mark Iliffe: Is the CAD tailored towards the requirements of this office or is it just an off the shelf?

Supt. Rhoomes: I think, well it was off the shelf, but I think it was tailored for here.

Mark Iliffe: Does it fit with what you need right now, though? I've got with the reports that written, it would be possible for us to say, "This is an issue that needs to be looked at." Then, we provision that into the programme.

Supt. Rhoomes: We can check with Leonardo.

Mark Iliffe: Yes. Great. Okay, so when it goes to the dispatcher, that's the point when it goes to the first responder.

Sgt. O’Neil: Yes. The dispatcher alert the first responder. That information goes to the first responder via the radio, not via electronic system.

Mark Iliffe: Okay. How is that first responder selected?

Sgt. O’Neil: Based on availability.

Mark Iliffe: You've got 136 cars at the moment, I believe have got a GPS tracker.

Sgt. O’Neil: Okay.

Mark Iliffe: That could show where they are, I believe.

Supt. Rhoomes: I need to verify to see how many cars. I will verify and tell you.

Mark Iliffe: Okay, would it be possible to see a map of where all the cars are now?

Supt. Rhoomes: Your map show all the cars?

Sgt. O’Neil: Not all of them.

Supt. Rhoomes: No, they don't show you all the cars.

Sgt. O’Neil: We can show you those that are ... What happened, if you do not enter the persons on duty, then you would not see the cars.

Supt. Rhoomes: Yeah.

Sgt. O’Neil: If you have 160 and there's only 20 out there presently on duty.

Mark Iliffe: No, that's fine.

Sgt. O’Neil: You would see those that are on duty.

Mark Iliffe: How is it possible to turn the systems off?

Sgt. O’Neil: You can?

Mark Iliffe: Apparently, it's possible to turn the location tracking off in the cars.

Sgt. O’Neil: I'm not sure exactly.

Supt. Rhoomes: No, I'm not sure. No, they can't turn it off.

Mark Iliffe: Okay, because I talked to Lieutenant Colonel Stacey Thompson yesterday.

Supt. Rhoomes: Yeah.

Sgt. O’Neil: Well, turned off.

Supt. Rhoomes: Turn it off, I don't know.

Mark Iliffe: He said that it was possible to stop the tracking.

Supt. Rhoomes: Not, I don't know where the colonel gets his information from.

Mark Iliffe: Okay.

Sgt. O’Neil: Just stop the tracker.

Supt. Rhoomes: No, you'd have to physically put out something onto the car.

Mark Iliffe: There's a possibility for us to make a leap here where we could optimise the dispatch, based on the closest available car. If you're able to identify the location of where the call was coming from, the dispatcher could see that map and go, "Unit Number Four, you are closest to the incident. Please, can you respond," or, how does the first responder get selected?

Sgt. O’Neil: All right, we are divided in areas, divisions. If for any reason you have an assignment and you will look at that division and the resources that they have, that area, resources that that particular division has. That they have to, able to say no. Now, each of those actual, they are given a specific area to patrol. One may patrol in or around this area. Any assignment come from this area, you're the first one we'll call.

The only way you call someone else, if it's not their assigned to assignment. All right, so let's take our 50 radios, 50 metre radios and one patrol is given that 50 metre radios to patrol. If there's an assignment in that area, then the dispatcher who'd first alert that unit. If it is that that unit is already assigned, then you move to another area where there's a unit that is available, closest to assist.

Mark Iliffe: Okay.

Sgt. O’Neil: Of course you go through by the commander on the ground. You contact the commander and let them know that this is out there.

Mark Iliffe: First responder responds, and then there'll be a process which, scenes of crime and others attend.

Sgt. O’Neil: Depend on the situation.

Mark Iliffe: On the situation, okay. How much of that is catalogued at the moment? The reports, are they all paper reports or are they ... Do they get fed back into the dispatch system?

Sgt. O’Neil: Once we've dispatched a unit, they have to give us back feedback and we enter it in the system. You say in this dispatch in that dispatch there, enter that. If it is a crime, where you know, then we get a full report from that area and then you enter in the system.

Mark Iliffe: That goes back to the dispatcher?

Sgt. O’Neil: No.

