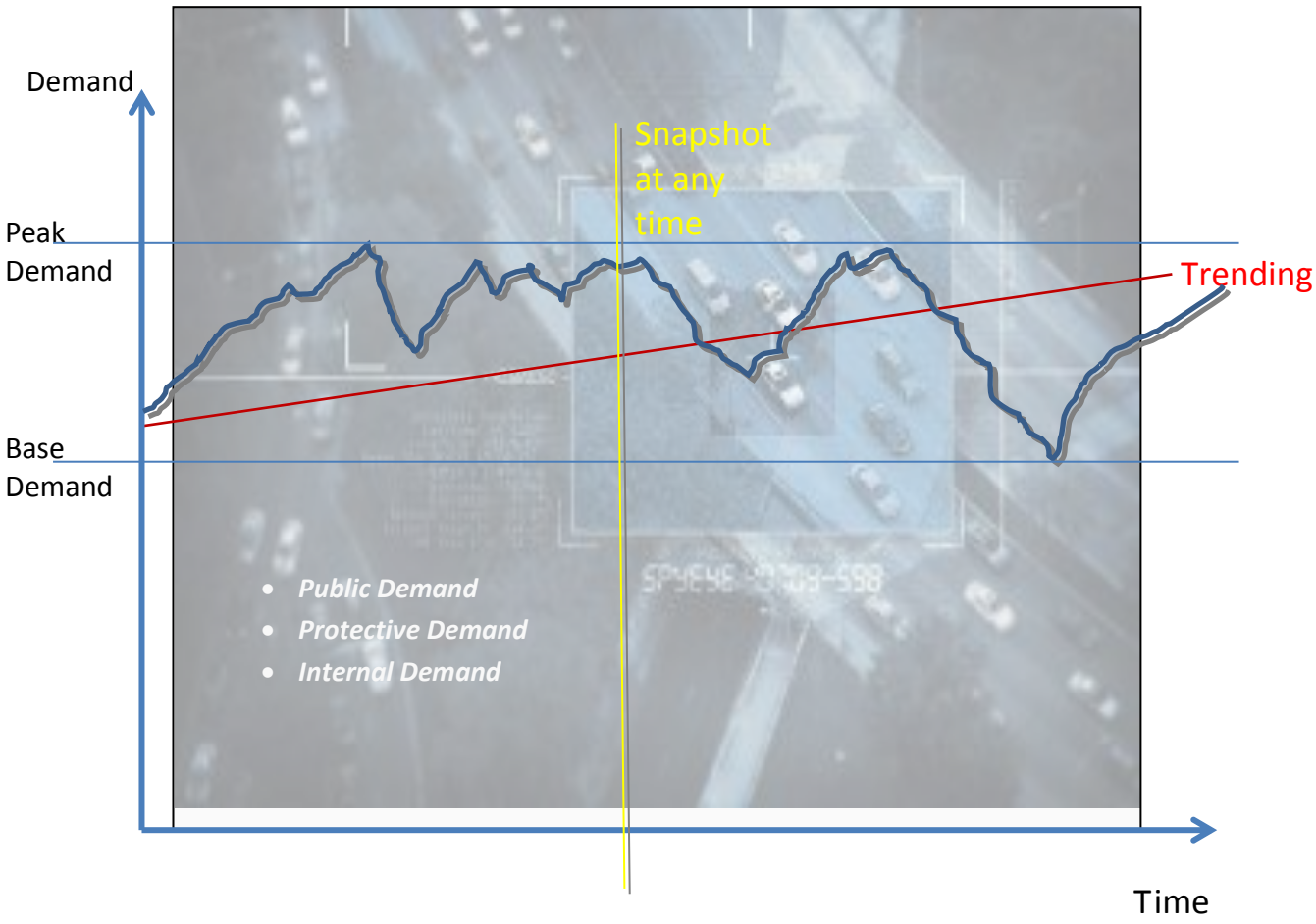


# Better Understanding Demand – Policing the Future

**NPCC Performance Management Coordination Committee**

**2017**

# Contents

Contents ..... 2
Foreword by Chief Constable Steve Finnigan CBE QPM ..... 3
Executive Summary ..... 4
Introduction ..... 6
Summary of Findings ..... 9
Summary of Recommendations ..... 11
The Demand Reference Group ..... 14
Chapter 1: Demand in Context and Whole System Thinking ..... 16
Chapter 2: Towards a Common Understanding ..... 19
Chapter 3: Legitimacy of Demand and Public Expectation ..... 23
Chapter 4: Vulnerability ..... 28
Chapter 5: Demand Management - A Case Study ..... 34
Chapter 6: Demand Management - MoRiLE ..... 39
Chapter 7: Demand Management - THRIVE ..... 42
Chapter 8: Internal Demand ..... 48
Chapter 9: Demand, Efficiency and Effectiveness - PEEL Inspections ..... 52
Chapter 10: 'Big Data' ..... 56
Chapter 11: Predicting Demand ..... 59
Chapter 12: What we can't Predict – A Co-ordinated Plan for Future Research ..... 71
Chapter 13: Productivity ..... 73
Chapter 14: Resourcing ..... 82
Chapter 15: Process Mapping and Value Streams ..... 88
Chapter 16: Demand and the funding formula ..... 92

APPENDICES

Appendix 1: Table on Tackling Vulnerability ..... 97
Appendix 2: Sample Internal Audit Form ..... 98
Appendix 3: Demand Prediction requiring further Research ..... 100
Appendix 4: THRIVE ..... 102
Appendix 5: Internal Demand in the MPS ..... 103
**References** ..... 104

# Foreword

## Steve Finnigan CBE QPM

**Chief Constable of Lancashire Constabulary and NPCC Chair of the Performance Management Coordination Committee (PMCC)**

There is no doubt that demand is changing in nature and much of it as a result of our revised approach to risk, threat, harm and vulnerability (R/T/H/V). Understanding demand across the breadth of our business is critical. In recent years the Police Service has seen change on an unprecedented scale and is striving to transform in ways that will enable us to meet new types of demand with fewer resources. Austerity has also led to some partner services shrinking apart; this has undoubtedly impacted on demand, capacity and capability. We now also have a new performance narrative, focusing on R/T/H/V, as well as an increase in complexity.

This piece of work to better understand demand, commissioned by the NPCC Performance Management Coordination Committee, has engaged with the service, as well as partners, to develop a clearer understanding and more consistent picture of demand that recognises the changing nature of R/T/H/V within our communities. Critically, it also seeks to examine the key levers that may enable the service to more accurately predict future demand.

The project has adopted a broad classification of demand into three domains, namely Public Demand, Protective Demand and Internal Demand. This is with a view to developing a consistent and considered approach to better understand the demand that we face, to be clear on how we can manage it, to support the tough decision making that prioritises service provision, as well as helping our managers and leaders to plan and then deploy resources in the most effective and productive way possible.

It is the second part of a project that set out to quantify demand and to aid our understanding of its importance in the management of modern day policing. In the first part, the College of Policing sought to quantify the totality of demand. In this work, demand was broadened out beyond calls for service to everything that the Police Service does to assist people in our communities. It tries to explain demand, offering a common language for discussion. It has linked demand to public value, in terms of how the services expected and delivered add to public value, as well as using academic research and other wider initiatives to develop demand forecasting models. The guidance also seeks to develop ways for data to be converted into management information linked to R/T/H/V to guide the allocation and deployment of resources.

The project has been assisted by an established Reference Group of volunteers from across the service who have shared good practice, provided professional opinion, reality checked options, and applied practitioner critique to the project outputs. A Task and Finish Group was also established to feed the learning from the work on understanding demand into the current thinking around the Police Funding Formula Review.

Finally, I would like to thank all those who have contributed to this guidance for their commitment and assistance.

**Chief Constable Steve Finnigan**

# Executive Summary

The PMCC of the National Police Chiefs' Council (NPCC) commissioned a project into better understanding demand on the Police Service. The first part of the project was conducted by the College of Policing and resulted in a report published in January 2015. However, the NPCC felt that there was further work to be completed in order that understanding and awareness of demand could be raised across the service and its partner agencies.

Within this, the NPCC were keen to increase the debate around the demand that is passed to the Police from other parts of the public sector, including the expectations of other agencies and the public. It was argued that the police needed to define policing demand beyond just calls for service and to better understand the demands presented through our daily management of R/T/H/V.

It was also important to develop a new understanding of the totality of demand on the Police Service that could inform the Police Funding Formula (PFF) review.

The scope of the project was set out in the agreed Terms of Reference and included:

1. Examine demand beyond recorded crime
2. Explore sources of demand data and how this can be converted into management information
3. Consider the impact on demand of collaborative working
4. Consider demand in the context of 'whole system thinking'
5. Identify on-going professional good practice across the service and set up a central repository to avoid duplication of effort
6. Establish an Independent Advisory Group drawn from various sectors to act as a 'critical friend' throughout the project
7. Link demand to public value in terms of how the services expected and demanded add to public value
8. Utilise current academic research and wider initiatives to develop demand forecasting models
9. Explore the relationships between demand, productivity and resourcing
10. Identify and acknowledge the potential of digital capabilities such as 'Big Data'
11. Consider the leadership and management skills required of leaders, managers and supervisors to use demand information as part of their supervision and management practices

The project commenced in May 2015 and established a 'Demand Reference Group' of volunteers drawn from across the service with representatives from all forces, non-Home Office forces, Police and Crime Commissioners Office, HMIC, Home Office, Federation, Superintendents Association, other emergency services, partners agencies and academia.

