



# ANALYSIS OF RESOURCE ALLOCATION IN THE SOUTH AFRICAN POLICE SERVICE



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# Resourcing the police for effective policing



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## ACRONYMS

|       |       |   |
|-------|-------|---|
| APCOF | ..... | African Policing Civilian Oversight Forum         |
| CIO   | ..... | Crime Intelligence Officers                       |
| CSC   | ..... | Community Service Centre                          |
| MIC   | ..... | Management Information Centre                     |
| MIO   | ..... | Management Information Officers                   |
| MTEF  | ..... | Medium Term Expenditure Framework                 |
| MTSF  | ..... | Medium Term Strategic Framework                   |
| HREC  | ..... | Human Resource Establishment Committee            |
| SIMC  | ..... | Station Information Management Centre             |
| SIP   | ..... | Station Intelligence Profile                      |
| OD    | ..... | Organisational Development                        |
| OSD   | ..... | Occupational Specific Dispensation                |
| PCP   | ..... | Portfolio Committee on Police                     |
| PSC   | ..... | Public Service Commission                         |
| PHREC | ..... | Provincial Human Resource Establishment Committee |
| PFMA  | ..... | Public Finance Management Act                     |
| PSA   | ..... | Public Service Act                                |
| RAG   | ..... | Resource Allocation Guide                         |
| REP   | ..... | Resource Establishment Plan                       |
| SAPS  | ..... | South African Police Service                      |
| THRR  | ..... | Theoretical Human Resource Requirements           |

# 1. INTRODUCTION

Police service delivery across the country has been an issue for many years. Various reasons can be postulated for the inefficiencies, but the challenge for the SAPS remains the ability to balance resources with high levels of crimes, service delivery needs, increasing expectations of the community, as well as budgetary constraints. Various studies point directly to the poor allocation of resources.

An Inspections Report of the South African Police Service (SAPS) Detective Services conducted by the Public Service Commission (PSC) in 2011 found that 70% of 33 police stations visited did not have sufficient detective officers to undertake detective activities. Successful and effective investigation of crime requires adequate detective officers in all police stations and inadequate resource allocation negatively affects general operations.<sup>1</sup> Similar findings were highlighted by the Civilian Secretariat for Police Service in 2014 during the development of a turnaround strategy for the Detective Service conducted.<sup>2</sup>

An Independent Commission of Inquiry was established in 2012 with the mandate of investigating police inefficiency and ineffectiveness in Khayelitsha. The Inquiry found evidence of inequities in the distribution of police human resources and recommended that the SAPS method of resource allocation be revised to address inequitable resource allocation. Another recommendation placed special emphasis on the equitable distribution of experienced personnel with specialist skills in the investigation of serious contact crimes.<sup>3</sup>

The Portfolio Committee on Police in its report on Oversight visits to Police Stations in Nyanga and Philippi in the Western Cape Province, on 31 October 2014, raised concerns about staff shortages at these police stations. The Committee recommended that the matter be addressed by the provincial management and additional staff be made available to the stations.<sup>4</sup>

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<sup>1</sup> Public Service Commission. 2011. Consolidated Report on Inspections of Detective Services: Department of Police. [O] Available at: <http://www.psc.gov.za/documents/2012/Police%20Report%20Complete.pdf>. Accessed 9 March 2017

<sup>2</sup> Civilian Secretariat for Police. 2014. Policy on enhancing the quality and functioning of the SAPS detective functioning

<sup>3</sup> Commission of Inquiry. 2014. Towards a safer Khayelitsha: Report of the Commission of Inquiry into Allegations of Police Inefficiency and a Breakdown in Relations between SAPS and the Community of Khayelitsha. [O] Available at: [http://www.khayelitshacommission.org.za/images/towards\\_khaye\\_docs/Khayelitsha\\_Commission\\_Report\\_W\\_EB\\_FULL\\_TEXT\\_C.pdf](http://www.khayelitshacommission.org.za/images/towards_khaye_docs/Khayelitsha_Commission_Report_W_EB_FULL_TEXT_C.pdf) Accessed 10 March 2017

<sup>4</sup> Report of the portfolio committee on Police on Oversight visits to police stations in Nyanga and Philippi in the Western Cape Province, dated 31 October 2014. [O] Available at: <https://pmg.org.za/taled-committee-report/2126/>. Accessed 10 March 2017



The Portfolio Committee on Police once again in April 2016 wanted assertions from SAPS management that necessary resources and human capital would be made available to address historic resource imbalances, and that appropriate resource allocation would be provided for fast growing new settlements.<sup>5</sup>

A study conducted by the Department of Community Safety in KwaZulu Natal found that there were serious discrepancies between the number of people actually at the police stations and the provincial list of personnel strength at that station. This was because in some cases people who were transferred to other stations were still reflected provincially as being present at the initial station despite the transfer.<sup>6</sup>

In order to determine reasons for the insufficient police resourcing, a project was identified and conducted in partnership with the Provincial Departments of Community Safety/Provincial Secretariats. Police resourcing is also an area identified as one of the policing priorities within the Medium Term Strategic Framework 2014-2019 (MTSF).

## 2. AIM AND OBJECTIVE OF THE STUDY

The aim of this study was to provide an analysis of police resource allocation at police stations.

The objectives of the study included the following:

- To compare the allocation of human resources against the Fixed Establishment (granted) at police stations to that proposed by the THRR (ideal)
- To identify problematic areas pertaining to input/audit sheets
- To determine the process for distributing human resources at Provincial level
- To identify the constraints that impact on the optimal utilization of human resources

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<sup>5</sup> Report of the Portfolio Committee on police on the 2016/17 budget vote 23, Annual Performance Plan and 2014-2019 Strategic Plan of the Department of Police (SAPS), dated 19 April 2016

<sup>6</sup> KwaZulu Natal Department of Community Safety report on resource allocation

### 3. METHODOLOGY

The study used both qualitative and quantitative methodologies. The quantitative method focused on data which was collected in a standardised manner at all nine provinces. The qualitative method included interviews at police stations by means of a standardized questionnaire to collect information regarding the THRR input sheets, fixed establishments, duty lists, vehicles and reservists, at all sampled police stations in all Provinces for the past five years.

The project was specific to the following:

- Random sampling of police stations (6 stations in each province).<sup>7</sup>
- Criteria for identifying 6 police stations: Rural/Urban and A, B and C police stations
- Obtain station level allocation of human resources (ideal, granted and actual) for verification of the information
- Determine if there are any arrangements for additional human resources (duty arrangements/reservists) at police stations
- Conduct a comparison of international experiences against the ideal allocation and the actual allocation

Structured interviews were held with the following stakeholders:

- SAPS National Organisational Development
- Provincial SAPS Resource Allocation Committee
- Police Station Management

The main focus on the study was on personnel allocation. However, there was also, to a lesser extent a focus on vehicle allocations.

### 4. LIMITATIONS OF THE STUDY

The geographical scope of the study in each province was limited to six police stations due to capacity constraints; hence the results of the study cannot be generalized across the provinces. The results however provide a snapshot and insight into the process of resource allocation and distribution in the provinces.

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<sup>7</sup> See annexure A

There was poor cooperation from some of the police stations; with the result that some Provincial Departments of Community Safety had challenges accessing critical information. There were also capacity constraints at Provincial Departments of Community Safety which made data collection a challenge.

## **5. LEGISLATIVE FRAMEWORK GUIDING THE SAPS RESOURCE ALLOCATION**

Resource allocations in the SAPS are directed by legislative frameworks. The list below presents various frameworks that provide guidance for resource allocation:

- South African Police Service, 1995 (Act No. 68 of 1995)
- Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996)
- Public Finance Management Act, 1999 (No.1 of 1999)
- 2006 Regulation 20(2)(3) of the SAPS Employment Regulations
- 2014 SAPS 'Back to Basics' strategy
- Medium Term Strategic Framework (2014-2019)
- 2016 White Paper on Policing
- National Development Plan 2030
- Medium Term Expenditure Framework

## **6. THE SAPS METHODS IN ALLOCATING HUMAN RESOURCES**

Resource allocation refers to the assignment of human and physical resources to police stations. Human resource establishment consists of staff appointed under the SAPS Act (operational or functional) and staff appointed under the Public Service Act (administrative or support).

Post 1994, the South African Police Service has undergone a series of strategic and managerial reforms that were designed to improve core police service delivery, operational transparency, and broader police transformation, in both rural and urban areas. These reforms included a number of innovative policing programmes to change from a reactive to a proactive method of service delivery, such as community oriented policing, sector policing, and intelligence-led policing.

Based on a need to deal with crime efficiently and effectively, the SAPS formulated models in order to allocate resources equitably. The models include the Mannekrag Plan, the Resource Allocation Guide (RAG), the Resource Establishment Plan, and the Theoretical Human Resource Requirement (THRR).

The Mannekrug Plan was established after 1994 when the SAPS identified a need to develop a resourcing strategy that would meet the policing demands of the time. It focused on police station upgrades as and when funding was made available. In 1998/99 the RAG concept was formulated as a starting point. RAG became the Resource Establishment Plan (REP) and was tested in 2004/5. The THHR process began in 2011/2012 and added more variables as adjustments were needed. In the public service, every post must be established and graded for remuneration purposes.

The models that are discussed below include the RAG and the THHR.

### **6.1. Resource Allocation Guide**

Certain aspects of police transformation promote new ways of using police resources where new methodologies or strategies are developed to replace existing ones. The SAPS has since 2004 utilised the RAG which is used as a tool to determine the ideal human resource requirements at national, provincial and station level on an annual basis, using a basket of variables/factors that are performance and non-performance related. The core variables are related to the minimum service levels, business rules, workload, internal functions and external factors. The allocation of the budget during the Medium Term Expenditure Framework (MTEF) would dictate the number of actual/granted resources (especially human resources) to be allocated at each level in the police. However, as has been argued this method treats crime offences as static and it does not allow room for refinement in cases of fluctuations.<sup>8</sup>

Due to criticisms on the RAG system, there has since been transformation from RAG to THRR which is discussed below.