Mark Iliffe: Or does it go to some other ...

Sgt. O’Neil: Those do not take a long period, goes directly, the radio contact goes directly to the dispatcher, who reopen that incident and update it. If it is like a murder, which you know, sometime take a little longer time to get respond, then that report would go to the supervisor and they enter it into the system. It still get into the system.

Mark Iliffe: The first responder responds to the dispatcher for, I don't know, "Someone's stealing my car," or, "Someone's robbed something." Then, the first responder goes and goes, "Yep, that, someone has stolen that. We have arrested him," or he's gone. Dispatch ...

Sgt. O’Neil: All right, you dispatch the unit, they or on the way.

Mark Iliffe: Yeah.

Sgt. O’Neil: In the car, you indicate that unit's on the way. At their arrival, they indicate that they have arrived.

Mark Iliffe: Yeah.

Sgt. O’Neil: You arrive them, assess the situation, they give us a report of what is in that area scene, what option that they do. That information is entered into the system. Of course they talk and the dispatcher types. If it is not their area, someone, or if it was armed robbery, they need for an assistant, that they're requesting the dispatcher send for an assistant.

Mark Iliffe: Okay, great. When they return to when the first responder officer's returns to the police station, that's when the traditional reporting and writing into the crime diary.

Sgt. O’Neil: That information doesn't come through us.

Mark Iliffe: Okay, so how many cars do you have at any one time on patrol?

Sgt. O’Neil: As I said, depends on the division. If you're talking about the entire Jamaica...

Supt. Rhoomes: I mostly would say not 40 day.

Supt. Rhoomes: It depends what car also. Maybe they don't want the same old car when they go.

Mark Iliffe: Yeah, I'm just thinking that there are roughly 3,000 police cars in Jamaica from what I understand. On any given day, just roughly, are we talking 2,000 being out, all 3,000 being out? What's the capacity utilisation of each of those cars?

Sgt. O’Neil: I'm not sure I can give you an answer for the entire Jamaica. The entire Jamaica don't have consistent, as I said, it's only Kingston and area one recently got them. I could just look on the car system and tell you the amount of cars that are deployed to do domestic patrols.

Mark Iliffe: Yeah.

Sgt. O’Neil: We would have cars out there that are not doing domestic patrols, but they are still out there, doing investigation, depending on the section they are from. To give you a total of number of cars deployed, no. I would not able to just give you like that.

Mark Iliffe: Do we have an understanding of how many cars are patrol cars, how many are just utility cars, or is it just interchangeable? I'm wondering about the fitness for purpose. Obviously I'm sure every police officer would want the biggest, fastest police car going, but that’s not always possible.

Supt. Rhoomes: We have too many different cars.

Mark Iliffe: Okay.

Supt. Rhoomes: Sometime we use it in the Hilux.

Sgt. O’Neil: Hilux.

Supt. Rhoomes: As a response car. The Hilux is not a response car.

Mark Iliffe: No, but if you're going off-road, it would probably be pretty useful.

Supt. Rhoomes: Yeah, sometimes not off-road.

Mark Iliffe: What sort of data integration do these systems have? How easy would it be for me to just hook a different system up and link stuff up?

Sgt. O’Neil: Hard, presently the CAD is not interoperable.

Mark Iliffe: What system(s) do you have running here apart from the CAD?

Sgt. O’Neil: We have CIMS. CIMS is our database that we use to capture crime. You turn wanted persons, missing persons, prior offences, persons who are wanted, and whatever it is. We also have capability for vehicles of interest, persons of interest.

Mark Iliffe: Do you do any number plate recognition?

Supt. Rhoomes: No, not yet.

Sgt. O’Neil: No, not yet.

Mark Iliffe: Okay, so you've got CIMS, the peoples of interest, anything else?

Sgt. O’Neil: Other than CIMS we have access to inland revenue system. That's where we check on our registration page to see who's insured and taxed their car. We also have a stolen motor vehicle database we use to access to. That one is not national though, meaning that that person's known to have access to it only. Traffic ticket management system. We also have that.

Mark Iliffe: With the ticket management system, how integrated is it?

Sgt. O’Neil: It is on its own, right? It's not integrated with anything?