The Reference Group established specific work streams to cover topics to consider within and to deliver against the terms of reference. Each of these work streams was led by volunteers from across a number of different forces.

As outputs, the group provided regular update reports to the PMCC and delivered National conferences/workshops which not only raised awareness of demand but also encouraged debate across the service as well as disseminate good practice.

The collective work of the Reference Group work streams was then collated into the production of this guidance, referred to as, **'Better Understanding Demand - Policing the Future.'**

The main findings and recommendations are detailed further within the document but can be summarised as:

- Demand on the police service goes far beyond 'calls for service' and can be categorised into three kinds of demand - **'Public Demand' 'Protective Demand'** and **'Internal Demand'** – however, the approach to these is inconsistent across UK policing

- The work of the Police Service cannot be viewed in isolation but is part of the wider system of Public, Private and Voluntary Sectors working together as a whole to deliver public safety

- The levels of demand and need in force areas should inform funding levels

- The role and scope of the Police Service has expanded considerably over the years and is partly as a result of reduced funding in other parts of the public sector

- Predicting demand is complex and to be achieved requires an investment in technology to collate data and external assistance to analyse and translate that data into a usable form

The main recommendations arising from the work of the groups are:

- The Peelian Principles of policing are still valid but if demand on the Police Service is to be better managed there needs to be more emphasis on prevention and early intervention rather than reaction. This would include increased collaborative working to alleviate vulnerability
- Tools and techniques such as THRIVE and MoRiLE should be adopted across the service
- There should be more emphasis across the service and the public sector on collaborative working and on 'Whole System' thinking
- There should be a reconsideration of the role and scope of the services that the Police Service provides
- There should be more investment in research and use of Big Data solutions
- There should be a better understanding on the part of the Police Service of techniques such as Systems Thinking, Value Streaming, Lean Manufacturing and Process Mapping so as to improve the efficiency of internal processes in order to reduce internal demand and improve productivity
- There should be further work commissioned by the NPCC to consider investment in systems and partnerships to gather demand management information and to develop analytics to better predict future demand
- Police Service funding should be linked to the totality of demand on the service

**Ch Supt Kevin Dunwoody**
**Project Coordinator**

# Introduction

The Police Service as a whole continues to face decreasing budgets and resourcing pressures at a time when forces report being busier than ever. It is clear that the context in which the police service operates has changed, the demands for services are increasing, the nature of demand is more complex and the police continue to feature as the 'service of last resort' dealing with more than 'just crime.'

Expectations on the part of the public and indeed wider afield have grown considerably beyond the police just dealing with crime. The complexity of the world of policing is also changing and accountability is ever increasing, but it brings with it an equally challenging increase in bureaucracy. Technology has provided some solutions to help productivity but in and of itself has also contributed to the rise in internal demand.

What is clear and unchanging is that the Police Service is about keeping people safe – this alone presents so many challenges in terms of how we respond to R/T/H/V whilst at the same time providing a quality of service to our communities.

It is important, therefore, to understand demand, its sources and its variability. It is important to understand demand so as to manage it and where possible to reduce it. Nationally there would appear to be little consistency in how demand is measured, in what is done with the measurements, and how assessments of R/T/H/V can be used with demand information to manage its complementary qualities of 'supply,' 'capability' and 'capacity'. The National Audit Office report **"Financial sustainability of Police Forces in England and Wales" (2015)** concluded that crime statistics indicate that crime has fallen since 2010-11, but that crime levels are a limited measure of demand and do not show the full range of work carried out by police. Recorded crime does not include all types of crime, it does not take account of complexity, nor does it take into consideration emerging more complex risks and threats such as cyber-crime and child sexual exploitation, which have historically been under-reported.

Chief Constable Steve Finnigan is the NPCC lead for Performance Management (PMCC) and has been driving the work to understand demand on the Police Service. The areas of Demand, Capacity and Supply are at the heart of the NPCC Delivery Plan - it is clearly set out at Objective 5.2 of that plan, ***"Develop a joint Enterprise with the College of Policing to improve the way the Service understands and manages demand."***

The PMCC recognised that with the reducing resources and increasing expectations of the Police, there needed to be a different approach to how policing services were provided. There also needed to be a better understanding of the nature and volume of demand for policing services. PMCC commissioned work with the College of Policing, the first product of which was the College of Policing study published in January 2015. This initial piece of work sought to quantify demand and led to the further development of the College's practical guidance entitled **'From Local to National: A toolkit to support the Police in Understanding Demand' (College of Policing, 2015)** that provided options and techniques to measure and analyse demand.

In May 2015, in recognition that more work was required, a further phase of the project was commissioned with the aims of:

1. *Providing a more complete and consistent understanding of demand on forces*

2. *Raising awareness of the importance of demand in managing resources and productivity*
3. *Providing information as to how demand could be better managed or reduced*
4. *Stimulate the exchange of ideas and best practice between forces*
5. *To consider how future demand could be predicted*
6. *To link demand to service capability*

A National Reference group was formed which had representatives from all 43 Home Office forces, non-Home Office forces, Police Federation, Superintendents Association, other emergency services, HMIC, College of Policing, OPCC and Local Authorities. Workshops led by the Reference Group helped develop the approach and the two National Demand Conferences provided the service with the opportunity to strategically consider the issue of demand as well as influencing forces thinking around the subject.

The core team has sought to raise awareness, stimulate debate, identify good practice, exchange ideas and to forge links with other on-going work within NPCC. Whilst the documents in this report consolidate the work undertaken, it is important to recognise the wider impact of this piece of work, in particular, on the need for a 'whole system' approach to community safety and in recognising and addressing vulnerability. In this the Police are but one component.

From this Reference Group, six work streams were developed which have been led by volunteers from across several forces:

- Understanding Demand
- Predicting Demand
- Productivity and Resourcing
- Managing Demand
- Communication
- Funding Formula

**This booklet is a compilation of separate reports developed by the work stream leads. It presents a summary of the work undertaken within the work streams. Differences in style reflect the different authors of the sections. The Chapters are designed to 'stand-alone' to a certain degree and by necessity, some are more 'academic' in their content than others.**

Over the life of this project a key aim was for there to be a more consistent understanding of demand and that there was a need for more emphasis on 'prevention' rather than 'reaction' if resources were to be used more effectively and efficiently. In fact, demand seemed to reflect a continuum of identifying and alleviating vulnerability at one end, going through prevention of harm and mitigation of risk by problem solving, and finally to the response required to deal with threat and harm. Work on 'value streaming' and 'process mapping' validated this by highlighting the costs of 'reacting' and 'responding' versus those of 'preventing' and 'alleviating', urging forces to ask questions about the *value* added at each stage of the processes, the costs of rework and the efficiency of internal processes.

It became clear to the project team that there was a need for a better understanding of the whole area of "Vulnerability", how we measure it and how to alleviate it. Understanding and alleviating vulnerability was found to be a precursor step in better managing demand through prevention and problem solving. Like demand, vulnerability is variable, and needs to be identified, predicted and managed within a 'whole system' context. For this reason it has been included as a separate chapter within the work.

The single most frequent question asked of the Demand Management project group in presenting their work on demand management is: "I get it… so what do I do now?"

The police operate within a social context. They need to understand their role in that context and to play their part in shaping the delivery of public services. The NPCC Demand Project is about demand on the police service;

1. **As an emerging science** – a clutch of tools and techniques that, done in isolation, could improve services and potentially save some money relatively quickly - but tools on their own are not enough.

2. **As a 'whole system, whole place' approach** – in which understanding demand and demand management is a lever to re-align systems of governance and service delivery around outcomes. This means thinking about the organisational, cultural and service design implications.

3. **Where the police service can affect long-term principles for public service reform** – an overarching vision that can hold the weight of change and can situate demand management as part of a fundamental shift in role and purpose for public services. There are examples of this across the service such as the approaches to Early Action.

Different localities need different things. Politics matters. Policing context is important and this project or its work streams is not intended to be prescriptive – more a starting point for decision makers and a framework on which further work can be developed.

The findings of the project have been collated and are presented together with the associated recommendations in the following pages.