### **6.2. Theoretical Human Resource Requirement**

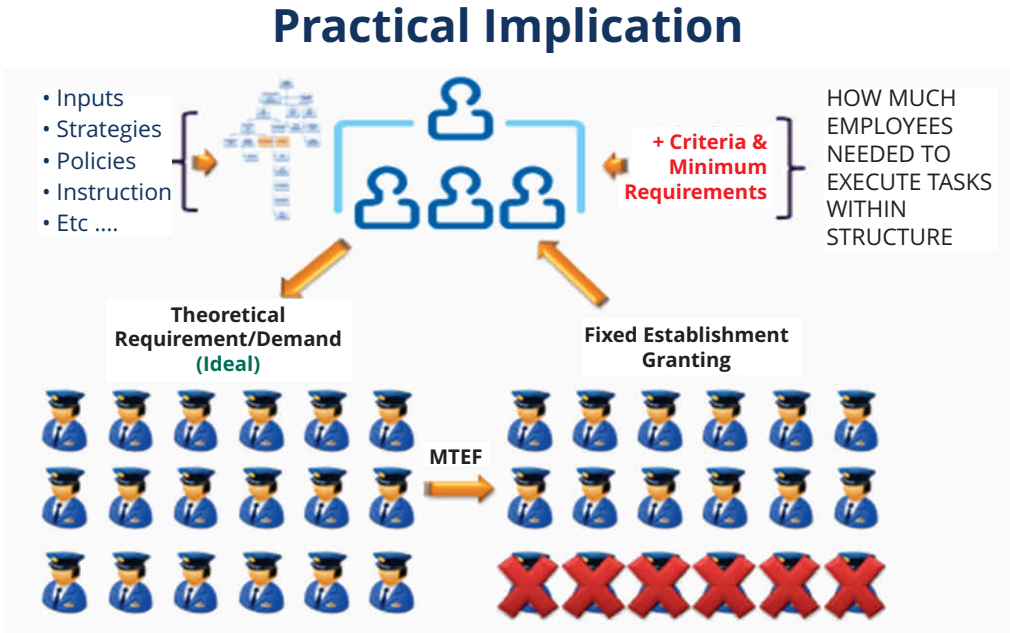
In response to the challenges and criticisms of RAG, SAPS undertook a RAG review which was subsequently replaced by the THRR model in 2011/12. RAG was regarded as a 'guide' and some stations exceeded the guideline. With the THRR, posts are fixed as per a post structure and determined by funding. Therefore, exceeding the fixed establishment places other personnel outside the staff establishment.

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<sup>8</sup> Albrecht, J.F., & Das, D.K (ed). 2011. Effective Crime Reduction Strategies: International Perspectives. CRC Press

The THRR of the SAPS is managed by a Human Resource Committee at SAPS Head Office which is chaired by the National Commissioner and is known as the Human Resource Establishment Committee (HREC). The allocation of personnel in SAPS is broken down into business units and the HREC allocate staff to these different business units. Each province is considered a business unit and receives their allocation as a business unit. According to Section 11 of the SAPS Act, the National Commissioner of Police is responsible for determining the fixed establishment of the Service as well as the number of grading posts. The Provincial Commissioners, as per Section 12 of the SAPS Act, have the delegated authority to distribute the allocated Fixed Establishment within each of their provinces. Diagram 1 below depicts the process for resource allocation.

**Diagram 1: Practical implication of ideal, fixed and actual resource allocation process**



Source: SAPS Organisational Development

The SAPS Organisational Development component at national level determines the THRR criteria or the 'ideal' post establishment, while the budget through the MTEF determines the Fixed Establishment, as approved by National Treasury and the SAPS Executive Committee. When the THRR figures are larger than the budget allocated for policing for a specific year, the THRR cannot be implemented. The Fixed Establishment principles determine the equitable allocation per province. The final number of funded posts that are allocated forms part of the Fixed Establishment of the police. The THRR determines the ideal number of personnel required, but due to budget constraints, the current situation is that the SAPS is only able to fund approximately 60% of the personnel number.

The SAPS allocation of resources is based on a “theoretical” requirement which is calculated based on the total time taken for all tasks that need to be done at a specific station. All the station information is gathered and collated into the Input Management Sheet at Station level by the Station Information Management Centre (SIMC). The THRR input sheet is divided into internal and external environment factors. The external factors comprise demographic factors which include population size; nature of the population, population movement, size of the precinct, topographical features of the environment, roads, transports, major infrastructure (for example dams), regular large events, courts and educational facilities. It also requests information on the number of gangs, registered and unregistered liquor outlets, firearm dealers and sellers and registered firearm owners, shopping centres and tuck shops, among others. Basically, the THRR attempts to consider all factors in the external environment that are likely to affect policing.

The internal environment factors include station infrastructure: area size of the station and various key facilities, rooms, community service centres, holding cells and toilets, information on other service points such as satellite stations, and number of client service centre activities such as registers in the SAPS environment entries. Furthermore, the tool takes into consideration reported crime per police station, per year. Finally, it accounts for the number of crime prevention activities. All these factors are weighted and aggregated as per the actual input sheet to arrive at a theoretical number.<sup>9</sup>

The SIMC then forwards the Input Sheet to the SAPS Provincial Office. The Provincial Organisational Development Office validates and captures the information on the Global Access Control System: THRR, and forwards this to the SAPS Organisational Development office at national level. The national office calculates the THRR and the level of the Station Commanders is determined according to the job weight range.

There are officially three categories of police stations; A-captain, B-Lt colonel, C1-colonel and C2-brigadier. The category of police stations refers to the size and ranking of each station, for example, a station with an A-Captain category consists of 90 personnel and below, and is managed by a Station Commissioner with the rank of a Captain. The threshold for B-Lt Colonel is 180, whereas the C1-Colonel station has a limit of 360 personnel, and the C2-Brigadier station has a minimum limit of 360 personnel. Categorisation of police stations is done via work studies conducted by the national office of Organisational Development. Provincial Commissioners are not authorised to change the category of a police station, or the rank of a Station Commissioner with a higher graded salary level, as this will result in the station

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<sup>9</sup> Western Cape study on Police Resource Allocation. 2017.

commissioner falling outside the post establishment. Provincial Commissioners, on annual basis has been tasked to determine police stations projecting a re-grade, based on a 3 year THRR comparison. This process affects the post establishment allocation of respective stations and affects the MTEF allocations. In terms of Regulation 35 of the SAPS Act, the Minister or National Commissioner may upgrade a police station provided the required criterion is met.

At a provincial level, a Provincial Human Resource Establishment Committee (PHREC) is established and chaired by the Provincial Commissioner. According to the THRR process, data collection is the responsibility of police stations, and distribution of resources in terms of the equitable distribution is the mandate of the Provincial Commissioners, according to Section 12 of the SAPS Act. The provincial office calculates their allocation of resources based on a crime threat analysis, provincial priorities, and developments in their respective policing areas, and distributes resources accordingly. Section 12 of the SAPS Act empowers Provincial Commissioners to re-deploy resources to a particular police station, as long as the basic staff requirements of each station are retained.

The THRR process also allows for stations to be declared “disadvantaged stations” based on the stations input sheet. The decision to declare a station disadvantaged is taken by the SAPS Head Office. The benefit of this classification allows disadvantaged stations to be allocated additional personnel.

It should also be noted that specialised units at local level are excluded in the THRR calculations due to their specialist function, although in issues of service delivery these units are deployed to police stations. The purpose for the specialised units' exclusion from the local level calculations is due to both its specialised nature and variables. These specialised units are usually national and provincial competencies meaning that the direct line of command lies with the national and provincial offices. However, components of these specialized units might also assist with policing functions at a particular precinct from time to time.

The THRR is currently in the monitoring and evaluation phase. It has recently received much attention more particularly to address the need to make on-going assessments and improvements in the allocation system.

Budget allocation in the provinces is as follows:

Provinces receive their budget from the SAPS National Office for all policing functions/activities to be performed in the Province. Provincial budgets are allocated according to the equitable share principle. SAPS allocate the money to the different programmes. Baseline budgeting is done at provincial level and the province normally receives an incremental of 1% or 2% on the previous year's budget. The Goods and Services budget as well as monies for vehicles are allocated to provinces, while the budget for salaries are centralized at National SAPS office. Additional posts that are allocated to provinces are funded by the National SAPS through the compensation budget.

## 7. COST OF SAPS HUMAN RESOURCES

Over the past five financial years (2010/11 to 2015/16) there has been a massive increase in the SAPS budget. In 2010/11, SAPS received a budget of R54 billion and by 2015/16 this amount had risen to R77 billion. In 2010/11, SAPS employed a total of 193 892 employees. By 2015/16 this had increased by 0.4% to 194 730<sup>10</sup>. The vast majority of the SAPS budget is allocated to compensation which constitutes 76.4% rendering compensation pivotal to the SAPS performance.<sup>11</sup>

To assess the role of budget allocations in the SAPS it is necessary to examine changing employment profiles, salaries paid, and the impact of inflation. Between 2010/11 and 2015/16, there was a nominal increase of 43% in the SAPS budget. However, when the impact of inflation is taken into account, the change in actual value of the SAPS budget is far lower<sup>12</sup>. In real terms the 2015/16 budget is only 9% greater than the 2010/11 budget.

Between 2010/11 and 2015/16 the average nominal earnings of the Lower Salary Levels 1-2 (Cleaners, grounds man, handyman, security guards, food service aids, messengers) category rose from R21 000 to R87 000. This corresponds to an increase of 219%, after the impact of inflation has been factored in. Less marked increases are also apparent for Salary Levels 3-5 (Level 5 includes constables under SAPS Act) and Highly Skilled Production which are levels 6-8 (Sergeant, Warrant officer, Captain). Amongst Salary Level 3-5 workers the average earnings increased by 68% and amongst Salary Level 6-8 workers, there was an increase of 27%. There were slight declines in the real

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<sup>10</sup> SAPS Annual Report 2015/16.

<sup>11</sup> The public service norm for compensation is 70%.

<sup>12</sup> Deflating the 2015/16 budget by the CPI index value.



value of Salary Levels 9-12 (Lieutenant Colonel, Colonel) workers and of Salary Levels 13-16 (Brigadier, Major General, Lieutenant General, and National Commissioner).

Accompanying the changing earnings profiles was the way in which posts were distributed within the SAPS. Of particular importance is the way in which the changes in both the average earnings and the number of people in each category impacted on the compensation bill. The proportion of the compensation appropriated by Salary Levels 9-12 workers dropped from 18% to 9% in 2015/16. By contrast, the total compensation bill of those in Salary Levels 3-5 increased from 27% in 2010/11 to 38% in 2015/16. This category of employee is overwhelmingly dominated by Constables, i.e. Salary Level 5. The share of the compensation bill appropriated by the Salary Levels 6-8 workers remained relatively constant, declining from 52% to 49%.

The change in distribution of the compensation bill was largely a result of promotions or upgrading of posts within the SAPS.