Supt. Rhoomes: No.

Sgt. O’Neil: We havejust got a new system Cyclops.

Supt. Rhoomes: Mmm-hmm.

Mark Iliffe: Cyclops?

Sgt. O’Neil: Yeah.

Mark Iliffe: What's Cyclops?

Supt. Rhoomes: Cyclops is our system given to us by the UK. It's like a criminal record system.

Mark Iliffe: Okay, how many people are trained in these systems?

Sgt. O’Neil: Except for the Cyclops, all the other Cyclops, all the other system. All the users inside police emergency are trained to use it.

Mark Iliffe: All police emergency staff.

Mark Iliffe: Okay. How many?

Sgt. O’Neil: Probably maybe one or two who would have just reached the centre, and not be trained as it, but in terms of the total, we have 198, sorry, persons at the centre. Now, they're all trained. For the training we've got, to take it one at a time.

Mark Iliffe: Okay, so with the 108, 198 trained personnel, how many ...

Sgt. O’Neil: Not 198, just 98.

Mark Iliffe: 98, okay, how many computer stations do you have?

Sgt. O’Neil: 41, one is just one centre. It's a flat setting. For the 119, we have 19 work here on a shift. We operate on a three shift basis, because we run 24 hours. We have presently 13 areas for 119. Each of those areas, should have a CAD machine. They don't, so what we are doing now, we use, we couple up so one persons, they log into the CAD machine and you have two call takers at each of the two to maximise on both calls because we get a lot of calls on a daily basis.

Mark Iliffe: How many of those are prank phone calls?

Sgt. O’Neil: Based on the system, 70% to 80% of it is prank, are pranks. We are looking at that on a daily basis.from 32,000 to it is not fluctuating between 17,000 and 21,000 a day, prank calls.

Mark Iliffe: So only like 10,000 of those are genuine.

Mark Iliffe: Okay, so with the 13 work stations, 98 trained personnel and three shifts ...

Sgt. O’Neil: Yes.

Mark Iliffe: You're looking at 30 people sort of roughly being available for each shift, but only 13 ...

Sgt. O’Neil: With 98 persons, those 98 is not necessarily the call takers.

Mark Iliffe: Okay.

Sgt. O’Neil: You have from, I'm talking from the head of the department, all the way to the bottom. In terms of shift role, presently we are able, the maximum we are able to reach is probably 18 persons and 18, not to include the call takers and if we look at 18 at a minimum, it should be a manager, who is an inspector, sergeants and corporal, they run the non-emergency desk at the back, because you get calls to deal with an operation, activities. There are a lot of that has to be done. That is done by the supervisor, the line staff.

The upper region support desk consists of those databases. You have someone there to monitor those when I call. When I request his name, then they do the searches. Then you take all the dispatchers. Sometime you can maybe see us with 11 call takers, 11, 10, sometime it goes on because a person's reported sick. Persons one leave, but the main thing though, if we could get rid of the prank calls, then we will deliver, better delivery in terms of the number of calls that are answered.

I must say how the system work, is that call is forced to the agent. As soon as the agent is off one call, then as long as there is another call in the queue, it is going to go to that agent.

Mark Iliffe: I imagine when in busy periods, it's just ...

Sgt. O’Neil: “police emergency” and “police emergency”. Sometime not getting time to breathe. Yeah.

Mark Iliffe: I don't have any other questions really, unless you've got anything you'd like to add.

Sgt. O’Neil: It's not a question, but because they're, all these systems are different databases, it is difficult for the agent to manage three or four keyboards at the same time. For instant, one of the dispatcher for area four, he is looking at three screen, two for the CAD machine, one with the SIMS, one with the stolen and one with the radio. Now, all of those machine has a keyboard and a mouse. That's one of the issue.

Mark Iliffe: What you need to do is you need to have one computer and then the data form that is in front of them, feeds those different systems by a single computer.

Sgt. O’Neil: That's correct.

Mark Iliffe: Okay, that's one of the reasons I ... If possible, just take the photo and go, "Here is this person," three computer screens, ding, ding, and really just illustrate that.

Sgt. O’Neil: Okay.

Mark Iliffe: Would be really useful.