**Ch Supt Kevin Dunwoody**
**Project Coordinator**

# Summary of Findings

| No. | Category | Finding | Chapter |
|---|---|---|---|
| 1 | General | Policing services must be considered as part of 'whole system' approach to the provision of public services | Ch 1,2,3 |
| 2 | Demand | Understanding demand is crucial to the design and delivery of policing services | Ch 1,2,3 |
| 3 | Demand | Understanding demand is crucial to the effective and efficient management of resources | Ch 1,2,3 |
| 4 | Demand | Demand in total can be categorised into 'public', 'protective' and 'internal' demand | Ch 2 |
| 5 | Demand | Demand must be linked to capacity, capability and productivity if it is to have any usefulness or value | Ch 1,2,3 |
| 6 | Predicting Demand | Reliance on static demand derived from 'snapshots of demand' must be treated with caution if used as a basis for forward planning of resources and capability | Ch 11 |
| 7 | Demand | Demand on the police as a service is not always 'legitimate demand' – it may be displaced from other agencies or services or may be generated as a result of inefficient or ineffective use of resources | Ch 3 |
| 8 | General | Public discussion and debate is needed to air the roles and function of the police as well as the way that policing services are delivered | Ch 1,2,3,9 |
| 9 | General | There is a concentration on 'outputs' and 'costs' at the expense of 'outcomes' and 'value' | Ch 1,2,3 |
| 10 | General | Managing 'demand' in respect of community safety in its totality is complex and cannot be dealt with by the police in isolation | Ch 1,2,3,4 |
| 11 | Predicting Demand | Predicting demand to anything other than a basic degree is extremely complex and 100% accuracy will never be achievable | Ch 11 |
| 12 | Vulnerability | Prevention and alleviating vulnerability is the most effective way of applying policing resources | Ch 4 |
| 13 | Demand Management | Decision making processes should be dealt with on the basis of Threat/Risk/Harm and Vulnerability | Ch 1,5,6,7 |
| 14 | Predicting Demand | Decision making is most effective when it combines professional judgement with actuarial analysis | Ch 11 |
| 15 | General | There is a strong relationship between demand and vulnerability. Strong evidence links demand, vulnerability and deprivation at a national, regional and local level | Ch 4 |
| 16 | Predicting Demand | Many forces are still using volume based approaches to identify their highest demands and are unable to accurately outline what their largest vulnerability or harm based demands are at present, or, predict these over any period longer than a few | Ch 11 |

| | | | |
|---|---|---|---|
| | | months | |
| 17 | Productivity Capacity Capability | At a national level it has been identified that the police service is unable to accurately identify the capacity of their resources | Ch 13,14 |
| 18 | Productivity Capacity Capability | Forces do not fully understand the capability of their resources in terms of skills, accreditation and qualifications | Ch 13,14 |
| 19 | Productivity Capacity Capability | Forces are unable to identify, understand or plan to resolve predicted gaps between demand, capacity and capability | Ch 13,14 |
| 20 | Vulnerability | There is a strong link between diversity and vulnerability and the ability of the police as a service to respond to vulnerability is related to the diversity of the police service | Ch 4 |
| 21 | Vulnerability | There is a need for better metrics to predict vulnerability, as defined by the College of Policing *("A person is vulnerable if as a result of their situation or circumstances they are unable to take care or protect themselves, or others, from harm or exploitation")* | Ch 4 |
| 22 | Vulnerability | Vulnerability based early intervention and prevention approaches are inconsistent and not effectively targeted to support the most vulnerable who may not be readily identifiable | Ch 4 |
| 23 | Predicting Demand | The London School of Economics demand mapping provides the most accurate geographical representation of demand currently available although there are other academic studies being conducted (e.g. PODSS by Queens University Belfast) | Ch 10,11 |
| 24 | General | Few forces have a clear understanding of the processes they apply in delivering services and as a result have high 'internal' demand | Ch 1,2,8 |

# Summary of Recommendations

| No | Recommendation |
|---|---|
| 1 | That the current project should be considered closed and consideration now given to widening the scope to develop the concepts of Vulnerability in Policing as well as emerging Service Skills and Capability |
| 2 | There is a need for more collaborative working across the police/public/private and voluntary sectors with a clear understanding of roles and scope |
| 3 | There needs to be a realisation that demand is dynamic and 'snapshots' are of limited use in predicting future demand |
| 4 | Police IT systems need to be designed and configured to generate dynamic management information in a readily digestible form and that can be shared between partner agencies. This would allow forces to analyse demand in detail and produce forecasts of demand to allow better workforce planning |
| 5 | A review of data sharing statutory obligations and their effectiveness is required to identify frameworks for the Police and partner agencies to maximise risk identification and prediction to help underpin early intervention and prevention approaches |
| 6 | There needs to be a means of automatically gathering work place time and motion (and/or task analysis) to fully understand demands placed on all resources, the time that is required to meet these demands and identify their capacity levels |
| 7 | There is a need for better data sharing between the police and partner agencies to ensure better joint decision making and better alleviation of vulnerability and reduction of harm |
| 8 | Work on 'Big Data' needs to be developed to be easily and readily updated, analysed and shared across the public, private and voluntary sectors supported by joint decision making and direction of services at strategic, tactical and operational levels |
| 9 | Geographical representation of demand and information from education, social welfare, social services, health, education and business or similar could be used to underpin 'Place based' partnership structures and tactical capable guardianship responses |
| 10 | The Management of Risk in Law Enforcement (MoRiLE) demand prioritisation model should be used by forces to help prioritise their demand areas. This can be achieved at strategic, tactical and operational levels and removes the emphasis on volume |
| 11 | Forces need to consider how they combine harm indexes with MoRiLE risk modelling to provide decision makers with better information to align resources to risk and vulnerability based demand |
| 12 | Forces should aspire to automate Risk, Threat, Harm and Vulnerability modelling through software based solutions which can be commissioned or constructed internally at little cost |
| 13 | Forces should endeavour to collaborate to share the burden of the detailed analysis required to better understand demand and the capacity and capability of their resources and assets |
| 14 | In the absence of identified metrics to predict vulnerability, forces should consider adopting the Adverse Childhood Experiences model as a predictor of vulnerability, until further research identifies a more effective model |

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|---|---|
| 15 | To underpin their response to vulnerability, forces should adopt a single definition of vulnerability which has been identified by the College of Policing as:<br>***"A person is vulnerable if as a result of their situation or circumstances they are unable to take care or protect themselves, or others, from harm or exploitation"*** |
| 16 | Forces should understand the links between diversity and vulnerability |
| 17 | There needs to be a development of skills across the police service to be able to manage demand and vulnerability in all their forms |
| 18 | That NPCC consider the following matters and questions in relation to the Funding formula:<br>• The vast majority of issues around funding and demand will not be central to this process. An allocation formula need only focus on demand which varies by force. How might the service establish a shared view on this?<br>• Are the previous principles fit for purpose, or are some of higher importance than others, such as stability?<br>• Does the service have a view on transition arrangements which could be put forward?<br>• What is the potential impact of the Specialist Capabilities review on the PAF and how do the current timelines work together?<br>• Is there an appetite to consider and progress or discounting, an alternative approach to implementing a new PAF?<br>• How will consideration be given to factors excluded from this work?<br>• Physical factors about that area that makes policing it complex, such as sparsity<br>• Economic factors which affect the cost of delivering policing services, which were accounted for previously through the area cost adjustment<br>• The relationship with local funding through precepting<br>• Other funding streams<br>• Does the service wishes to proceed to develop potential metrics and consult across forces on them in advance of the Home Office proposal |
| 19 | The service should consider commissioning insight in to what we mean by vulnerability, and how we might measure complex and co-existing needs in communities which create a need for policing. This could potentially be achieved by expanding the LSE work with HMIC but would need agreement across many NPCC portfolios due to its cross cutting nature.<br>***Note that the chapter on Vulnerability was completed after the Task and Finish work being completed***. |
| 20 | The NPCC should determine the medium term aspiration to provide greater insight into police demand to inform future spending reviews rather than the PAF |
| 21 | Productivity - To support an agreed approach to productivity that facilitates cross agency sharing and develops organisational understanding of the interdependencies that impact upon marginal gain and organisational change. |
| 22 | Resourcing - To adopt time as the agreed measurement of demand and develop networks for sharing data that is described and built in a consistent manner that minimises variation and enables effective utilisation across forces |
| 23 | Agree a set of national principles of THRIVE aligned to and based on the College of Policing Principles of Risk and the International Standard (ISO) of Risk Principles. The principles to be agreed to aid the implementation of THRIVE and to ensure the model is successfully |

| | |
|---|---|
| | embedded within any organisation |
| 24 | An NPCCC agreed approach based on using THRIVE in all Police Contact areas of business |
| 25 | Agreement to set up a working group to nationally agree language and develop approved practice through the College of Policing - to nationally agree training levels required to support staff in delivery, to share ICT developments, training products, performance management, best practice, learning and development |
| 26 | To implement a National continuous professional development centre for THRIVE |

# The Demand Reference Group

The project picked up from the initial work by the College of Policing and was greatly helped by the support and contribution of the below mentioned people who collectively became the Demand Reference Group. The group developed the work streams and it is their work and findings that are presented within this collective work. Without their commitment and efforts the project could not have been completed:

| Name | Work stream | Organisation/role |
|---|---|---|
| Sean Price | 4 and 6 | Head of Performance, **Avon and Somerset** |
| James Goodwin | 1 | Enterprise Architect, Strategic Alliances, Avon and Somerset |
| Natalie Benton | | Head of Assurance **- Cambridgeshire** |
| Sue Ratcliffe | | Head of Performance **- Cambridgeshire** |
| Paul Woods | | **Cheshire Police** |
| Stuart Phoenix | | Head of strategic development **– City of London** |
| Tara Holford | | Business Transformation Manager - **Cleveland** |
| Ch Supt Andy Towler | 4 | **Cumbria Police** |
| Alexis Poole | **Lead for 6** | Devon and Cornwall - Lead for Policing the Demand |
| Ins Glenn Hoggard | | **Derbyshire** |
| CI Ben Hargreaves | 4 and 6 | **Dorset** |
| Nikki D'Souza | 5 | **Durham** – TFU Staff Officer to CC Barton |
| Gillian Routledge | | **Durham** |
| Claire Morgans | | Integrated Offender Management Analyst**, Dyfed Powys Police** |
| Ch Supt Carl O'Malley | | **Essex** |
| Supt Neil Evans | 2 | GM Public Service Reform Team & **GMP** Mental Health Lead |
| Supt Phil Davies | | **GMP** Change & Transformation Branch |
| Bob Keeble | | **Gloucestershire** - Continuous Improvement Manager |
| Ch Supt Rhiannon Kirk | | **Gwent** |
| Supt Tony Rowlinson | | **Hampshire** |
| Inspector Richard Lilley | 3 and 4 | **Herts** police - Mobile Data / Continuous Improvement Team |
| Emma Gyamfi | 3 and 4 | Project Manager, Continuous Improvement Team **Herts police** |
| Supt Andy Foster | | **Humberside** |
| Martin Scoble | **Lead for 1** | Chief Executive **Humberside** OPCC |
| Supt Martin Wilson | **Lead for 4** | **Kent** Police - Head of Innovation |
| Mark Johnson | 2 | **Kent** |
| Pete Steenhuis | 4 | **Kent** |
| Ch Ins Jon Bullas | **Project Manager** | **Lancashire Police** |
| T/Supt Ian Dawson | | **Lancashire Police** – Head of Corporate Development |
| Insp Sue Swift | 5 | **Lancashire Police** – Staff Officer CC Finnigan |
| PS Eric Halford | 6 | **Lancashire police** |
| DC Mark Brennan | 2 and 4 | Supply and Demand Work stream Lead Blueprint 2020 Team - **Leicestershire** |
| Steve Hempton | | Project manager - **Lincolnshire** |
| ACC Nicola Boardman | 1 and 5 | Head of Corporate Support & Development, **Merseyside Merseyside** |