**Table 1 : Depicting compensation of SAPS employees across all salary levels**

| Salary bands   | Compensation of employees cost (R'000) | Percentage of total compensation of employees | Average compensation of employees per employee (R'000) | Number of employees |
|--|--|---|--|---------------------|
| Lower skilled (Levels 1-2)                               | 1,135,087                              | 2.0   | 87   | 13 005              |
| Skilled (Levels 3-5)                                     | 21,973,411                             | 38.2  | 230  | 95 477              |
| Highly skilled production (Levels 6-8)                   | 28,225,650                             | 49.1  | 368  | 76 704              |
| Highly skilled supervision (Levels 9-12)                 | 5,275,619                              | 9.2   | 601  | 8 776               |
| Senior management (Levels 13-16) and Executive Authority | 868,604                                | 1.5   | 1,131  | 768                 |
| <b>Total</b>   | <b>57,478,371</b>                      | <b>100</b>                                    | <b>295</b>   | <b>194 730</b>      |

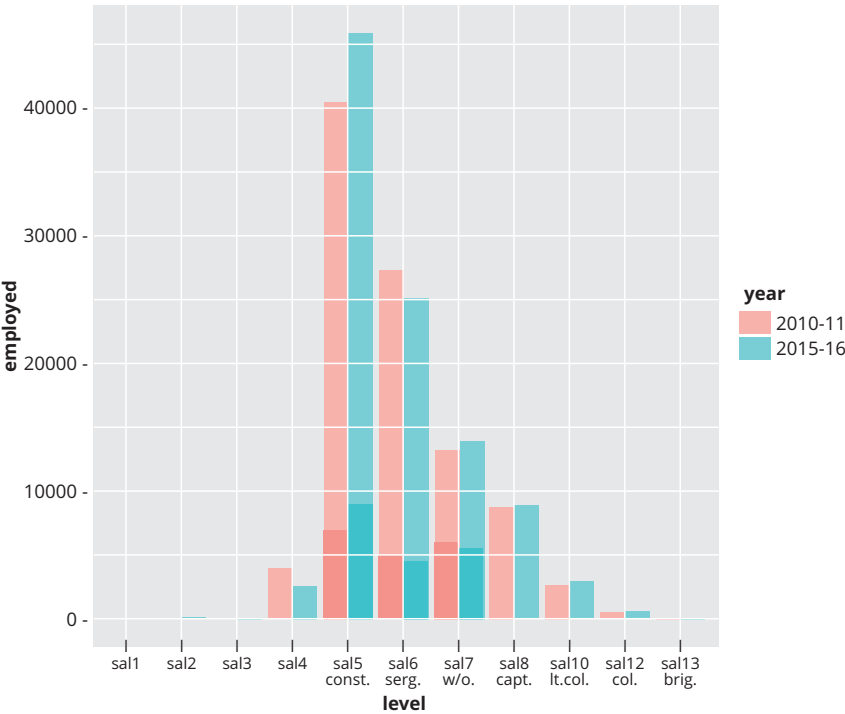
Source: SAPS Annual Report 2015/16

The impact of the promotions is clearest when comparing High Supervision posts and Senior Management posts. During this period the average earnings of Senior Management increased from R913 000 to R1.13 million. When CPI is taken into consideration, this represents a slight reduction in the real value of the earnings. By contrast the average earnings of High Skilled Supervision staff declined from R802 000 to R601 000 in 2015/16. In real terms, this reflects a reduction in the average earnings of 42%. This is explained by the progression of level 9-12 staff into Senior Management (level 13-16) ranks. At the same time, a proportion of level 6-8 staff progressed into relatively junior High Skilled Supervision (level 9-12) posts. This resulted in the substantial decline in average earnings of highly skilled employees (levels 6-9).<sup>13</sup>

<sup>13</sup> National Commissioner R. Phiyega media statement on promotion of SAPS members. <https://www.saps.gov.za/newsroom/msspeechdetail.php?nid=6115>. 01 October 2015.

Despite the marked improvement in remuneration rates between 2010/11 and 2015/16, the number of Levels 1-2 declined by almost 24% (4000). At the same time the number of employees in the next highest tier, Levels 3-5 increased by 9% (7700). Marked increases are evident for levels 9-12 and levels 13-16 Senior Management, both of which increased by 14%.

**Graph 1 : Fixed Establishment at Police Stations**



Source: South African Police Service

The net effect of these changes is a reduction in the number of level 1-2 employees. This group declined from 9% of the total staff complement to 6.7%. Virtually none of Levels 1-4 staff are employed at Police Stations. Half (49%) of all SAPS employees occupy level 3-5 positions. Collectively, levels 1-5 employees have remained a stable proportion of the total workforce (**56%**). Conversely, **44%** of employees are at level 6-16 i.e. ranked from Warrant Officer to National Commissioner.

Despite the marked improvement of salaries for levels 1-2 and 3-5, and the significant role played by promotions and upgrades, the situation remains where 60% of the SAPS total compensation bill is for that 44% of staff above the rank of Constable.

At the forefront of combating and preventing crime, making arrests, and securing prosecutions are those employed under the SAPS Act and based at police stations. Additional statistics made available by the SAPS indicate that only 60% of its entire workforce is employed at police station level under the SAPS Act, with the balance being employed at management, administrative and other support roles. If the analysis is further restricted at only those at the frontline i.e. the SAPS Act employees below the rank of Captain, then only 43% of the entire SAPS workforce are based at the frontline.

In summary, the following can be deduced from the above analysis:

- Despite the SAPS budget increasing by R23 billion between 2010/11 and 2015/16, the increase amounts only to 9% when considering inflation.
- Levels 1-2 category salaries rose drastically in the period under review, indicating SAPS management is making much progress in improving the conditions of employment of lower level employees. However, these are a very small proportion of the workforce and they are peripheral to police work
- Promotions and post progressions were high from lower to middle management.
- The proportion of the SAPS employees in non-supervisory roles at police stations is 43%; this means that the vast majority of the SAPS employees are employed in administrative and supervisory positions.
- Rebalancing of the SAPS resource allocation towards frontline services rather than administration and management roles could markedly improve service delivery within the existing budget constraints.

## 8. LITERATURE REVIEW

From the above discussion, it can be deduced that the process of the SAPS resource allocation is complex and dependent on many variables. If the method of calculation is disputed, the result is a flawed allocation system. Budgetary constraints as has been determined are critical to the allocation process. Before attempting to answer the question as to the process and whether a revision is required, and the request for a larger budget to address the challenges to resource allocation; the question to ask is: **Whether more personnel equates to more effective policing?**

It is worth looking at the evidence on the impact that increases or decreases in total police officer numbers have on crime rates before looking in detail at how effective the police are in reducing crime. According to Bradford and Levitt in Deshpande<sup>14</sup>, the evidence that additional numbers of police reduce crime rates is inconclusive, although

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<sup>14</sup> Law Enforcement Officer from Goa, India.

the absence of any police presence, for e.g. at protest marches, has been shown to increase crime. Some studies have suggested that increased police numbers may be associated with lower property and other acquisitive crime, with one study suggesting that an estimated 10% increase in officers leads to a reduction of around 3% in crime<sup>15</sup>, but the evidence of an association between police numbers and violent crime seems to be more ambiguous<sup>16</sup>. However, it should be taken into consideration that a baseline in a country like South Africa is needed to determine the above, as it is very probable that South Africa has a very low baseline. Additionally, this would also mean a 10% increase is required in frontline workers, rather than an overall 10% increase across the board, or an increase at supervisory levels.

Efforts to increase the speed of response to urgent incidents have also been shown to have little impact on detection rates as the delay in calling the police tends to outweigh any increase in the chances of catching the perpetrator that reduced response times might achieve<sup>17</sup>. In practice, it is difficult to separate the effect of increased numbers from the actual work of officers.

Deshpande contends that with the rapidly changing socio-economic and technological changes, as well as changes in patterns of crime and demands for security, drawing on knowledge of effective, sustainable crime reduction practice, and developing multi-agency problem-solving, community engagement approaches, to address issues in micro-location hotspots is recommended.

Traditionally, police agencies have allocated resources in response to their operational demands or requirements, with the majority of resources being distributed in response to political demands and public calls for service<sup>18</sup>. It should also be taken into account that this also depends on the country, and the kinds of issues that the country confronts. In a low crime rate country, it might seem possible that more resources are given over the response of public order policing. But in high crime countries, you would expect a higher proportion in response to calls for investigation.

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<sup>15</sup> Levitt, S. 1997. Using Electoral Cycles in Police Hiring to Estimate the Effect of Police on Crime. *The American Economic Review*, 87 (3): 270-290.

<sup>16</sup> Bradford, B. 2011. Police numbers and crime rates – a rapid evidence review. [O] Available at: <https://www.justiceinspectors.gov.uk/hmic/media/police-numbers-and-crime-rates-rapid-evidence-review-20110721.pdf>. Accessed 16 March 2017

<sup>17</sup> Skogan and Frydl, (2004)

<sup>18</sup> Ibid

The City of Bogota in Colombia was able to substantially reduce robbery rates by 75% between 1996 and 2001. The success was mainly attributed to proper and SMART policing methods that strengthened the intelligence and investigation units, and also improved coordination. The success in reducing robbery rates was achieved without increasing the number of police officers, rather investments were made targeting police training, crime intelligence and investigations, as the units were then able to increase their arrests and detention rates by over 500%.

The changing policing environment to a public 'service' ethos, with an emphasis on accountability and the effective utilisation of available resources, has deemed the historical methods of allocating personnel irrelevant. Where public demand for police services is rising and increased expenditure on resources is not feasible, the issue of managing and allocating resources becomes crucial.<sup>19</sup>

***From the above, it can be deduced that more personnel does not necessarily equate less crime, but more effective policing and better management of resources is critical to effective policing and reduced crime levels. Therefore, it is significant for police stations to be allocated resources in order to then be better positioned to police effectively.***

The following section provides a discussion around international and regional police resource allocation models, and developments in relation to efficiently addressing challenges of police resource allocation.

Internationally, in the absence of any objective means of quantifying the numbers of police officers required to meet community needs, governments solely relied on ratio of police officers to population in providing a determination of the overall number of police officers required. However, relying on this ratio is deemed flawed as this only measures what a community is prepared to spend on law enforcement rather than what police resources it needs.<sup>20</sup> More so, police workload cannot be measured by the total number of recorded crimes only.<sup>21</sup>

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<sup>19</sup> Skogan and Frydl, (2004)

<sup>20</sup> CALEA Update 2003. Measuring the Performance of Law Enforcement Agencies - Part 1 of a 2-Part article [O] Available at: <http://www.calea.org/calea-update-magazine/issue-83/measuring-performance-law-enforcement-agencies-part-1of-2-oart-articl>. Accessed 23 March 2017

<sup>21</sup> Garda Inspectorate: Promoting excellence and Accountability: Report of the Garda Síochána Inspectorate. [O] Available at: [http://www.gsinsp.ie/en/GSINSP/48429%20Garda%20Inspectorate%20Resource%20Allocation%20Report%2009%20\(Screen\).pdf/Files/48429%20Garda%20Inspectorate%20Resource%20Allocation%20Report%2009%20\(Screen\).pdf](http://www.gsinsp.ie/en/GSINSP/48429%20Garda%20Inspectorate%20Resource%20Allocation%20Report%2009%20(Screen).pdf/Files/48429%20Garda%20Inspectorate%20Resource%20Allocation%20Report%2009%20(Screen).pdf) Accessed 9 March 2017

It should also be noted that there is *“limited information available on the methods used by police agencies in allocating resources”*.<sup>22</sup> With that noted, available data on the resource allocation models to police departments in various countries are discussed below:

### **8.1. New Zealand Police Resource Allocation Model**

The New Zealand police department moved away from applying the traditional resource allocation model which allocated resources to the total number of population per area, to a focus on reducing high crime offences based on proactively dealing with crime by directing resources to specific geographic areas with high crime or to specific crimes. The Resource Allocation Model (RAM) was then introduced when the police department realized that there were gaps with the way in which resources were allocated as the processes were in no particular way addressing the problem of escalating crime rates in New Zealand.

The RAM formula specifically took into consideration a total of nine variables in informing resource allocation for the police to be better positioned in dealing with crime. Socioeconomic, demographic and police-relevant variables are used to determine the number of police officers per area, as compared to the allocation of resources based on age group and population size, which has been another method that New Zealand has been using. The six socioeconomic, socio-demographic and police variables the formula accounts for are as follows:

- Age group of males
- Income
- Employment status
- Ethnicity
- Education
- Family related factors
- the number of incidents,
- the level of crime and
- the resolution rate

However, the challenge of balancing resources and services with budgetary constraints and community desires remains.