Sgt. O’Neil: Yes it would.

Mark Iliffe: To simplify.

Sgt. O’Neil: More integration needed. Of course, the stolen motor vehicle, as I said, it is not national. We would have before, using a book, but we realised that writing it in a book is not good. Write it in a book when they reference to search for it, so a database was created. It is from Access.

Mark Iliffe: Okay.

Sgt. O’Neil: I think the team would have work on new database. Is that?

Supt. Rhoomes: Which one?

Sgt. O’Neil: The stolen, but it is not yet up in terms I think control.

Mark Iliffe: Right. Okay. Thank you for your meeting and time today gentlemen.

## Tactical Crime Analytics Meeting

11th August 10-08-2017

IDB Office, Kingston, Jamaica

Table 7 Meeting Participants

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Position** | **Email** | **Phone** |
| Donovan Anderson | Det Sgt - Analytics | [donovan.henderson@jcf.gov.jm](mailto:donovan.anderson@jcf.gov.jm) | +1 (876) 818-5446 |

**Transcript**

Mark Iliffe: Okay, just sitting here with Sgt. Henderson from the Jamaican Police Force. Just showing me the statistics and the sort of stuff that you do.

Sgt. Henderson: Alright. What happens is that Inspector Bosco's unit would send this information to him. Now the history of this is the Geographic Divisions send the info of the daily crime to him, rather than me. He collates it in his database, extracts this information for me on a weekly basis. What I do now is make this information interactive.

Mark Iliffe: And that data as it comes in to you, is that a manual process? Does he do it in Excel, and send to you?

Sgt. Henderson: Excel.

Mark Iliffe: No databases?

Sgt. Henderson: No databases. Not at the Divisional level.

Mark Iliffe: Okay.

Sgt. Henderson: It's difficult because they're not doing it in a central way. It's 19 Geographic Divisions doing 19 different ways.

Sgt. Henderson: Right, so what we did was to standardise it with the Excel Spreadsheet.

Mark Iliffe: Okay.

Sgt. Henderson: So, that is done. We want to take it to the next level with the incident management so that this will be eliminated. But, what it does for me is that I am able to look at the crime picture in a more interactive way. By selecting, let's say for example, this shows that the St. James Division is #1 with murder. By changing certain variables, and this is Major Crime, by changing certain variables, you see Manchester is at the head with break ins. But all of these are different charts to show the data different ways. I do a weekly break down on probability of causation. So, for example, when I had murder here, I took down what would happen in a particular division. Certain persons were taken out. In this instance, one particular wanted person was fatally shot, and since he was fatally shot, the division has not seen any murder except for one since his fatal shooting.

Mark Iliffe: So, he was killing every week.

Sgt. Henderson: He was killing every week, basically, yeah. So, that was what happened. Now the Division is back up to a couple of murders, but it was domestic related. That kind of thing. It wasn't a gang feud.

Mark Iliffe: Okay.

Sgt. Henderson: But it shows causation to the very Divisional level. This again, the Geographic side of things is really just Divisions. Incident vs. victims. This now gives you a little bit more. This will give you ... Let's go murder... this is really a heat map.

Mark Iliffe: Just one thing. You are really pushing Excel to the limit, here.

Sgt. Henderson: Yes. To the very limit, to the very limit. I know that Excel is cursing at times.

Mark Iliffe: Now, I'm just saying how sort of interactive you have your drop-down boxes. You've got all of these things.

Sgt. Henderson: Yeah.

Mark Iliffe: That's, on paper Microsoft Access territory, not Excel.

Sgt. Henderson: Not Excel, because what happens is that, to get persons to use Access, it's so hard. To get them to use Excel is better, but everybody wants to use Word, and I'm like, "No. This is where it really is." So, this heat map here, breaks it down for example, I say, "Okay I'm going to highlight St. James. Now these are all the stations in St. James. So, these are physical Police Stations." But that's it. I can't go any further, geographically. So, I don't have the communities that the station covers.

Mark Iliffe: You don't have the communities the Stations covers. Do you have the street address of the crime?

Sgt. Henderson: We have that from time to time. From time to time we have that, but it's not necessarily accurate.