| Name | Work stream | Organisation/role |
|---|---|---|
| Kim Bentley | | **MPS** – lead whilst Aimee Reed is on maternity |
| Aimee Reed | 6 | **Metropolitan Police Service** - Strategic Design Authority |
| T/CI Frankie Westoby | 3 and 4 | **Metropolitan Police Service** – Staff Officer Commander Jones |
| Gemma Stannard | | Head of Joint Performance and Analysis Department – **Suffolk and Norfolk** |
| PS Nathan Steele | 4 | **Northamptonshire Police** - Demand Management Project |
| John Gardner | | **North Hants** |
| Supt Dennis Murray | | **Northamptonshire Police** |
| Inspector Kevin Waring | | Change Programme **Northumbria Police** |
| Nicholas Evans | | **North Wales** |
| Mark Bates | **Lead** for 3 | Service Delivery Advisor - **North Yorkshire Police** |
| C/I Andrew Burton | | Performance and Insight Manager **Nottinghamshire** Police |
| Ch Supt Kevin Dunwoody | **Project Leader** | **Police Service Northern Ireland** |
| Brian Johnston | | **Police Scotland** |
| Emily Morris | 2 | **South Wales** - Organisational Review and Development |
| Ins Jason Davies | 2 | **South Wales Police** - Corporate Development |
| Insp Paul Ferguson | 2 and 4 | Diamond II - Transforming the Business Corporate Services **South Yorkshire Police** |
| Chief Ins Russ Hughes | 1 and 3 | Performance and Governance - Business Change Directorate **South Yorkshire Police** |
| Supt Stephen Morrey | | **Staffordshire** |
| Ins Steve Cheesman | 4 | **Surrey** |
| Jenny Stone | 2 and 3 | **Surrey Police** |
| PS Mark Townsend | | Staff officer to ACC Smith **- Sussex** |
| Ch Supt Steve Hockin | 1 | **Thames Valley** - Head of Tasking and Resilience |
| Ins Phaedra Binns | | **Thames Valley police** - Staff Officer to the Chief Constable |
| Peter Warner | 1 | Head of Strategic Performance, **Thames Valley police** |
| Sup Stacey Williamson | | **Warwickshire and West Mercia** |
| Supt Jo Smallwood | All | **West Midlands** - Deputy Head, Force Contact |
| Melanie Jones | 5 | **West Yorkshire** |
| Scott Bisset | | **West Yorkshire** |
| Rachel Kirby | | **Wiltshire Police** - Systems Thinking Lead |
| Inspector Andy Bridge | | **Wiltshire Police** - Transformation (Systems Thinking) |
| Nerys Thomas | | **College of Policing** - Knowledge, Research, Practice Lead analysis |
| Sharon Gernon-Booth | 1 | **College of Policing** - Organisational Development Lead |
| Dan Rowley | | **College of Policing** - Field Advisor |
| Ch Supt Paul Phillips | 4 | **College of Policing** - Police Standards Manager, Local Policing |
| Lin McGrath | Lead for 2 5 | **College of Policing** - Business Advisor (Accountability) Local Policing |
| Dave Mann | 6 | **College of Policing** |
| Dr Peter Langmeade-Jones | | **HMIC**/Greater Manchester Police |
| Ch Supt Sarah Boycott | | **HMIC -** Efficiency and Leadership Team Leader PEEL |
| Steve Almond | 6 | **Home Office** |
| Louise Fennell | | Priority Projects Team - Police Science and Technology Unit, **Home office** |
| Raza Hussain | 6 | Efficiency and Resources Unit, Crime and Policing Group, **Home Office** |
| Austin Curzon | | **Home Office** - Priority Projects Team, Police Efficiency & Collaboration |
| Chris Witt | | **Home Office** - Health and Policing (Public Protection Unit) |
| Les Humphries | 6 | **Lancaster University** |
| Karen Stephens | 6 | Interim National Board - **Police Federation** of England & Wales |
| Giles Herdale | | **Head of digital intelligence** & investigation strategy, Senior national co-ordinator for CC Stephen Kavanagh |

# Chapter 1: Demand in Context and Whole System Thinking

The laws of 'supply and demand' are well established and generally well known. Even the Dickens character Wilkins Micawber gave a view now enshrined in the eponymous 'Micawber Principle', based upon his observation: *"Annual income twenty pounds, annual expenditure nineteen pounds nineteen and six, result happiness. Annual income twenty pounds, annual expenditure twenty pounds nought and six, result misery."*

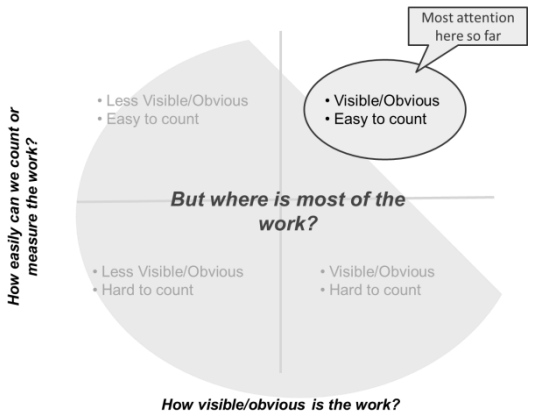
Within the modern day Police Service, there is recognition of the pressures on resources. There is considerable discussion in terms of 'demand' and how that demand is changing. The questions are, "What is meant by '**demand'** and is there a shared understanding of it as the same thing?" and "So what?"

It has taken some years to get here, but all forces are looking at 'demand' to some degree. When resource cuts first appeared on the horizon, many forces thought they could weather the storm by reducing the back office, restructuring and freezing recruitment. But that has proved insufficient and it is also now widely accepted that the police service must question the legitimacy and value of all the work that they do as well as the way that they do it.

Consideration was given to how to 'do more for less': but the thinking behind that approach was often flawed. It normally focused on costs rather than value; it sought to maximise productivity by reducing unit costs and increasing outputs per unit. This is not only de-humanising, but also leads to creating more overall expense, by driving up end-to-end costs and reducing the quality of service. Because it looks at what is important to the organisation (costs, outputs), it fails to understand what really matters to the service user (value, outcomes). Doing 'more for less' may appeal to managers who only see output per unit cost but it can only work so far before it starts to damage the core.

There was also the trend towards 'do less with less'. It may be simple 'salami slicing', or more complex choices about 'service levels' for a set level of resource. 'Benchmarking' is used to bring everyone to a maximal work rate. This approach again looks at costs and outputs and what is important to the organisation rather than the service user. But by fixing service levels against a set level of resource, it can freeze change and hinder continuous improvement.

Many forces now are looking at ways **to *reduce demand***. If it is possible to reduce the amount of work coming in to policing, then there may be a need for less staff. The government has a view that there is less crime so the service is clearly not merely coping, but actually succeeding in doing more with less. As has now been conclusively shown, 'crime' accounts for less than a quarter of 'demand' through calls for service (College of Policing, 2015), but it needs to be asked, "Is the service really coping? Is demand really down and is crime is down?"



The Police Service for some time has sought to answer questions such as, “What do we actually mean by ‘demand’?” “How much resource can be cut because recorded crime is down?” “What about the other 75% or more of ‘demand’?” “What about all the other stuff that the police do?”

The National Audit Office has warned that the government does not understand the impact of the cuts they are making to police budgets **(‘Financial Sustainability of Police Forces in England & Wales, National Audit Office, June 2015’)**. Other than crime rates, there is little in the way of data to help the police and others to understand the workload that forces are carrying and basic questions about ‘viability’, ‘productivity’, and ‘efficiency’ seem difficult to answer.

However, if demand can be quantified and projected then there is a realistic prospect of designing service provision that is appropriate, efficient and effective in meeting the needs of the public. If that demand can be managed – and reduced - in a safe and effective way then there is a tantalising prospect of forces being able to achieve real savings without damaging the core service quality.

Therefore the whole idea of prevention and problem solving has renewed currency. ‘Problem solving’ has been a policing strategy for many years, but until the financial crisis hit, the budgetary focus had been on ‘performance improvement’, with any savings being expressed in terms of efficiency gains, eg time saved. In the present climate of austerity it has to be about real cash savings and how to cope with less resource while still providing a service that meets public expectation.