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<sup>22</sup> Heyer, G., Mitchell, M., Ganesh, S & Devery, C. 2007. An econometric method of allocating police resources. *International Journal of Police Science & Management*, 10(2): 192-213

## 8.2. United States of America Police Resource Allocation Model

The primary goal of police operations in the USA became crime reduction since the professionalisation of the police functions in the early 20th century. The US has subsequently made use of five common methods in determining human resource demands; namely:<sup>23</sup>

- Crime trends: This method became the benchmark for human resource allocation in terms of police staffing, as the more crime was committed, more police officers were hired in an effort to combat identified crimes. However, it has been argued that this approach is inefficient to staffing because whenever the police are unsuccessful at combating crime, the model would therefore call for additional personnel in dealing with crime. Inversely, when the police are effective at combating crime, fewer officers are thus deployed. Therefore the model was developed on the basis of effectiveness whereby the police ratio was directly dependent on their effectiveness in combating crime. Using this model essentially provides motivations for poor performance and demotivation for good performance<sup>24</sup>. Furthermore, crime rates are predisposed by many other dynamics other than solely the police response. Therefore, based on the shortcomings of the model of resource allocation, using crime rates as a benchmark to the number of staff an area is supposed to have, is no longer a recommended approach as police departments are no longer applying the model.
- Per-capita approach: In determining the total number of personnel required, many departments made use of officer-to-population ratios. It was subsequently argued that using this model in determining police staffing is ineffective and unreliable.
- Minimum-manning levels: This was a predetermined approach to police staffing informed by a minimum number of police officers required to ensure the functionality of a police station. It was based on past practice, policy and supervisory judgement
- Authorised/budgeted levels: Determining police staff for an area is solely dependent on the budget a police department has received in providing policing activities to various areas. Therefore, the model is simply developed on the premise of the ability to afford as compared to community needs. This is a model that fails to account for equitability in that specific communities' ability to pay

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<sup>23</sup> McCabe, J. 2012. An analysis of police department staffing: How many officers do you really need? A Review of 62 Police Agencies Analyzed by the ICMA / CPSM

<sup>24</sup> Albrecht, J.F., & Das, D.K (ed). 2011. Effective Crime Reduction Strategies: International Perspectives. CRC Press

taxes might be used to allocate resources more so making the model a politicised one.

- Workload-based models: Workload based model is developed on the premise of assessing demand and supply so as to close discrepancies. This approach relies on an examination of calls for service received by a department, and these calls are modelled to understand demand and supply. However, there are also shortcomings with regard to this model in that it only considers calls made and in turn runs the risks of recording physically reported calls. Regardless of its shortcomings, workload-based model as compared to other models is believed to be an accurate and reliable predictor of staff policing levels.

### 8.3. Ireland Police Resource Allocation Model

In Garda Síochána in Ireland, the allocation of police officers headquarters, national units and the operational Garda divisions is determined by the Commissioner<sup>25</sup>. The Commissioners utilize the following elements in resource allocation:

- Crime levels;
- Demographic changes, and
- Factors relevant to security, such as time, geographical area, workloads.<sup>26</sup>

According to a study conducted by the Inspectorate on Irish police resource allocation, there are case scenarios that can be applied in the process of efficiently allocating services equitably, and they are inclusive of the following:

- Achievement of more balanced police officer workloads which will subsequently lead to improved services and police safety;
- Adapting policy on allocation of police time, and
- Achieving closer alignment of police working times with patterns of demand for police services.

It was also proposed that new systems were required in order to allocate resources equitably; with the result that investment in modern technology investment was made which included:

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<sup>25</sup> Garda Síochána Act 2005. [O] available at:

<http://www.irishstatutebook.ie/eli/2005/act/20/enacted/en/print>. Accessed 9 March 2017

<sup>26</sup> Garda Inspectorate: Promoting excellence and Accountability: Report of the Garda Síochána Inspectorate.

[O] Available at:

[http://www.gsinsp.ie/en/GSINSP/48429%20Garda%20Inspectorate%20Resource%20Allocation%20Report%2009%20\(Screen\).pdf/Files/48429%20Garda%20Inspectorate%20Resource%20Allocation%20Report%2009%20\(Screen\).pdf](http://www.gsinsp.ie/en/GSINSP/48429%20Garda%20Inspectorate%20Resource%20Allocation%20Report%2009%20(Screen).pdf/Files/48429%20Garda%20Inspectorate%20Resource%20Allocation%20Report%2009%20(Screen).pdf). Accessed 9 March 2017



- Computer Aided Dispatch system
- Resource Management System, and
- Demand Profiling Software

All the three above mentioned technologies and/or systems are used to explore the demand for police services through providing an analysis on workload, deployment, and response times.

#### **8.4. Australia Police Resource Allocation Model**

A New Zealand study researched the relationship between socioeconomic, demographic and industry characteristics and the costs of delivering government services in the area of law and order.<sup>27</sup> These socioeconomic factors were inclusive of income differentials, residential stability, youth of the population, employment status, education, age, sex and family structure. The exercise took cognizance of the disparity of resource allocation between Australian States, for example differences in the extent of proactive and reactive policing.<sup>28</sup>

The results showed that, across Australia as a whole, police staffing distributions as presently implemented by States, did not reflect relative needs relating to urbanisation, disadvantaged tourism, or other factors. Instead they appeared to be simply a function of the Australian State policy as determined by population size and historical factors.<sup>29</sup> Therefore, based on the findings, the Australian police force reconsidered their police allocation model and focused more on socioeconomic, demographic and population factors in their effort to effectively allocate resources.

#### **8.5. United Kingdom Police Resource Allocation Model**

In the United Kingdom, systems such as Computer Aided Systems, Records Management System and Geospatial Information systems are used to guide allocations of resources to the police through taking into account community demands. The government has partnered with organisations to provide assistance in maximising the use of information technology to develop sustainable police resourcing models. The modeling tool is data driven and enables police departments to examine areas of key importance such as neighbourhood crime, major crimes, protecting vulnerable people, public protection unit, incident response teams, incident management teams and force control room call takers.

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<sup>27</sup> McCabe, J. 2012. An analysis of police department staffing: How many officers do you really need? A Review of 62 Police Agencies Analyzed by the ICMA / CPSM

<sup>28</sup> Ibid

<sup>29</sup> Ibid

It is equally significant for police to furnish valid and reliable data for resource models, since “poor statistics” can be seen as a symptom of under-resourcing due to the expenses involved in developing, monitoring and training authorities in data collection systems”.<sup>30</sup>

In order for police departments to be better positioned to provide effective services to communities, a sustainable model is required, which allows sectors to stimulate potential changes to operational services, to understand the impact of any proposed changes. This process is significant in that changes contribute to fluctuations that in turn need to be evaluated in informing resource allocation in order to avoid under-resourcing or over-resourcing areas in dealing with criminal offences. More so, the model is supposed to be sustainable in addressing issues pertaining to supply and demand needs through providing a detailed analysis on the impact of the following on services:

- Reduced number of officers
- Changing crime types
- Skills profile

The demand tool allows police departments to understand demand, threat, risk and harm, thus allowing them to prioritise in terms of service allocation to areas of greatest priority.<sup>31</sup> The demand and modeling tools, unlike traditional approaches of allocating resources, is flexible in that it allows for adjustments taking into consideration the overall demands based on data, viewing or changing model data or change of variables as per a given scenario, and viewing of overall utilisation within the model for business functions. The model covers the following components in resource allocation:

- Demand - total number of crimes
- Activity durations - time taken to investigate crime
- Resource abstractions - attending meetings or training
- Number of full-time employees

Due to the flexibility of the model, it is therefore possible for managers to make adjustments and refinements where required since crime offences are not stable.

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<sup>30</sup> Hinton, M.S & Newburn, T. 2009. Introduction: policing developing democracies. In: Hinton, M.S & Newburn, T (eds.) Policing Developing Democracies. Routledge: Oxford, pp. 1-27.

<sup>31</sup> Sopra Steria. Police Resource and Demand Modelling. Developing Sustainable resourcing models. [O] Available at: <https://www.soprasteria.co.uk/docs/librariesprovider41/Solution-Overview/sopra-steria---police-resource-and-demand-modelling.pdf?sfvrsn=2>. Accessed 14 March 2017

## 8.6. Wales and England Police Resource Allocation Model

Wales and England Police Forces are funded based on a two phase process. The first phase involves the division of funds between different activities undertaken by the police, and a portion of the total funding is also distributed taking into consideration the population sparsity in addressing the specific needs of rural forces. The second phase is to then divide funding for each of these workloads between all the local policing bodies. In order to do this, workload indicators<sup>32</sup> which are based on socio-economic and demographic indicators are calculated to estimate the number of personnel for each police force. The formula consists of a basic amount per resident and a basic amount for special events, and top-ups for the five key areas, sparsity and area costs (which takes account for regional differences in costs).<sup>33</sup>

The model was criticized for various reasons including the utilisation of outdated data and a new Resource Allocation Model was proposed which was still in progress during the time of writing this report. The new model is more simplified and transparent to determine budget allocation at force level.<sup>34</sup> Therefore, the new funding formula utilises 10 complex statistical regression models with the aim of distributing funding on the basis of 'relative need' by using population data and a range of socio-economic variables to estimate the 'expected workload' of each Police Force Agency, across a range of crime and non-crime activities.

In summary, it is the responsibility of the Home Office to divide the total funding available for that year's settlement between the five indicators based weightings and therefore, a share for each indicator would be allocated between police forces based on the proportion of each indicator within that police force area. The police force would then get allocations for each of the five indicators based on its proportion of the Wales and England total for that indicator. The police forces allocation would then be the sum of the five sub-totals for each indicator.

## 8.7. African Police Resource Allocation Model

For resources to be efficiently allocated, adequate information is required. However, many African countries are still experiencing challenges regarding their respective information systems due to inadequate technological advances. This is a concerning

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<sup>32</sup> Ludwig, A & McLean, I. 2016. Principles of Police Funding in the UK. [O] Available at: <http://ggcpp.nuff.ox.ac.uk/wp-content/uploads/2016/11/Working-paper-Funding-formula-final.pdf>. Accessed 23 March 2017

<sup>33</sup> Home Office (2015). Consultation on reform of police funding arrangements in England and Wales. London, Home Office.

<sup>34</sup> See Home Office (2015).

issue in that valid and reliable information provision is significant in informing decision making. It is stated that “an information system which is tied to a map helps the police commanders visualize the location of crime incidents which will also give them an opportunity to access and process information quickly and be better positioned to allocate resources efficiently”<sup>35</sup>. Crime mapping through the utilisation of GIS has become a widespread approach in developed countries and this has subsequently improved the services they render to the communities based on need analysis<sup>36 37</sup>. However, underdeveloped and developing countries are still lagging behind due to slow advancement in technological operations.