Mark Iliffe: But in this, in the crime reporting, you don't have the-

Sgt. Henderson: So, you will see for here Spanish Town Road, vicinity of North Street. You really don't have an address, the closest address.

Mark Iliffe: And that is so vague.

Sgt. Henderson: Yeah. Very vague.

Mark Iliffe: So, Rose Hill District could mean anything, whereas here, you've got the precise room-

Sgt. Henderson: Yes. Towards Ricketts Avenue, Ricketts Street. That's a part of our drawback that we have. Short of that-

Mark Iliffe: So, you need to standardise location. There needs to be some way of standardising addressing, and reporting of.

Sgt. Henderson: Yes, that is so ... it is extremely difficult because Jamaica's addressing system is not yet fully standardised. So you still have Districts. As a matter of fact, you have 83 Hagley Park Road; that is an entire community.

Mark Iliffe: I'm currently staying at 16 Oxford Manor.

Sgt. Henderson: Right, but for Oxford Manor, it's an apartment. Rooms, so. An apartment, so. No, this is a community. 83 Hagley Park Road, that's it.

Mark Iliffe: Okay.

Sgt. Henderson: Same thing with John's Road, 31 John's Road, and I know about other areas. But this just gives it a comparisons in terms of male/female, etc. etc. But what I do from the other day is this. Utilise two apps on the phone, and this is now becoming a part of my analysis.

Where are you, where are you, where are you?

The issue I am having is that I also get GIS data. The GIS data that I get ... I got here, I'll show, in a Kmail file, this is what I get in Kmail on a weekly basis. In all honesty, it's not very helpful. It's just showing me what happens over a period of time.

Mark Iliffe: So, who is generating those location points?

Sgt. Henderson: The location points here are generated by the Inspector Bosco's Unit, the GIS Unit, downtown. Again, this not even strategically, this helps us, really. So, what we are trying to do is make it more for the officer on the ground. So, what I did last week, in a particular space in Portmore, I went there, and I pretended that this now would be my patrol zone.

I did it three times, to say to the officer that, "Listen, just imagine that this being three units out. Not a problem, but what happens is that along your patrol route, you took some photographs. So, it can be, as I said last time, let us say this means where all parties will be kept this week, Friday. Then you can plan a patrol route."

I took a photograph that had a graffiti, and it so happens that at that particular spot, we have a series of robberies where the graffiti is. Now, when I checked it out, there are two other locations with that particular graffiti that is like a bus stop, and that is where the robberies occur. So, you can take problem locations.

So, what I've been saying to officers on the ground is that by just geotagging the photographs, just location on taking a photograph, you can upload it to a Kmail file. You can look at your patrol routes, and then you can overlay it with the crime that happened in the particular space.

Mark Iliffe: Mm-hmm (affirmative)

Sgt. Henderson: You notice, I'm not even explaining. A robbery took place, here. When was it committed? That kind of thing, so you can understand the effectiveness of your patrol. So, this has multiple, multiple, multiple use.

Mark Iliffe: Yeah.

Sgt. Henderson: Because I can take gang areas-

Mark Iliffe: Yeah.

Sgt. Henderson: Put it on the map. These look up pins are where incident happened. So, let's say they are crime scenes.

Mark Iliffe: Yeah.

Sgt. Henderson: I can plan a patrol route, targeted raid, whatever it is. "Where did I find the most firearms?" That is there. "Where is my team now?" kind of a thing. Well, that's not a property, but this is what it can do, but this is a thing. This does not happen at the most basic level that is needed. So, yes, we have been in our meeting for an entire day, but all of what you are doing is up here.

Mark Iliffe: No, but that's what I mean about making maps for the community offices.

Sgt. Henderson: Yeah. We have ESRI, that is what Bosco tells you about, but it is not being used. It is not being used at the most basic level, and that is where we want it to happen, at the most basic level.

Mark Iliffe: But, in your opinion, do you want ESRI at the most basic level-

Sgt. Henderson: No.

Mark Iliffe: Or do you want to have just a webpage that ... like a dashboard that goes, "These are where the high crimes are. This is where you should patrol."

Sgt. Henderson: For my area.

Mark Iliffe: Yeah, for my area.