In thinking about ***demand management***, the first question managers usually ask is “what can we stop doing?” The problem is that just saying ‘no’ very quickly runs up against external and internal resistance. The furore over burglary attendance and investigation shows the difficulty of debating difficult choices with the public and that the service has not yet agreed views on what to say ‘no’ to either.

It is a normal reaction to start at this point because many in the police service think they know what their demand is and they think they know what the caller or the victim wants. As a service and as individual forces it is known how many crimes and incidents are recorded and they can be broken down into different categories and types. It is known what should be done for each incident type. But this is only one part of the picture and starting from this point can miss far better opportunities to make savings.

A better starting point is to look in a holistic manner at what is currently being done – not just the calls for service that the police receive - so that it is more fully understood how all resources are being used and what is taking up the time. This inevitably prompts surprise as it is revealed just how and why valuable resource time is being consumed.

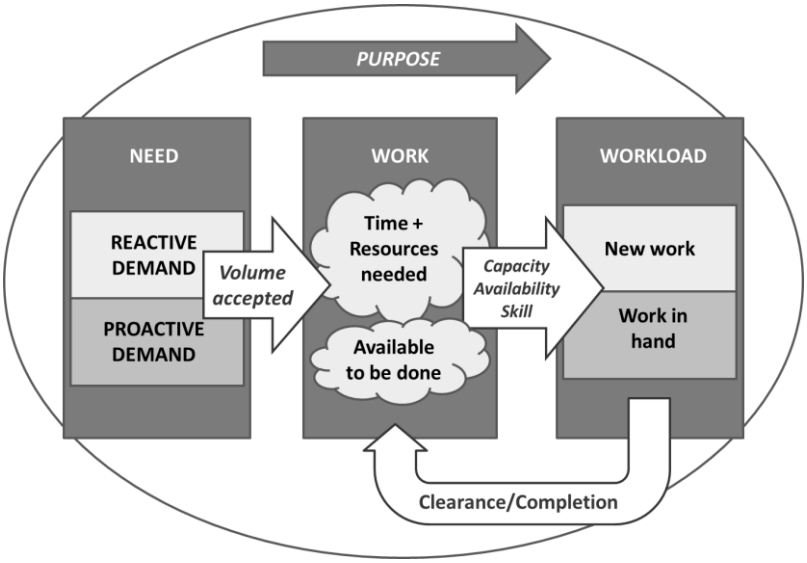
The work on demand by the College of Policing was a welcome start, but it needed to be developed. Having an evidence base to show that most of police ‘demand’ through calls for service does not relate to ‘crime’ is interesting and useful in challenging various opinions. To make this information useful, it is necessary to work out how to tackle this demand in a way that allows the police service to cope with the ever falling level of resources.

This is why the service needs to develop a common understanding of what is meant by ‘demand’ and ‘demand management’. If there is no agreement on whether or not the police are ‘coping’ and there is inadequate evidence of the impact of the cuts, then the service is vulnerable to yet more budget reductions.

At the same time, there is also a growing body of knowledge in relation to demand and how to deal with it in better ways. Such information is not always appreciated or transferable because of a lack of common understanding of demand management.

The police service no longer sees demand management as an optional extra, it is increasingly becoming a necessity in delivering ever-increasing outcomes with ever-fewer resources. Extensive economy and efficiency drives have already been made, yet with the majority of forces still having to find further savings over the next 3 to 4 years, ever more urgency has been added to this problem.

One of the biggest challenges - opportunities - facing the service is the shift from supply side (service led) improvement, to demand-side (citizen driven) change led by a more consistent focus on understanding the real needs, assets and aspirations of citizens.




The aim is not to divest the police of their responsibilities but to be clear about what the Police Service leads on and has responsibility for and where they have a subsidiary role in the context of a collective public services sector working together to keep people safe through alleviating vulnerability and preventing harm.

**Ch Supt Kevin Dunwoody - PSNI**
**Ch Ins Jon Bullas - Lancashire Constabulary**

# Chapter 2: Towards a Common Understanding

There are some key definitions upon which agreement is needed and about which more information needs to be developed. The purpose here is not to be prescriptive but to give some commonality to the language used when discussing demand and its associated concepts.

## 'Demand' – Public, Protective and Internal

There are two types of service demand – reactive and pre-emptive (sometimes referred to as protective or proactive demand.) Reactive demand is principally the calls for service such as incidents and crimes. Proactive demand is when there is a need to 'react in anticipation' of incidents or in response to intelligence. This reactive and pre-emptive demand is now more commonly referred to as **public demand** and **protective demand**.

Both these types can also be split into demands that are accepted (i.e., work will be done on them), and those that can be rejected.

***Public demand*** is often equated with incidents and reports of crime. These are very obvious and relatively easy to count – but the police service receives a lot of calls which do not translate into incidents or crimes yet nevertheless take up a lot of resource time. The danger with just counting recorded incidents and crimes is that this ignores a significant amount of work and effort that the police service expends resulting in a gap in the understanding of what is taking up time and why.

***Protective demand*** can often be impossible to ignore. Failing to act on critical intelligence can lead to considerably more work and cost, including human cost. Failing to gather intelligence and act proactively will often lead to even more reactive work. Public events generate a demand for resources that often cannot be declined, so police respond in anticipation of problems and with the aim of preventing them. But the value of this can be difficult to quantify. How 'valuable' is a night-time patrol presence in a town centre to prevent problems? If there are no incidents during that time, does that represent good productivity or a waste of effort?

Such situations all place 'demand' on policing. If the focus is solely on reactive demand which can be counted easily, that will not allow planning for the resources and capability that are needed to deal with prevention of harm and alleviation of vulnerability.

***Internal Demand*** can be understood as 'core' demand which exists within the organisation, is self-generated and covers all of those processes, protocols, administrative tasks and bureaucracy. It is always there but the demand burden it places on resources is very poorly measured or understood.

Policy, procedure and bureaucracy have a significant impact on demand and capacity and are equally open to improvement. The role of the police needs to be supported by a whole system perspective and not merely a functional view. Understanding purpose, evaluating work as it passes through the system - judged against how well policing achieves its core objectives and purpose - then designing better ways is the core essence of systems thinking.

Key to this is knowing the business, how it works, its processes and how the various parts intermesh and combine to provide the service to be delivered. One of the more forgotten elements of internal demand is the amount of 'failure demand' in all its forms i.e. the amount of work done to correct errors or to revisit things missed or omitted the first time around.

It could be the time spent redoing things; It could be the effort needed to recover lost ground because someone hasn't done what they should; Or perhaps time spent having to justify or apologise. UK industry was adopting Total Quality, Kanban, Just in Time etc. in the 80's and 90's to make UK manufacturing and service industries more competitive. The Police Service is now embracing the need for efficiency and effectiveness and attempting to adapt to a changing economic environment, though there is more to do.

Demand categorised into **public, protective and internal** has been introduced. There is, however, a whole language of terms around 'demand' that has grown up and for clarity these are explained in the following paragraphs.

**1. Demand modelling**

Through the development of best practice and on-going work within several police force areas, supported by the PEEL assessment process, predictions of police demand are getting more robust. There is a wealth of police modelling which is being used not only to test different demand scenarios but also to compare resource supply models. They have also enabled several invaluable partnerships with Cambridge University, The London School of Economics and other academic institutions.

**2. 'Need' - vulnerability and risk**

Some demand is hidden, but is nevertheless there. Cybercrime, sexual abuse, domestic abuse, organised crime, modern slavery are high profile examples of demands where little is known, or of which we possess only part of the total picture of 'need'.

Another example is roads policing, where the potential 'need' far outstrips the police resource allocated to it.

Sometimes it is necessary to look for 'proxy' indicators of need. For example, a new community with high deprivation but with few calls to police may indicate unreported crime. Firearms discharges not reported to police may indicate an organised crime problem. While there may not be an appetite to go looking for work that is out of sight, it is a high risk strategy to just hope it isn't there or will simply go away. With increasing focus on R/T/H/V and pooling of information with partners, then a more complete picture of need will evolve - and we will need to respond to some of this need.

**3. Risk Appetite**

***Risk appetite*** can be defined as 'the amount and type of risk that an organisation is willing to take in order to meet their strategic objectives.' The Police Service has varying risk appetites depending on where they are, their demography, their capabilities, their culture and objectives. Even within forces, there are a range of appetites that exist for different risks and these also change over time and with changes in personnel. Consideration and understanding of risk appetite is a core consideration of what should be done, what could be done and what won't be done.

While risk appetite will always mean different things to different people, a properly communicated, appropriate risk appetite statement can actively help us as a service to achieve goals and support sustainability.

While risk appetite is about the pursuit of risk, ***risk tolerance*** is about what an organisation can actually cope with.

All organisations have to take some risks and avoid others. To do so, they need to be clear about what successful performance looks like. This question may be easier to answer for a commercial organisation than for the police service but a fundamental starting point is knowing and understanding the demand on the service, the capability and capacity it has to respond and the measures that can be put in place to mitigate or control the risk.