It has been reported that there are many African continent based countries that are still experiencing challenges regarding adequate management and allocation of resources which subsequently negatively affects effective and efficient policing. Nigeria is still faced with inadequate human resources to deliver the services to the communities which are also coupled with mismanagement of resources<sup>38</sup>. The Zambian Police Department also applies uninformed criteria in resource allocation that is mostly guided by crime trends.<sup>39</sup> This criterion does not allow for crime analysis prior to resource allocation. In terms of available information system, a manual system is used to record a case which is also time-consuming. Consequently, there is loss of traceability, transparency and accountability<sup>40</sup>. The challenges experienced by the Zambian Police departments include lack of comprehensive crime analysis, lack of detailed data and lack of training and resources<sup>41</sup>. More so, the Kenyan Police Force is also faced with challenges in their function of delivering effective policing services as required by law and expected by the public, and most of the police officers who were interviewed for the study stated that the annual budgetary allocation of the Kenyan police is hardly enough to ensure that they discharge their duties effectively.<sup>42</sup>

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<sup>35</sup> Katantamalundu, S.D. 2004. Developing a crime analysis information system for a police service in a developing country: The case of Zambia Police Service. [O] Available at: [https://www.itc.nl/library/Papers\\_2004/msc/upla/katantamalundu.pdf](https://www.itc.nl/library/Papers_2004/msc/upla/katantamalundu.pdf). Accessed 03 March 2017

<sup>36</sup> Weir, R., & Bangs, M. 2007. The use of Geographic Information System by Crime Analysts in England and Wales. [O] Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.97.4489&rep=rep1&type=pdf/>. Accessed 14 March 2017

<sup>37</sup> Balogun, M.J. 2003. Nigeria’s public service reform process: Human resources issues. [O] Available at: <http://www.unpan1.un.org/intro/groups/public/documents/CAFRAD/UNPAN011072.pdf/> Accessed on 14 March 2016

<sup>38</sup> Alemika, E. E. O. (1993). Criminology Criminal Justice and Philosophy of Policing in Tamuno, T. N & Akano, A.O (Eds) Policing Nigeria: Past, Present and Future. Lagos: Malthouse Press Ltd. Pp. 30 -78.

<sup>39</sup> (Katantamalundu, 2004).

<sup>40</sup> Lyoko, G., Phiri, J., & Phiri, A. 2016. Integrating Biometrics into Police Information Management System: A Case of Zambia Police. *International Journal of future computer and communication*, 5(1): 1-7

<sup>41</sup> See Katantamalundu, S.D. 2004

<sup>42</sup> Omeje, J., & Githigaro, J.M. The Challenges of State Policing in Kenya. *Peace and Conflict Review*, [O] Available at: <http://www.review.upeace.org/index.cfm?ejemplar=24&entrada=129>. Accessed 13 March 2017

In summary, it is evident by the above review that challenges pertaining to police resource allocation are a global issue, and models guiding resource allocation are continuously evolving.

The New Zealand model is based on national level resource allocation, similar to the South African model. The rest of the models provide for local station level resource adjustments, and are flexible as contexts differ. Most of the countries under review utilise the workload and demographics variables in calculating police population.

For the SAPS, while the THRR is not without its challenges, the model has been benchmarked internationally and is facing similar challenges as other police agencies.

The funding resource allocation model of England and Wales should be explored as an option for South Africa given fiscal constraints. Currently, SAPS does resource allocation at a national level based on various variables for human resource distribution. Provinces then adjust these, and police stations are still without critical resources.

Going forward, SAPS should delegate resource allocation to cluster and police station level, as police stations are best suited to make informed resource decisions due to changing crime patterns, operational interventions, and accommodating changes in shift times to make allowances for crime operations, amongst others. In this way, cluster and station commanders are empowered and have the discretion to optimally focus resources with an allocated budget, and at the same time be held accountable for any failures. The discretion could extend to station commanders choosing to utilise technology and more suitable vehicles rather than additional human resources and more vehicles.

The blame for poor resourcing and poor station performance has always been channeled to the national Organisational Development office, and vice versa.

The national model is to be revised to accommodate a **Funding Allocation Model.**

## 9. STUDY FINDINGS

This section of the report provides the study findings taking into consideration the following objectives:

- to provide an analysis of the allocation of resources at selected police stations by comparing the allocation of human resources against the Fixed Establishment (granted) at police stations to that proposed by the THRR (ideal);
- to identify problematic areas pertaining to input/audit sheets;
- to determine the process for distributing human resources at Provincial level; and
- to identify the constraints that impact on the optimal utilization of human resources.

As mentioned previously, only six stations per province were sampled for the study, and the provincial results are not reflective as representing the whole of all the provinces, nor generalizable to each of the provinces.<sup>43</sup> It must be noted that many provinces have provided comprehensive analyses on the study, but for purposes of the consolidated report, key strategic issues have been highlighted.

The findings are structured according to the following thematic areas:

- Discrepancies with the THRR, Fixed Establishment, and Actual human resource allocation
- Challenges regarding input sheets
- Vehicle allocation
- Reservists allocation

### 9.1. Discrepancies with the THRR, Fixed Establishment, and Actual human resource allocation and the impact on policing

The process followed in resource allocation has been explained above. The following were the provincial findings in relation to the THRR process:

- The Fixed Establishment is based on a 60% funding of the THRR total due to budgetary constraints. All provinces experience variations in the allocation of the THRR for SAPS members. In **KwaZulu Natal**, the fixed establishment was found to be as low as 31% of the THRR, while a station in Nongoma receives a higher proportion of 71% and 77%.

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<sup>43</sup> See Annexure A on list of police stations sampled in each of the provinces.

- In **KwaZulu Natal**, it could be argued that the THRR does attempt to address questions of equitable resource distribution and transformation given that various input items appear to target conditions of 'previous disadvantage', e.g. informal settlements and unemployment, although it is not clear how these factors are weighted.
- Due to the personnel strength of **KwaZulu Natal**, most stations appear to be functioning on bare minimum levels, lacking even necessary resources to implement the sector policing strategy. Despite the shortages, the Province has set a baseline that all Captain Stations are required to have a minimum of 24 members to staff shifts (i.e. a minimum of 6 per shift).
- In **Gauteng**, the provincial office of the SAPS has granted the police stations a certain number of staff according to different ranks, however, the allocated number becomes less at station level. Furthermore, the provincial office of the SAPS, allocated a high number of staff that exceeded the granted number of staff for police stations, according to the fixed establishment, RAG and the THRR.
- The **KwaZulu Natal** provincial office does not deviate from the fixed establishment process, as demonstrated in 2011/12, due to the Province not having alternative criteria which would justify any significant deviations. **Western Cape** also reported that in the previous years, there were no deviations at the identified police stations from the fixed establishment, however, this changed in the year 2016 wherein deviations occurred due to additional posts and moving posts to priority stations. **North West** province indicated it did not experience significant deviations.
- There are some variables on the THRR that do not make sense. For example in the **Western Cape**, calculations are made according to the number of licenced liquor outlets, the number of requests for licences, and the number of unlicensed establishments that are closed down. However, there is no indicator for the number of unlicensed liquor outlets. In the more informal areas which do not meet the zoning bylaws, the number of licenced outlets may be more than four times as many licenced outlets. A study conducted by the Medical Research Council in 2016 found that there were 170 licensed taverns and 750 unlicensed shebeens and 30 umqombothi establishments.<sup>44</sup> A similar pattern has been observed in other township areas.

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<sup>44</sup> University of Cape Town. (2016). *A mixed methods study of the nature and extent of the alcohol trade in Khayeltisha and community perceptions*. Draft report. Western Cape, p. 68.

The SAPS repeatedly draw links between the levels of alcohol use and abuse and high levels of violence. Yet, the THRR does not include reference to one of the major sources of alcohol in some communities which may vastly escalate the levels of violence. The indicator of number of shebeens closed down is not an accurate reflection of the problem. If the SAPS really wanted to impact on levels of violence then it would need to develop a strategy to target unlicensed outlets, and it would need to indicate the number of these outlets. The amount of time taken to respond to policing unlicensed establishments is not factored into the THRR.

- Apart from crime statistics, it is unclear what other variables are used at provincial level in determining priority stations for resource allocations.
- Provincial Commissioners retain the discretion to move personnel as per Section 12 (3) of the South African Police Service Act.<sup>45</sup> This is based on a needs analysis as determined by the Provincial Commissioner and the management team. The redistribution of resources by Provincial Commissioners must however be within the provincial budget parameters.
- In **Mpumalanga** and **North West**, stations indicated that they were still using the RAG system which should have been replaced by the THRR. The RAG system is a challenge because the number of resources which the Police Stations are to have ideally has never been addressed due to budget constraints. Consequently, it has been indicated by SAPS that RAG was phased out in 2011/12 and Station Commanders were part of the evolutions process. In the previous three years, **Limpopo** was not using the THRR for resource allocations.<sup>46</sup>
- Despite the participation of police stations in **KwaZulu Natal**, **Western Cape** and, **North West** in the THRR process, station members indicated they do not have faith in the ability of the THRR to adequately resource the stations. Stations regarded the THRR practice as not useful in curbing the challenge of adequate resource allocation.
- All provinces felt that the THRR model has never been fully implemented, thus a proper assessment of the model cannot be conducted.
- Some provinces such as **North West** and **Free State** reported that the actual post establishment supersedes the fixed establishment until salary Level 7 due to historical grade progressions. Thereafter it is post bound.
- There has been a drastic decrease for entry level constables for the **Free State** Province from 2010/2011 to 2015/2016. Reasons provided by SAPS Provincial Office for this sharp decrease is the fact that the Free State Province was overstaffed in terms of its total Fixed Establishment and is currently in a stabilization phase where it has to cut down to get to its actual numbers in terms of the Fixed Establishment.

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<sup>45</sup> South African Police Service Act 68 of 1995

<sup>46</sup> Telephonic conversation with Limpopo Deputy Director: Research



On the other hand, **Northern Cape** Police Service received on average year on year more entry level police members. The figure below provides a national picture of post allocations for Entry level Constables from 2010/11 to 2015/2016. The table illustrates the decline in entry level constables with a sharp decline reflected in 2012/13, and a gradual increase since 2014/15.

**Table 2: Depicting post allocations for SAPS Act entry level constables**

| Financial years        | 2010/11 | 2011/12 | 2012/13 | 2013/14 | 2014/15 | 2015/16 |
|------------------------|---------|---------|---------|---------|---------|---------|
| Entry level Constables | 5091    | 4009    | 879     | 1348    | 2629    | 3493    |

Source: Northern Cape report 2017

- Provinces indicated that the ranking of stations are also questionable with low crime areas ranked higher than high crime areas and vice versa.
- Due to inadequate PERSAL/PERSAP system updates, distribution of posts verification is a challenge in that personnel movement is not recorded. For example, a stations PERSAL/PERSAP system would reflect 20 personnel, but in actuality only five warm bodies would be present. Additionally, the system does not reflect service arrangements, casualties and temporary placements which are also detrimental.
- Due to shortages of resources to police other areas of need, the THRR does make a consideration for the establishment of satellite stations or changes in station boundaries, with minimum requirements. This is a challenge since the police are not allocated additional human resources to staff new police stations or satellite stations. Personnel are rather redeployed from one station to another station which creates vacuums at other stations and on frontline service delivery.
- Furthermore, most of provinces indicated that duty arrangements reflect member/s on the duty list, however, reflected member/s are not physically available at the stations. More so, the findings in **Mpumalanga** reflect that the number of days lost due to absenteeism is higher with fewer personnel as opposed to more personnel.
- All provinces reported shortages of personnel within police stations and it was reported by **Mpumalanga** that stations had personnel shortages that were vacant. In all provinces, Stations have vacancies which have not been filled for long periods. **KwaZulu Natal** and **Western Cape** had received additional operational posts in September 2016. In **Western Cape**, there were also vacancies that had not been filled and the filling of junior level posts process takes longer.
- More so, there was an increase in the total number of leave days despite personnel shortage. **Western Cape** findings were that the allocation of the fixed

establishment was not directly proportionate to the THRR and thus that the sampled police stations have been under resourced for the past five years.