Sgt. Henderson: Right, because the data will be coming from the local officers.

Mark Iliffe: Yeah.

Sgt. Henderson: So, they need to see immediate-

Mark Iliffe: Yeah.

Sgt. Henderson: Rather than have it processed somewhere else, to come back.

Mark Iliffe: Great, okay.

Sgt. Henderson: And that's basically it. My office, we're trying to build out an analytical office. It's short of equipment. As a matter of fact, we have none, because it's not yet built out. The only thing we have now is just basic computers and a white board. So, I'm going to try and see if I can put that to drop it in our budget to give us something. Even like the conference room we were just in, that big screen, so that the analytical team can look at it and see what's happening.

But the next thing that I am doing, and I'll be doing over the weekend is from a ballistics standpoint, we have another issue.

Mark Iliffe: Really?

Sgt. Henderson: Alright. Sergeant Bernard created a wonderful programme that links all firearm, and gives you a geographical overlay. This Division, St. Andrew South had the greatest increase in crime, and we showed it as it relates. I went down to the communities giving us problems. This is in St. Andrew South, but these three communities, they're outside of St. Andrew South. This is in St. James, way over, and these two are in St. Catherine.

Mark Iliffe: Mm-hmm (affirmative)

Sgt. Henderson: Alright, but this is what I'm breaking out later: The crimes, linking ballistically to guns used in St. Andrew South.

Mark Iliffe: Yeah.

Sgt. Henderson: So we have a couple in St. Andrew Central, St. Catherine North, South, Clarendon: All over the place. It will be good now if I could look at all the linked cases-

Mark Iliffe: Yeah.

Sgt. Henderson: And see where they are linked to. Mr. Bernard has that capability. It's not updated, but it's getting there. It's going to get there in short order. If I remember my password, but again, his software does not overlay my local information.

Mark Iliffe: And that's what you need.

Sgt. Henderson: And that is what I need. All information is turnkey, and read only, so to speak.

That being said, that being said, password and everything, gone. Let me see if I can log in and see something. It's not been used so long. Alright, so it's not going to connect.

As again, what happens is that you give a strategic data; we're unable to overlay it with my data in the Division so that it makes sense to me, that I can do something like a Google earth.

Just to point something, I know you're expert at this, but I did this using cell phones on my way to work, and I'm showing persons that this can happen.

Let me click you out, you out, you out, you out. This is just on my way to the office, right?

Mark Iliffe: Yeah, that makes sense.

Sgt. Henderson: And then, what I did now was to just take photographs on my way to the office, and I'm saying to persons, "You can click on it, and it's all right there."

Mark Iliffe: Ok – I see. Thank you very much for meeting with me today.

1. Interview with Sgt. Ramsay and Supt. Rhoomes, 10th August 2017 at Police HQ [↑](#footnote-ref-1)
2. A detailed breakdown of these statistics is available. [↑](#footnote-ref-2)
3. The geographic location is not automatically provided. Information such as caller ID is not provided either – this has been discussed with the JCF taskforce due to reasons of trust within the police and to ensure privacy/continued anonymous calls by the public. [↑](#footnote-ref-3)
4. This was established in prior reports and conversations, but there was discussion of “1600” GPS devices being in storage awaiting installation onto vehicles. The plan for the installation of these devices is as yet unknown. [↑](#footnote-ref-4)
5. <https://support.microsoft.com/en-us/help/13853/windows-lifecycle-fact-sheet> [↑](#footnote-ref-5)
6. User Centred Design is an approach that involves the end user as part of the design process. <https://www.usability.gov/what-and-why/user-centered-design.html> [↑](#footnote-ref-6)
7. Such standard would be the OASIS Emergency Data Exchange Language (EDXL) standards:

   <http://docs.oasis-open.org/emergency/cap/v1.2/CAP-v1.2-os.pdf>; or the Open Geospatial Consortium (OGC) standards: <http://www.opengeospatial.org/> [↑](#footnote-ref-7)
8. This amount was agreed with Michael Saunderson of the National Works Agency while in Kingston, 11th of August 2017 [↑](#footnote-ref-8)
9. Or is provided as part of other Government Network initiatives. [↑](#footnote-ref-9)