**4. Volume**

Volume is often used interchangeably with 'demand', but is different. 'Volume' is the number/ amount of activities that are required to be completed. We all know that some incident types or actions generate more activity (either from a single resource taking more time to complete it or through utilising multiple resources). It is often stated that 33% of demand in a force control room is related to calls for personal safety and welfare and often linked to complexity. In reality they are referring to volume and not the time based activity that is required to resolve that call. In essence uncoupling demand from volume enables a clearer and more accurate appraisal of the resources required to service a particular area of business. In essence:

***Demand is a combination of volume, active time, productivity and complexity.*** Understanding the amount of active time required to deal with an incident/crime/task is the core part of managing demand. Active time reflects the amount of effort directly attributed to the activity (not the time taken from call to closure) and is impacted by productivity (marginal gains that reduce the active time) and complexity (individual R/T/H/V factors that may increase active time.)

***Capacity*** is the amount of resourcing hours available adjusted to reflect the capability and skill requirement of the activity that has to be completed. Available capacity is total capacity minus the current demand.

***Capability*** is the organization's ability to deliver resources with the right skills (e.g advanced drivers, detectives) within the right infrastructure (e.g vehicles, estate, technology.) Capacity without capability will result in an inability to meet demand which means that within any resourcing model both need to be intrinsically linked.

***Productivity*** at its simplest is the output per unit in a fixed period of time. It is predicated on increasing output or reducing costs in one of three ways:

1. Continue to deliver the same quantity or quality of service at a reduced cost
2. Improve delivery of services (quality or quantity) for the same cost
3. Improve service delivery at a reduced cost through Transformational Change

However, within the police service complexity also has a significant impact upon productivity. For example, incidents may now take longer than they used to and therefore it could be suggested that productivity has dropped. However, that increase might be because there are more factors to consider (partner agencies, digital information, social media, etc), or there is a greater expectation of a high quality level of service. It is therefore important that productivity is not seen just as volume output and that it is accepted that customer expectation and service quality are equally as important. Therefore from an organizational perspective understanding productivity and what needs to be achieved from it is essential, as this will drive the approach used to increase productivity and the subsequent efficiencies (time or financial) that are achieved.

**5. Dynamic Demand**

Demand is not just complex, it also is not static and varies with time. The variations can be resolved into a number of components:

***Baseline*** – the steady state demand that is always with us. There will always be a need for police

***Cyclical*** – Events that occur on a regular cycle for example acquisitive crime at Christmas

***Seasonal*** – is a form of cyclical demand and the term is sometimes used interchangeably. It is demand that varies with events or seasons of the year; Darkness in winter months; increased internal demand during summer months when most staff traditionally take leave

***Surge*** - unexpected or one off incidents leading to a rise in vulnerability. Examples being the reaction on the part of some towards communities following terrorist attacks elsewhere or perhaps even floods or snow or internally when flu or cold epidemic strikes

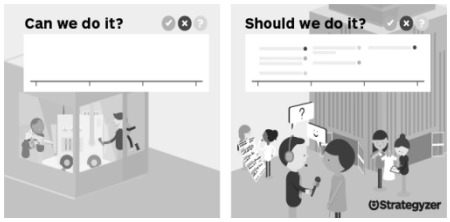
***Trending demand*** - is demand that is decreasing or increasing over a period of time. It may be due to a localised problem and would include emerging trends around vulnerability due to changing demographics - for example rising reporting of new or emerging crime types such as Cybercrime, Digital Exploitation, Child Sexual Exploitation and Terrorism

It is this variation along with complexity that makes it hard to predict. Demand can be measured using a whole variety of appropriate techniques and the movement can be plotted. The risk is that without proper analysis using, for example regression techniques, simple analysis will draw the wrong conclusions and in turn give the wrong response.

Use of 'Big Data' also can be used to supplement the available empirical data.

**Ch Supt Kevin Dunwoody**
**Project Co-ordinator**

# Chapter 3: Legitimacy of Demand and Public Expectation




Demand and work have to be looked at with a clear sense of what our role is and what we are trying to achieve. We can't sort out 'value' from 'waste' unless we know our purpose. Unproductive work is a waste of resource. Doing work in a highly efficient way which does not help achieve purpose is also a waste of resource.

Purpose for the police at its most fundamental is about keeping people safe. Legitimacy of demand is derived from the services that the police provide and the way that it helps them in achieving that policing purpose. The demand is legitimate if it adds value in meeting public need. 'Need' is different from 'want' and so there needs to be a clear communication of what the police can provide, should provide and will provide. **That is beyond the remit of this project**.

Legitimacy of demand should not be confused with legitimacy of service provision which is an assessment of whether, in providing services, the force operates fairly, ethically and within the law; this includes the treatment of those who receive services from the police and the treatment of the people who work in police forces to provide those services.

The sense of purpose and legitimacy of expectation has to be looked at from a whole system perspective. Working in a way which saves time now but adds cost later, means that overall, the work will take longer to complete and use more resources – and victims will suffer. This is why many forces are instinctively moving away from 'functional' models, where work is split into separate processes completed by separate units. When the resource time required to complete those separate tasks is put together, it inevitably costs more to complete the work than when it was all handled within **one team**. Each extra handover adds delay and errors and is usually accompanied by extra checking. Different functional teams develop their own 'purpose' and measures, which again cause problems when trying to move work through the system. For example, call handlers are typically measured on time taken to answer with calls (outputs, costs), yet we know that taking more time and making good decisions 'upfront' can save significant resource time 'downstream' (value, outcomes).

If we therefore look to make savings by encouraging fewer call handlers to deal with more calls, there is an inevitable likelihood that extra work and cost will be passed down to response teams. What may appear to be a saving in one part of the process just adds cost elsewhere, and overall, the system becomes less efficient/effective and more expensive.

If we look at the system as a whole, with call handlers as part of the same service as response, we soon recognise that more savings and better service impact can be made through better teamwork and a shared purpose. Recent work completed in forces such as Kent and PSNI, has shown that we can reduce the need to deploy to incidents by a third, mainly through better decision making (discretion) and teamwork earlier in the process and often at the first point of contact i.e the call taker.

This is the core essence of systems thinking - understanding purpose and process. It's about studying work as it passes through the system, judged against how well we are achieving against purpose, then designing better ways for that work to flow through the system.

Sometimes we will be saying 'no', but we will be doing that from an informed, well-judged understanding of why, what it means to the caller and how that relates to our purpose. Key to that is a shared understanding of what we mean by 'demand management'.

There is a further element to systems thinking which needs to be explored in a separate presentation. Namely the 'thinking' that prevents us seeing things as a system and which supports the commercialist approach to management of people. There is a school of management thought which focuses on unit production cost and work rate, which manages the business through counting performance outputs and costs. It pushes the functional approach and assumes that by minimising costs at each stage, overall cost efficiency can be maximised. People working in these systems are just units of work, to be constantly measured and pushed to deliver more. This is not only de-humanising, but as experience shows, is also more expensive and less efficient. It may work in some manufacturing, but public services are different. How many of you have embarked on Priority Based Resourcing on this basis?

As we continue to wrestle with the resource challenge and start to understand what we really mean by demand management, it will become more and more apparent that we have to trust, respect and nurture our staff. They already have a very clear sense of purpose and mission – we need to build systems which allow them to do what they joined the job for. This will require a change in management and leadership mind-set, behaviour, skills and attitudes ..a whole separate project in itself!

In 2012, the then Assistant Chief Constable of Norfolk and Suffolk Constabulary, Sarah Hamlin, captured the essence of a requirement to rethink demand in policing when she observed:

*"Policing has reached a watershed in its modernisation programme, attempting to change its value discipline from operationally excellent to customer intimate. Operational performance needs maintaining and yet there is an expectation on us to not only engage with our customers but understand their needs, motivations and what they value most from the services they receive. Our drive to improve confidence and satisfaction may have led to us creating an "emotional bond' between the public and police and consequently this may explain why the public contact the police first rather than a more appropriate organisation."*

Benington and Moore (2011) in their work on Public Value wrote that:

*"Organisational understanding of citizens (or customers) needs and citizen perceived value are both critical success factors. Citizen needs, values and expectations are very likely to change as they encounter different departments and organisations along their "customer journey'. However as a service the police have not refocused or educated the public about how to engage with appropriate organisations for their needs, and instead have continued to promote accessibility for everything and this has led to a greater need for partner engagement and/or referral. This essentially adds another step in the process, duplicates effort, and adds cost."*

Crime is still commonly reported as falling, when the available evidence would suggest that the police service is busier than ever. The College of Policing in January 2015, HMIC and the National Audit Office in 2015, agree that the demand on police services is increasing rapidly and is changing in nature. For example, the public perception of falling crime and a safe environment is not matched by the reality of high volumes of serious and organised crime, child sexual exploitation, domestic abuse and online offences; all of which are creating unprecedented demands on policing services. The changing nature and complexity of crime create greater demand for specialist skills, time and resources from police forces. There is increasing movement towards partnering, collaborating, para-professional arrangements and for joint ventures as the service learns to operate in austerity.

Many of the issues that the police increasingly have to address are what Professor Keith Grint (2010) describes as "wicked problems", in that they are complex, involve multiple partners and are problems where there are no easy, agreed or known solutions. In fact often the solution in and of itself may create more problems. Counter-terrorism, mental health, violence, child sexual exploitation, and missing persons are all issues where public expectations of the police are high, and rightly so. Yet the strategic management tools from the 1990's onwards focus on organisational goal-setting, targets and KPI's, which create rigidities, reinforce silo mentalities and create what is often referred to as "reward "gaming." Such performance based approaches are counterproductive in performance regimes through increasing competition within and between organisations; and stifle innovation. Nor will 'command and control' approaches create the agility and responsiveness to new challenges in society, which will be necessary in this rapidly changing environment. The increased government investment in Internal Investigations (IPCC) and External Inspection (HMIC) has added further dynamics to the policing arena - Chapter 9 of this guidance elaborates more on the PEEL inspection regime for example.