- In the same vein, transferring members from Station A to Station B results in vacancies at Station A. In some instances of transfers, the budget allocated to the post in Station C is transferred with the post to Station D. This means there is no additional budget to refill the post at Station C which inevitably tempers with the fixed establishment.
- Equally, building of new police stations not supported by additional budget results in personnel having to be redeployed from other police stations, resulting in vacancies at police stations. In **North West**, a new police station has been completed but has not been capacitated for more than 3 years. It has been reported that building inspections have to be conducted prior the operation of the police station.
- It has also been reported that the police are increasingly conducting services other than policing such as escorting ambulances and escorting suspects to courts, councilors, medical patients, to mention but a few thereby increasing the police workload. In Rural areas police provide other government services. Additionally, the workload of other police personnel is increased as a result of extended duties that have to be performed.
- Much time is also spent dropping off and fetching members from their homes. Many senior managers also have drivers who are police members impacting negatively on resourcing.
- It has also been reported by the **Eastern** and **Western Cape** that there are misconstrued responsibilities at accidents where there are no victims. Thus based on this, the burden of policing extends outside the ambit of the SAPS mandate. Non-policing functions in different socio-economic settings are characterised by environmental design factors and lack of infrastructure.
- Provincial priorities, for example, the sudden need to establish a specialised unit in a particular police area to deal with specific crime will therefore require the redeployment of personnel to the specialised unit subsequently disadvantaging front line service delivery.

Despite the human resource shortfall presented above in all the provinces, the police have to utilise what is available to render policing services to the different communities and deal with the burden of policing per police precinct. Station Commanders have limited scope in terms of dealing with the burden of policing. This is partly attributed to police having to deal with non-police functions such as escort services which subsequently contribute to the utilisation of the available resources for non-police functions. The diversion of resources impacts on other functions like serving orders to offenders in an area which lacks street addresses and visible policing.

Other challenges that posed a challenge on policing, in Gauteng and North West for example, include the geographical area of the police precinct, whereby seasonal influx of harvest/migrant labour are not accounted for, roads in bad conditions, police and vehicle attacks during community unrests, and management of leave as in some instances, taken leave days are not recorded.

The other challenge relates to filling of vacant posts, which police stations have little control over as it is a provincial competency. The filling of posts takes a long period particularly junior level posts. Sector policing and other policing operations are also not fully functional due to resource constraints.

Resource constraints lower morale of personnel as<sup>47</sup> they operate under difficult conditions. The shortage of staff during shifts puts more strain on the officers on duty. The result is that quality service delivery is being compromised.

## 9.2. Challenges regarding input sheets

The section sought to identify problematic areas pertaining to input/audit sheets and relevant information. It is significant to note that in order for resources to be allocated adequately and for the THRR to be successful, data accuracy is of utmost importance. The findings in relation to information from police stations highlighted the following:

- In the **Northern Cape**, there is no standardised method of information interpretation by the Station Commanders or MICs. Furthermore, due to bad filing practices information is incorrect, unreliable and flawed at some stations. Station Commanders were also not validating information on the input sheets. There were however three stations who were doing fairly well in terms of managing the input sheet.
- Crime Intelligence Officers (CIO) conducts crime statistics analysis and compiles Station Intelligence Profiles (SIP). The CIOs function is to advise the Station Commander on crime trends every 12 hours. CIOs and Management Information Centres (MIC) must input data into the input sheet. In many stations the relevant members are not trained or familiar with inputting information. It was also evident from the **Western Cape** and **Northern Cape** report findings that none of the sampled police stations had knowledge of the THRR system, let alone actual involvement in determining the resource requirements for police stations. It was only Management Information Officers (MIOs) and the station commanders who were aware of the THRR process, and this was attributed to issues of compliance to the Provincial office.

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<sup>47</sup> Gauteng report. 2017.

- In the **Free State**, almost all stations were able to provide the THRR input sheets, and at those Stations where input sheets were not available the information was obtained from Provincial office. In cases where input sheets were available, the integrity of some data was questionable. For example, at one station, police station management indicated they had 226 smallholdings to police, while only 160 smallholdings were reflected on the input sheet.
- Record keeping was also a problem at most stations in most provinces, including **Gauteng**. In some stations there were no hard copy records kept at the Registry, and the failure of the station Information Technology equipment has resulted in loss of data, which could not be retrieved due to a failure on the side of SITA. **Free State** Station management was undergoing training on the completion of the input management sheets, and input sheet data integrity verification process is underway throughout the Province. Management also indicated that the Fixed Establishment was in the process of being revised.
- **Western Cape** findings show that input sheet indicators did not always account accurately for the distinctiveness of each police station. For instance, the input sheet has a gang indicator which is weighted like any other indicator, but it falls short of accounting for the frequency of gang violence, the size and nature of the particular gangs, gang activities and more importantly, the impact of gangs in terms of police resource allocation and distribution. Additionally, the input sheet fails to account for time taken in responding to domestic violence cases, and areas without home addresses. In some case, the Western Cape found that the same numbers were being populated into input sheets year after year with no apparent changes over the years. Findings in Western Cape showed that there was lack of data governance, tight record management at the identified police stations; hence the police stations could not provide certain data and information that was required. Additionally, the manner in which the historical data was stored poses a challenge in terms of accessibility of the information.
- In **KwaZulu Natal**, the population figures contained in the input sheets sometimes differed from those in the SIP. The discrepancy is as a result of informal settlements and illegal liquor trading which contributes to areas not being considered in the calculations. Additionally, a discrepancy regarding the input sheet is the requirement on the input sheet in relation to the number of unlicensed liquor outlets, which may be imprecise due to the very nature of illegal liquor trading. Similarly, the THRR input process provides a field for “tribal areas”. The assumption is that “tribal areas” require special attention in resourcing, hence its inclusion in the input sheets.

- In **Mpumalanga**, most of the stations do not have the THRR input sheets and the information provided was obtained from the Efficiency Index System. There were many discrepancies regarding the information. All Stations sampled were unable to provide the rate of absenteeism in terms of the Efficiency Index as compared to the baseline.
- There were unclear formats of duty sheets with functions at the stations as per the fixed establishment in **Free State, Northern Cape, Eastern Cape** and **Western Cape**.

### 9.3. Vehicle allocation

In order for effective policing to be realised, the National approved norm of personnel to vehicles is approximately 4.5:1. Findings from **Mpumalanga, KwaZulu Natal, North West, Eastern Cape, Northern Cape, Free State, Gauteng** and **Limpopo** were that all stations experience shortage of vehicles. The shortages were a result of vehicles being boarded at garages or undergoing repairs, and yet these were still reflected on station vehicle logs. However, in the **Western Cape** there was an indication that all sampled stations were capacitated above their allocated granted threshold, but as with the other provinces, the vehicles were not active or have mechanical problems.

The challenges outlined by the provinces were that the turnaround time to repair vehicles was lengthy due to unqualified mechanics at state garages. Most of the stations indicated that they were allocated vehicles that did not suit their policing terrain, which in return hindered them from reaching other parts of their precincts. Another impediment which impacts on policing is the transporting of members to and from homes which contributes to resource shortage.

The findings from **Northern Cape** indicates that the shortages of vehicles at stations are not taken into consideration with the allocation of vehicles, Priority Stations were sometimes overlooked, the type and configuration of a vehicle is not considered when allocating vehicles to certain geographical or topographical areas and vehicles were being allocated without taking the purpose for which the vehicles will be used into consideration. More so, according to the Northern Cape findings, the budget for vehicles decreased over a 7-year period whilst the personnel increased by 12.77%.

**Mpumalanga** findings stipulate that there was no Fixed Establishment granted for vehicles which subsequently made it a challenge to make comparisons between fixed and actual allocations. Even though all the provinces encountered challenges with car allocations, it was reported in the **KwaZulu Natal** that the provinces vehicle allocation was significantly higher since 2011/12. However, regardless of the increase, KwaZulu Natal police stations have reported that the vehicle listed by SAPS as being allocated to

a particular station are at times different to what actually exists at that station.

It was reported by **Gauteng** that stations did not have satisfactory budget to purchase suitable vehicles every financial year since the budget was always inadequate to meet the requirements of vehicles at those particular stations. Therefore, stations opted for cheaper and less appropriate vehicles to perform tasks.

Over and above the challenges faced, **North West** findings showed that police stations were unable to provide complete information regarding vehicles, due to lack of proper records management.

According to the above analyses the allocation of vehicles was not in line with the increase of personnel in the Provinces.

#### **9.4. Allocation of reservists**

The value-add and contribution of reservists, although sporadic and intermittent, was intended to alleviate the burden on permanent police members. Much of their contribution was dependent on training provided, the service delivery ethos, and any unique skills they could provide.

In **Mpumalanga**, there was a decline in the number of reservists because reservists did not get stipends, or were unable to secure permanent positions in the SAPS. Additionally, other reservists in the stations are not completely active. In **KwaZulu Natal**, most stations had 3 or fewer reservists over the period under review. In the **Eastern Cape**, reservists were not being used strategically, and the rural stations do not have adequate reservists. In the **Western Cape**, the number of reservists in the stations under review decreased between 2011/12 to 2015/16. In **North West**, reservists' figures declined due to loss of interest and the implementation of the SAPS National instruction 3 of 2014 which laid strict requirements for appointment of reservist, with many being disqualified. In addition to a series of assessments that a potential reservist must undergo, a reservist must possess a senior certificate (Grade 12), or proof that they have completed a SAQA accredited NQF level 4 qualification.

Based on the discussion above, the decline in reservists in many provinces was due to the 2011/2012 directive which sanctioned a purification of reservists, wherein reservists had to be verified. Thus based on the verification process findings, some reservists were terminated due to criminal records. The general feeling was that reservists do not complement stations and therefore, are not adding any value to stations.

## 10. CONCLUSION

Police strategies in the SAPS have undergone many changes in the past two decades, coupled with challenges which have been stimulated by economic and community expectations. SAPS resource allocation has been in the forefront of the challenges, as demonstrated by this study.

The SAPS has over the years moved their method of allocating resources from RAG to the THRR, in the hope that the constraints of allocating resources would be addressed. The models and processes established have been developed over a considerable period of time and clearly a great deal of thought and resources have been put into this process.