The original approach to Public Value was developed by Mark Moore of Harvard University, and then developed further by him with John Benington of Warwick University. Their work created a framework which focused on the added value created by public services. They recognised that measures of added value needed to go beyond the counting of activities, or even the counting of outputs (e.g. stop and search, number of arrests or convictions) to include ways in which public organisations contributed to the wider aims of society, for example creating a fair, just or peaceful society or enabling citizens to live confident, safe and fulfilling lives; consistent with Human Rights, Ethics and Values of fair and just policing.

The approach emphasises that there needs to be what Moore and Bennington refer to as "networked governance' that with multiple stakeholders involved in creating and evaluating decisions which affect their community, and who have a view about what is valuable and/or desirable for that community. The police are but one partner.

Bennington and Moore, with Professor Jean Hartley, have developed the concept to there being two components of public value:

**1. What the public value**

What the public indicate they value or see as important priorities, which is sometimes different from what they want.

**2. What adds value to the public sphere**

Value cannot be determined solely from the first component, otherwise it could be based on populist or majority views, whereas a fair society also needs to consider both the longer-term (e.g. protecting future generations) and also minority views of whom many are the most vulnerable in our society and have no voice.

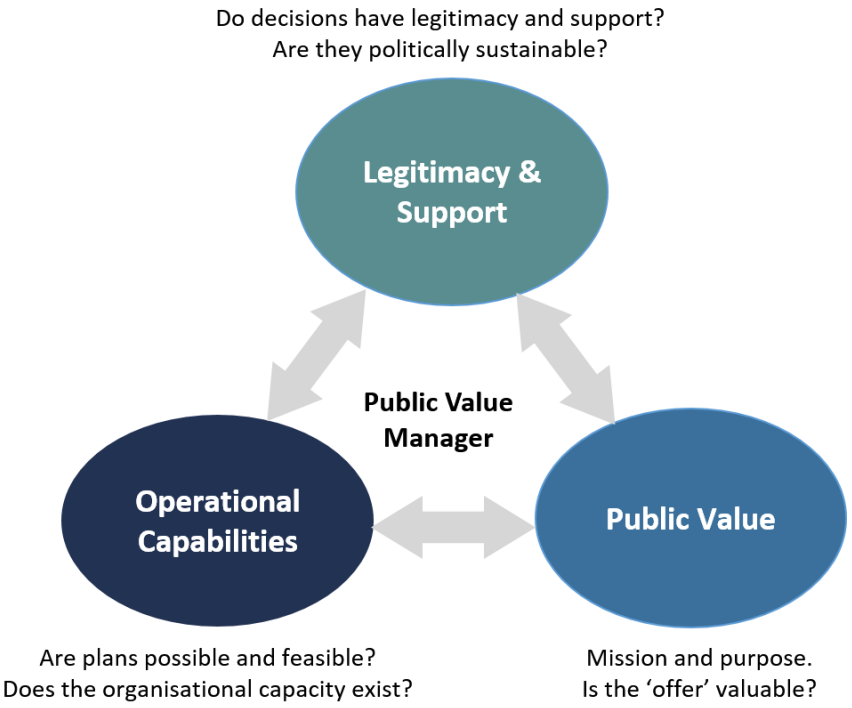
The 'public sphere' as described by Moore (2005) is the web of places, organisations, cultures, rules and knowledge held in common by people and held in trust by government and public organisations. The two approaches to value, what is valued by the public and what adds value to the public sphere, are sometimes in tension and may require skilled leadership and democratic dialogue to bring into alignment as far as possible.

**The public value strategic triangle**

The police can contribute to the creation of public value by considering three elements, which need to be in alignment to create public value. These elements are dynamic:

1. What is the public value proposition? What is the value that I am aiming to create/enhance? Can I state this clearly and persuasively? Is it focused on processes and outcomes?
2. What is the legitimacy and support I need to achieve that public value proposition?
3. What operational resources do I need to achieve this outcome? Note that this is operational capacity and capability. Where will resources come from? (bearing in mind that resources may lie outside the organisation not just within it)?

The Strategic Triangle of Public Value (Moore, 1995)




Public value is not only created by the public sector. The private sector and the third sector can also create and add public value. However, one of the key roles of the state and its agencies can be to harness the work of other partners behind clear public value goals and outcomes.

For the police as a service better understanding of the services that they provide in terms of a 'value stream' can greatly assist in adding to (or indeed detracting from) real public value. The contribution of various partners can be analysed as occurring at a number of points in the "public value stream." Value may be added at any point in the process, but the ultimate focus is on the public value outcomes, with the earlier parts of the stream contributing (or not) to those outcomes. It allows police managers to develop decision making around R/T/H/V and to ask the questions about whether and where in the "policing process" public value is being created or lost. In their book 'The Public Value Stream' (Benington, J & Moore, M. 2011. p48) Benington and Moore depicted the public value stream as an open system in which inputs are converted, through activities and processes, into outputs and outcomes, with the active help of co-producers and partner organisations.

So when we talk about legitimacy of demand on the police service, the concept of public value helps us to focus attention and effort to be more outward looking and towards collaborative problem solving. It directs us to engaging our resources more efficiently towards practical and useful outcomes for citizens, communities and society at large, as part of a whole complex adaptive system of governance.

Knowing and understanding demand in all its forms and complexity is a useful tool for strategic planning. It helps us to distinguish and determine priorities through asking:

- What is the public value being added?
- Who supports this to be achieved?
- What operational resources are needed?

It also requires clear measurement or at least assessment of demand. Public value can be used as a mechanism to stimulate debate about how to achieve value. It asks where public value is being added (or destroyed), and how this might be improved?

Policing is trying to change its value discipline from 'operationally excellent' to 'customer intimate.' Earlier approaches in this regard failed to make the link between efficiency and public value. For example, measurement of activity and reductions in cost did not necessarily equate with what added value in the public eye. Increasing demand and 'being busy' did not necessarily translate into a safer society. For policing, Public Value, with the knowledge and understanding of the totality of demand, has the potential to inform, clarify and operationalise the notion of prioritising, producing, providing and adding value to the services to the public.

**Ch Supt Kevin Dunwoody**
**Project Coordinator**

# Chapter 4: Vulnerability

*The quality of any society will be evident in the way that it treats its most vulnerable citizens*

Professional judgement within the service is clearly showing that one of the greatest challenges for both the mission of policing and also the demand for service is the growth of vulnerability and the impact that it has on policing demand and partnership working. The challenge is so complex and great that failing to develop an integrated public service approach to community harm will result in increasing vulnerability for individuals, families and communities and to broader organisational failure and reputational damage.

There is a great deal of safeguarding activity that takes place on a daily basis that often manifests itself in complex planning processes involving Public Protection Units and key partner agencies. Clearly, integrated public service, public value and organisational development must be key ambitions where blue light service collaboration is a given, but also recognising that the greater leadership challenge centres around transforming public services locally enabling simpler access for vulnerable people through a single portal.

Vulnerability arises from a variety of causes, some natural, others through human intervention or neglect. In the same way, vulnerability can be mitigated by solutions from a wide variety of unofficial and official sources whether personal, public, private or voluntary. The police may be one of those sources of a solution but the role of the police needs to be defined and clarified if they are to be able to be effective.

Policing takes part not in a vacuum but in a 'whole system' of public, private and voluntary service providers. Such services may include:

- Education
- Health system
- Mental Health
- Re-offending
- Community and Family dysfunction
- Social Care
- Victim support

Recipients of services in these areas typically have degrees of vulnerability and where they enter the criminal justice system as victim or even as perpetrator require intervention from the police as a response.

Traditional definitions of vulnerability used by the police in the past have been narrow and have tended to focus on specific themes - for example, female genital mutilation, child sexual exploitation, domestic abuse, missing persons and mental health. All of these are valid in describing vulnerable groupings but complicates policing action by focussing on these with less emphasis on wider vulnerability. The result is that over time, more and more groups have been added to the definitions and the ability of the police to respond to their needs has been varied and inconsistent.

The College of Policing have tried to provide an overarching definition of vulnerability as:

***"A person is vulnerable/at risk if as a result of their situation or circumstances they are unable to protect themselves from harm."***

In addition they have defined 13 key strands of vulnerability:

1. Domestic Abuse
2. Adult Sexual Exploitation
3. Stalking and Harassment
4. Missing and Absent persons
5. Female Genital Mutilation (FGM)
6. Managing of Sex and Violent Offenders
7. Adults at risk
8. Child Abuse
9. Honour Based Abuse (HBA)
10. Modern slavery and trafficking
11. Forced Marriage
12. Serious Sexual Offences
13. Child Sexual Exploitation

Quite often the demand on the police in these areas has been as a result of the malfunctioning of the other social institutions or more often the failure of these to properly work together to prevent harm and mitigate risk. There has also been a significant effect of austerity that often the police have become the service of first and last resort picking up the pieces when the social policy system breaks. That is not an apportioning of blame but recognition of a very complex and difficult landscape trying to deal with a very difficult and very complex challenge.