The study findings demonstrate that the transition in the modeling approaches has had minimal impact; the SAPS model for allocating resources is reliant on the availability of a larger budget, accuracy of data from provinces and police stations, and is grounded on the discretion of Provincial Commissioners, who rightfully tend to prioritise their crime concerns. It should be emphasized that the THRR is used to determine the ideal number of personnel, but in the end the SAPS budget and the MTEF determine the number of posts that can be established. This situation according to discussions with National Treasury and SAPS management will continue due to low fiscal growth.

The outcome of the THRR has not been subjected to any assessment as there is no evidence of any police station being capacitated to the full prescription of the THRR system, yet the model is meant to determine and allocate resources to police stations in order to perform required tasks. In this context, it is evidently difficult to determine whether the main problem lies with the THRR system - in the sense that the resources it allocates do not meet the needs of the community and the burden of policing per police station.

The international literature demonstrates that countries worldwide are experiencing police resource challenges, with ineffective resourcing models being continually revised. The international literature further demonstrates that more personnel does not necessarily equate to less crime, but more effective policing and better management of resources is critical to effective policing.

The study findings show that approximately 57% of the SAPS members are allocated to administrative and management posts. Only 43% of the entire SAPS workforce is based at the frontline at police stations.

By all standards, the SAPS is one of the largest police services in the world, and as the cost analysis indicates, it is highly bureaucratic and top heavy. These features point to potential easy wins in terms of improving SAPS service delivery. For example, reducing the levels of bureaucracy, requiring a lower level of administration, devolving decision making, and flattening the hierarchical structure, will easily lead to a more cost effective institution. Administrative functions such as currently undertaken by police members employed under the SAPS Act must be reallocated to employees appointed under the PSA Act. The new reliance on PSA Act employees will immediately be reflected in a new balance between frontline members and other SAPS staff, such as in crime prevention and visible policing.

## 11. RECOMMENDATIONS

The following short term recommendations are provided in dealing with resource allocation in the SAPS:

- Given that the THRR allocations have never been implemented to its full potential, 10% of police stations across the country must be capacitated fully to determine the value of the THRR. The performance of these stations must then be monitored on a continuous basis over a period of three years to determine effectiveness.
- In order to address the imbalance of more management to fewer frontline operational members, the administrative and management posts have to be re-examined, as operational members are critical for service delivery
- An intensive investigation be undertaken to standardize and automate administrative functions.
- Stations management should be actively involved in all the THRR processes to better understand the THRR process and detailed training on the THRR must be conducted with managers.
- The performance management system has to be reviewed to determine the adequacy of the performance. For example, high crime reports should not be regarded as poor police station performance.
- Alternative policies and strategies must be formulated and clearly outlined to address the challenge of police having to play roles additional to their scope of work which adds to the burden of policing.
- Police station management should be given the prerogative to recruit members and fill vacant post according to their station needs, and based on merit.
- Reasons for the moratorium on reservists must be explored to deal with the issues. The policy on Reservists must be implemented by the SAPS.



- There must be standardization of data management processes and systems across all police stations. Information management systems must be improved to allow proper record keeping.
- There must be an ongoing monitoring of the input sheet to curb incorrect information being populated .
- Station Commissioners must be assessed on the availability and correctness of information on the THRR input sheets in order to enforce correctness of information. Provincial Commissioners must come up with strategies to guide the evaluation of Station Commissioners role in ascertaining that data captured is correct.
- THRR input sheets should be revisited by National Organizational Development to determine the relevance of some of the information that is captured on the input sheets.
- A full comprehensive fleet management cost, performance and operational efficiency audit be undertaken.

The mid to long term recommendations on resource allocation is to include the following:

- The proposed recommended model for the future should be based on the Funding Allocation Model as used by England and Wales. In this way, resource allocations at station level could be determined by Cluster and Station Commanders, as per the demands and requirements of each police station, based on proper assessments.
- Any new approach should be implemented alongside a Change Management process to get the buy in of employees.
- In the absence of a fully adequate model for allocating resources, alternative policing operating approaches for more effective policing must be executed by SAPS (See Annexure B).
- The obligation to embrace SMART policing must reside and be driven by the Minister of Police and the Provincial MECs for Safety.

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### 13. Annexure A:

#### Sampled police stations as per the nine provinces

| <b>Western Cape</b>         |                                |
|-----------------------------|--------------------------------|
| Paarl East                  | Colonel, Category C            |
| Mfuleni                     | Colonel, Category C            |
| Manenberg                   | Brigadier, Category C2         |
| Nyanga                      | Brigadier, C2                  |
| Prince Alfred Hamlet        | Captain, Category A            |
| Kleinmond police station    | Captain, Category A            |
| <b>North West</b>           |                                |
| Brits                       | C2                             |
| Sun City/Mogwase            | B/ C1                          |
| Cyferskuil                  | A                              |
| Klerksdorp                  | C2                             |
| Wolmaraanstad               | C1                             |
| Christiana                  | A                              |
| Vryburg                     | C1                             |
| Pudimoe                     | B                              |
| Reivilo                     | A                              |
| Mahikeng                    | C2                             |
| Motswedi                    | B                              |
| Nietverdiendt               | A                              |
| <b>Mpumalanga</b>           |                                |
| Fernie Police Station       | Captain, Category A            |
| Embalenhle Police Station   | Colonel, Category C            |
| KwaMhlanga Police Station   | Brigadier, Category C2         |
| Hendrina Police Station     | Captain, Category A            |
| White River Police Station  | Lieutenant Colonel, Category B |
| Schoemansdal Police Station | Lieutenant Colonel, Category B |
| <b>Northern Cape</b>        |                                |
| Kimberley Police Station    | Brigadier                      |
| Kuruman Police Station      | Brigadier                      |
| Roodepan Police Station     | Colonel                        |
| Kakamas Police Station      | Colonel                        |
| Modderrivier Police Station | Captain                        |
| Bathlaros Police Station    | Captain                        |
| <b>Free State</b>           |                                |
| Heidedal Police Station     | Urban                          |
| Kroonstad Police Station    | Rural/Urban                    |
| Park Road Police Station    | Urban                          |
| Soutpan Police Station      | Rural                          |
| Tweespruit Police Station   | Rural                          |

| <b>Gauteng</b>                  |                                      |
|---------------------------------|--------------------------------------|
| Welbekend Police Station        | Rural                                |
| Enkangala Police Station        | Rural                                |
| Randfontein Police Station      | Rural                                |
| Pretoria Central Police station | Urban                                |
| Akasia Police station           | Urban                                |
| Loate Police station            | Urban                                |
| <b>KwaZulu Natal</b>            |                                      |
| <b>Hlobane</b>                  |                                      |
| Hlohluwe                        | Captain-upgraded to Lt Col-Sept 2016 |
| Mondlo                          | Lt Col                               |
| Madadeni                        | Col                                  |
| Osizweni                        | Col                                  |
| Jozini                          | Col                                  |
| Umlazi                          | Brigadier                            |
| Nongoma                         | Brigadier                            |
| <b>Limpopo</b>                  |                                      |
| Namakgale                       | Colonel Semi-urban                   |
| Thohoyandou                     | Brigadier Semi-urban                 |
| Tzaneen                         | Brigadier Semi-urban                 |
| Siloam                          | Lieutenant Colonel Rural             |
| Dennilton                       | Colonel Rural                        |
| Marble Hall                     | L.T. Colonel Rural                   |
| <b>Eastern Cape</b>             |                                      |
| New Brighton                    |                                      |
| Humewood                        |                                      |
| Motherwell                      |                                      |
| Ngangelizwe                     |                                      |
| Libode                          |                                      |
| Umthatha                        |                                      |

## 14. Annexure B:

### Improving frontline policing: Towards a technologically SMART policing approach

The 2016 White Paper on Policing proposes an integrated approach to policing which is geared amongst others, towards an optimal utilisation of public resources. Greater emphasis must be placed on maximising the utilisation of law enforcement resources, such as with Municipal Police Service (MPS), for effective and efficient policing. MPS are well placed at municipal level to proactively address crimes through the rigorous enforcement of their two mandates - traffic enforcement and by-law enforcement. By ensuring that traffic laws and by-laws are observed, MPS will contribute to instilling a culture of lawfulness. In this way MPS can effectively contribute to visible policing and are in a position to observe violations of by-laws and petty and other crimes.

The partnership and coordination approach of the MPS and the SAPS will ensure a greater impact on the prevention of criminality. The limited human capacity of the MPS and the limitation on the crime prevention role will allow a greater focus on by law enforcement and traffic enforcement, particularly given the legislative requirement which states that traffic law enforcement may not be compromised in favour of the other two mandates.

Moreover, a regulatory framework must be established for conferring of limited investigative competencies for Metropolitan Police to conduct investigations for preparation to submit to court. This is to include particular categories such as traffic related matters, municipal by-laws, as well as crimes committed on and related to municipal assets or environment, such as theft and tender irregularities, amongst others. MPS may only detain suspects until the SAPS are able to take custody.

The above approach is directly in line with the 2014 SAPS 'Back to Basics Strategy', which is a comprehensive, multi-disciplinary, and integrated, police safety plan involving all force multipliers. One of the pillars of the SAPS back to basics strategy is that targeted, informed deployment of operational resources be made by the SAPS to ensure the optimal utilisation of the limited resources that the police have at their disposal to ensure that they are applied to the maximum effect.

Modern information systems and computer technology are able to enhance the ability of police agencies to allocate resources by identifying changes in crime patterns, among others. However, in order to effectively manage high volumes of data, high priority must be given to process of crime analysis and the application of real time analytics. These systems usually result in the adoption of dashboard-type systems which facilitate management decisions and resource deployment.



These systems provide commanders with real-time access to current reports and deployment patterns of resources. Modern systems rely heavily of Machine Learning systems which may alleviate administrative tasks associated with report preparation and speed up patterns of recognition analysis. The resulting reduction in administrative workloads can contribute the redirection of human resources to frontline tasks.

As it is evident that public sector budgets are, in real terms, shrinking, there is an urgent need for more efficient policing. CompStat and related technologies can therefore help to ensure that police resources are monitored and used effectively.

These technologies are widely used by emergency services and have increasingly been adopted by the private sector in delivering efficient services. Modern taxi hailing systems too routinely rely of real time monitoring of fleets, satellite based identification of client locations, automated estimation of shortest routes between journey start and end points, and even the seamless estimation of costs and billing of clients. All of these are achieved with virtually no manual input of data or clerical staff. Bringing the same technology to bear on the deployment of police resources will have a profound impact on their efficiency and thus the number of resources required.

Police departments have been somewhat slower in embracing these technologies. Despite this there has been a trend towards adopting intelligence-led policing strategies or information-led policing strategies relying on analysis to guide decision-making. More so, for SMART policing to be implemented successfully, technology is a prerequisite, and an interdependent holistic relationship with communities is of utmost importance.

Within the existing resource allocation, substantial improvements in service delivery can be achieved by minimizing and streamlining the administrative burden carried out by the SAPS. Currently with almost 57% of the SAPS employees occupied with management, supervision and administration, only 43% are frontline operational members based at stations. This ratio must, at the very least, be reversed, and the technologies referred to above will eventually be instrumental in reaching that goal. There are easy gains to be had by frontline operational police using devices that record their location, as well as statements made by witnesses, photographs and even fingerprints. While this technology can place key information in the hands of frontline police (images of suspects, criminal records, ownership details of vehicles, addresses, status of firearm licences, citizenship status, warrants, and others), their primary impact can be to dramatically reduce downstream administration burden. This may include the elimination (or substantial reduction) of manual data input, the

classification and archiving of records, and others. The technology will simultaneously facilitate the monitoring and management of frontline staff and oversight. Currently poor crime and operational information management, including inaccurate recording and collation of information, inadequate analysis and infrequent dissemination of statistics affect the performance of the police service.

Generally the required technology is available off the shelf, is often low cost, or even free. However, the integration of this technology into the existing system depends on the creation of IT platforms and, more challenging, the adoption of new attitudes to the integration of SMART technologies and the way in which managerial oversight is exercised.

The key question is not how SMART technology can be deployed in crime prevention but how can existing resources be better utilized, lead to higher prosecution rates, better crime prevention, and ultimately more secure communities. One promising answer is to streamline administration, management, and oversight by using SMART technologies that are increasingly commonplace. These technologies can, at the very least, free resources from administration and managerial tasks for deployment 'on the frontline'.

The adoption of technologies and innovations has in the past been impeded by a mindset of senior and middle level management, who have grappled to embrace off the shelf technologies. The E-Docket system is an example of the inability of SAPS to embrace innovation, or make efforts to get it right.

Small steps include the Namola Cellphone Application that has been implemented in the Brooklyn Station precinct in Pretoria. With this application on a cellphone, one is able to send information through about a crime in progress to a Namola system in the police control room as well as in the police vehicles. The police can then pinpoint the place of the incident immediately and the nearest vehicle will respond immediately.

The Memeza Community Safety Alarm System is holistic community based public alarm system that is directly integrated with the SAPS, CPF and community structures. It was designed to ensure that it is affordable enough to allow low income learners to link with the SAPS. The system was developed specifically for the SAPS, based on SAPS requirements and challenges. It improves front line service delivery to communities, with the SAPS being able to track service levels with validated data. It enables communities to immediately notify the SAPS of any crime, allowing SAPS to proactively respond. Through the system, the SAPS are able to track and measure their own front line delivery services with an "on scene" SAPS functionality, which allows the measuring

of response times. The system works with a remote alarm. Pressing the panic button allows the following:

- Produces a unique three-phase siren sound (designed at the request of Business Against Crime) to alert the neighbourhood and Street Patrollers
- Flashes a red light to make easy identification of the house in distress
- Sends out alert SMS messages to the cell phones of the local Sector Police, Street Watches, Patrollers as well as pre-selected family, neighbours and friends. No limit to the number of respondents to be notified.
- The SMS includes the street address or land mark of the house where the alarm has been activated.
- Intruders are scared away by the activation of the deafening sound and bright red flashing light.
- Logs all crime statistics to a back end database for up to date reporting, audit trail and accountability.
- Communicates with the Back End Management system, ensuring every incident or activity linked with the actual unit, or customer is captured and stored. The back end system provides access to real time, validated crime intelligence, linked to the individual impacted, geographical area and data related to the crime.

Some farmers in the Eastern Free State are making use of Drone Technology to patrol their farms. The SAPS do not have the manpower to patrol all of the farms every day. Therefore farmers are utilizing drones fitted with cameras that are programmed to fly a route via certain co-ordinates to patrol the farm borders. The farmer monitors the fences through the camera fitted to the drone. Many farmers also make use of the Marnet Radio System which is linked to the Police Station in order to enhance policing in the area. During farm attacks communication is effectively facilitated with each other and the Police.

The Neighborhood Watch system and Community Patrollers initiative are also ways to compliment the SAPS establishment. Stations have entered into the social media arena and most have social network platforms such as Facebook pages where the community can ask questions or leave comments regarding station functioning.

Even though there have been minor technological advances in the policing sector, the following hi-tech areas must be considered towards a new approach for policing in South Africa.

Strategically Managed Analysis and Research-driven Technology-based (SMART) policing has been cited by policing experts as the new evolution in policing.<sup>48</sup> SMART policing uses technology, research, and analysis to support the strategic management of police activities. It also provides for more efficient data collection, information sharing, and data analysis. The primary goal of SMART policing is to improve overall police performance through the more efficient use of police resources. SMART policing has three primary components namely:

- **Strategic Management:** Strategic management begins with an assessment of criminal activities, threats, and vulnerabilities. This assessment may include a gap analysis or capabilities review of what was done and what should be done, and must include strategic goals and objectives for improving police performance. Once this step is complete specific practices, tools, and technologies are to be implemented and deployed to support these goals and objectives. Forging community partnerships and garnering public support for policing initiatives is critical. Monitoring and assessing must be undertaken to measure effectiveness
- **Analysis and Research:** Research and the analysis of historical data and stats to measure trends are important to synthesize data across various sources. With this, management can make better decisions about resource allocation and deployment.
- **Technology:** Recent advances in technology and tools can help police improve data capturing, display and analysis, information sharing, and surveillance activities. Tools such as the following are necessary to achieve strategic goals and support data analysis:
  - Intelligence software that uses a different type of data to drive deployment of law enforcement assets.
  - Internet communication programs for the enhancement of situational awareness among police and community stakeholders.
  - Linkage and networking software which is needed to fuse disparate information.
  - Electronic surveillance technologies that employ software capable of identifying behavioral anomalies and facial features of suspects.
  - Complaints management which enhances the management of operational staff and
  - Resource management which keeps record of areas that have resources and the ways in which the resources are utilised. This system provides an ongoing monitoring of resource utilisation.

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<sup>48</sup> Matlala, R.L.G.2016. Defining e-policing and smart policing for law enforcement agencies in Gauteng Province. *The International Journal of Social Sciences and Humanities Invention*, 3(12): 3058-3070

Another form of SMART policing includes the Predictive Policing approach which involves taking other forms of policing approaches and integrating them into one. In essence, through predictive policing, data is sourced from dissimilar sources, analysed, and then the results are used to anticipate, prevent and respond more effectively to future crime. Predictive policing entails becoming less reactive. *“The predictive vision moves law enforcement from focusing on what happened to focusing on what will happen and how to effectively deploy resources in front of crime, thereby changing outcomes”*.<sup>50</sup>

Predictive policing is not meant to replace already successful police techniques, instead, it borrows from the principles of problem oriented policing, community policing, evidence-based policing, intelligence-led policing and other proven policing models; models already in use in South Africa. Current analytic tools and techniques like hot spots, data mining, crime mapping, geospatial prediction and social network analysis can be applied to a broad range of criminal justice problems. For instance, they can be used to anticipate localized crime spikes, inform city and neighborhood planning, and aid in police management decisions<sup>51</sup>. Predictive policing can be used in identifying hotspots and crime mapping, data mining, informing police deployment of manpower, provision of statistics, geospatial prediction and social network analysis. Through the approach of predictive policing, resources can be effectively managed and allocated.

There is substantial research evidence that the more focused and specific the strategies of the police, the more they are tailored to the problems they seek to address, the more effective police will be in controlling crime and disorder.<sup>52</sup> Research on police effectiveness in addressing “hot spots,” has found that well-managed investigations and crackdowns can suppress crime, deter its future reappearance, and avoid simply displacing a similar number of crimes elsewhere. Discovering hot spots and tracking the effectiveness of policing efforts against them has been facilitated by the widespread adoption of new computer mapping and crime analysis technologies by the police.

Computer Statistics (CompStat) is a performance management system that is used to reduce crime and achieve police stations goals, and emphasises information-sharing, responsibility and accountability, and improving effectiveness. It includes four

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<sup>50</sup>Pearsall, B. 2010. Predictive Policing: The Future of Law Enforcement?. *NIJ Journal*, 266: 1-36

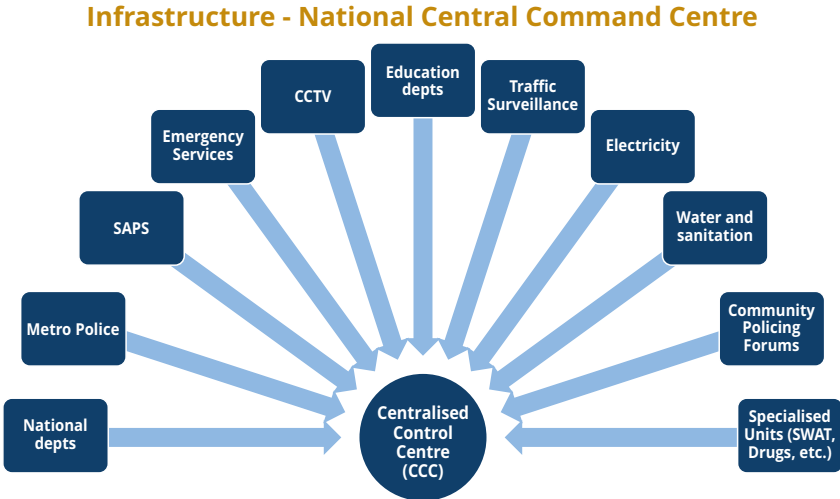
<sup>51</sup> Casady, T. 2011. Police Legitimacy and Predictive Policing. *Geography and Public Safety*, 2(4): 1-16

<sup>52</sup> Martin-Roethele, C. 2013. Police Innovation: Enhancing Research and Analysis Capacity through Smart Policing. Arizona State University

generally recognized core components namely: timely and accurate information or intelligence, rapid deployment of resources, effective tactics, and relentless follow-up.<sup>53</sup>

Many countries utilise the Centralised Control Center (CCC) that houses all relevant service delivery, community safety and support departments, as well as industry and community role players.<sup>54</sup> Another enabling component of this concept is the critical communication backbone network infrastructure that enables high speed wireless critical voice and data communications over a dedicated infrastructure of high sites and base stations.<sup>55</sup> This ensures a dedicated communication link between the CCC, other centres and all mobile units even during disasters or large events. The following diagram depicts the National Central Command Centre:

**Diagram 2: National Central Command Centre**



Source: Bureau of Justice Assistance

SMART policing facilitates the detection in changes in crime patterns, location of hotspots and other important features of modus operandi through computer usage. In South Africa data records are collated and analysed after crimes have happened to identify changing patterns and better ways of allocating resources and meeting community demands. A SMART system with real-time logging of details is more conducive to identifying the changes and deploying resources. The technology requirements are essentially computer analyses. The adoption of the SMART technology is primarily aimed at reducing the administrative burden of police, particularly within established sectors or sector policing, which is generally resource intensive. It also seeks to transform operational policing methods of working.

<sup>53</sup> Yüksel, Y. 2015. Police Culture and Change: The Case of Compstat In Police Organizations. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 34: 107-121

<sup>54</sup> Ibid

<sup>55</sup> Laybourn, K & Taylor, D. 2011. Policing in England and Wales, 1918-39: The Fed, Flying Squads and Forensics. Palgrave Macmillan: United Kingdom





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