It also needs to be realised that vulnerability is not always one-dimensional and vulnerability begets vulnerability. In the 1990's Farrell and Pease **(Farrell, 1992;Pease, 1993)** discussed multiple victimisation and being a victim led to increased likelihood of being a repeat victim and therefore increased vulnerability. While some repeat victimisation is dealt ably with e.g. elderly victims of theft and burglary through target hardening (locks, chains, alarms) to prevent a reoccurrence, it is much harder to deal with compound vulnerability that crosses institutional boundaries. We are all acutely aware of individuals, of families, even communities who are simultaneously clients of mental health, social welfare, social services and the criminal justice system. Unfortunately the response is rarely as joined up and coordinated as it could be to the detriment of the client. This need for a coordinated response is a compelling argument for 'whole system' joined up thinking approach.

But with such a wide ranging concept there is then a question of how to prioritise vulnerability?

Vulnerability varies - in that respect it mirrors demands being made of:

- **Baseline** - vulnerability that is always with us. There will always be deprivation and poverty.
- **Seasonal** – that varies with events or seasons of the year; Darkness in winter months
- **Cyclical** – Events that occur on a regular cycle for example debt that follows Christmas
- **Surge** - unexpected or one off incidents leading to a rise in vulnerability. Examples being the reaction on the part of some towards communities following terrorist attacks elsewhere

It is also hard to measure. Demand for services may be one way of highlighting vulnerability by extrapolation. Good sources of community awareness and community intelligence are others, but as in many things, vulnerability can be overt and hidden. Just as vulnerability needs a coordinated

response, there is a need for pooled and shared information to be able to identify and to quantify the levels and degrees and types of vulnerabilities. For this reason, the work of institutions in pulling together 'Big Data' (as discussed in other chapters) is crucial.
Vulnerability is also about diversity and not all manifestations of vulnerability elicit compassion. It *may be because of:*

- Lack of diversity awareness
- Lack of inherent diversity in police officers and police staff
- Unintentional stereotyping

Diversity is a huge source of vulnerability and the work that has been done on diversity over the years now needs to reflect how we identify and alleviate vulnerability. Indeed, we as a police service also need to reflect and understand the diversity which gives rise to vulnerability.

Examples of how this has worked in the past have been the changing approach to how the police as a service has dealt with victims of sexual assault or domestic violence. The changes in approach arose out of greater awareness and also changes in the police forces themselves to become more diverse in their makeup. Another example is the changing attitude to offenders and the need to rehabilitate and to resettle them in order to break the cycle of offending and to reintegrate offenders into the community.

In considering vulnerability we also need to question what is the role of the various actors and also the role of the police. In particular, is that role protective or paternalistic? And to what extent should the state or the police intervene in preventing people from choosing to live a life the way they want to live it? Or to what extent should the police intervene in saving people from themselves?

For example, intervention in cases of people taking or attempting to take their own life - it involves a considerable allocation of police resources but few would argue against such intervention and most, if not all, would argue that it is a clear example of the police intervening to keep people safe when they are at their lowest ebb and perhaps incapable of making a rational choice.

But what about seat belt enforcement? Or use of recreational drugs? Or does it help to distinguish between those who are unwilling to help themselves and those who are less able to help themselves? And anyway, how do you tell the difference?

It is easy to argue that at present the intervention of police in many cases is based on the impact on the rights and liberties of others. The National Decision Model puts Human Rights and the Values of the police service at the heart of operational decision making.

The question then arises, with so much vulnerability out there should we allocate resources on basis of greatest individual need? Or on the basis of greatest mass?

In the real world there are never enough resources to go around and so allocation of resources and the design of services must be based on priorities. Indeed one of the drivers for this project was to try to understand demand better so that reducing resources could be better matched in terms of capacity, capability and productivity to the demands that the modern police service faces. One of the key findings and recommendations of this work was that the police as a service should be less reactive and move towards managing demand through prevention. A key element of this lies in being able to establish where and how preventive and protective services should be applied to alleviate vulnerability.

There is in itself a risk in using the term 'vulnerable' - by labelling an individual or group as vulnerable there is the chance that they will internalise that identity and perceive themselves to be inferior or different. This in turn creates a risk that they will retrench or become more isolated thereby increasing their vulnerability. We need, therefore, to deal with vulnerability in a non-stigmatising way, allowing as many people and groups as possible to see themselves as ordinary citizens and valued members of society.

For that reason the police could never become a 'moral agency' – that those who have contributed to their own circumstances of vulnerability are less deserving of assistance than those who have been born into or arrived through no fault of their own at circumstances of extreme adversity. This could not be a position of a service based on serving ALL of the public without fear or favour. In any case, how can you readily tell? How can you distinguish between someone who is the author of their own misfortune and those who are a victim of birth and circumstance? Does it matter?

Traditionally the most vocal and most articulate got the most attention. However, in many cases the most vocal and most articulate are not the most deserving of attention with those most in need too often being inarticulate, silent or ignored. We only have to think of cases of child sexual abuse or of domestic abuse to see how this is illustrated and how sometimes their reluctance to engage with public services was due to a fear of not being believed or recognised or even just dismissed in some cases due to lack of diversity within the service.

**The policing response to vulnerability**

As we have seen in other chapters, policing demand is challenging, complex and variable. Understanding demand is key to determining the capacity and capability of the service and the distribution of resources.

There is a risk if the police, in dealing with demand, continue to focus on reactive demand because they will concentrate on incidents and perhaps trends up and down rather than patterns of behaviour and vulnerability.

More successful forces who understand their demand have looked at prevention and protection as ways of managing and reducing reactive demand and of better keeping people safe before engaging in more costly reactive and response services. They have focussed on outcomes rather than outputs and on value to communities rather than costs to themselves. Collaboration with other agencies whether public, private or voluntary is a key part of their work.

Dealing with vulnerability can be seen as part of a continuum where we need to respond to incidents, identify vulnerability, understand the vulnerability, problem solve the symptoms and ultimately alleviate the issues. There needs to be education and awareness of the police themselves, of public and communities and of partners. There is perhaps a significant role for the police in providing leadership to others in helping them to reshape or to refocus provision of services or to use decision making based on T/R/H/V to align and modify practices as part of a whole system response.

But police must be able to gauge their role so that they are a net benefactor and not always a net donor in such situations. Skills of officers beyond immediate problem solving are necessary to consider the underlying vulnerabilities for a longer term approach. There needs to be a shift in leadership thinking towards vulnerability and problem solving and to developing that capability within forces.

Diversity includes vulnerability and vulnerability includes diversity. Vulnerable people may be geographically isolated; they may be culturally isolated. Society is becoming more diverse - diversity in the police is essential in order that they are representative of communities they serve.

**Predicting Vulnerability**

This paper also recognises that there is a wealth of emerging professional and academic evidence of predictive analytics on traditional police demand but that this tends to be less reliable in the changing areas of complex crime such as modern slavery and cybercrime. The greater challenge therefore is the requirement to develop analytics that are more able to determine the demand for policing that sits within the 80% of activity from calls for service that is not crime based. This 'vulnerability' demand has been examined nationally and analytics have been used utilising techniques drawing on big data predictions - but these have also been found to have only a 50% statistical inaccuracy within them.

This paper therefore proposes that the **use of indicators from public service which demonstrate vulnerability and which are consistently available nationally** presents a clear opportunity to both reflect accurate policing budget allocation to meet changing demand as well as create predictive demand models to deal with planning toward 2025.

1. **Vulnerability Criteria**

For the purposes of accurately reflecting future policing demand within vulnerability it is necessary to set parameters for the data to be analysed. In using these parameters the aim is to assess information that is or has been available for some time and therefore is capable of creating a baseline of data that can also be predicted into future years. The following parameters have been used:-

a. Using data that is nationally available and can be further examined at local level within individual policing areas
b. Using data that has the closest link to complex needs demand
c. Using data within complex needs that is the most likely to result directly in demand for policing services
d. Using data that will also most likely require follow up services to enable problem solving across one or more statutory and non-statutory agencies
e. Using data that demonstrates 'causation' factors rather than the outcomes of those factors which may already be captured within overall demand.

2. **The 15 Vulnerability Predictors**

The predictors of vulnerability of demand arise primarily from the toxic trio of causation, these being alcohol harm, drug related harm and mental health demand. The following are indicators largely available through public health data or ONS data and can be applied at an individual force level. They can be used as a weighting within vulnerability based on volume but do clearly demonstrate where much demand is originating for the police in partnership.

This data is beneficial in that it has firm foundations in its collection and the main elements selected demonstrate the complexity of demand and the interdependence of them to policing agencies. It is also fair to reflect that these demand areas directly impinge upon partnership delivery and can be mitigated through best practice and integrated public service working.

**a. Alcohol Related Harm**

i. Alcohol admissions to hospital (Public Health England)
ii. Alcohol related mortality rate (Public Health England)
iii. Drug Related Harm
iv. Drug related deaths (ONS)
v. Drug related hospital admissions (Public Health England)
vi. Opiate and crack cocaine users (ONS)

**b. Mental Health Demand**

vii. Mental health admissions to hospital (All ages) (Public Health England)
viii. Dementia and Alzheimer's - Under 65 and Over 65 (Public Health England)
ix. Hospital admissions as a result of self-harm (Public Health England)

**c. Other Vulnerability Demand**

x. Looked after Children (DFE)
xi. Children in Need (DFE)
xii. Child protection plan cases (Data.Gov)
xiii. None accidental injuries hospital admissions for children (Data.gov)
xiv. Suicide rate(ONS)
xv. NEETS (DFE)
xvi. Statutory Homelessness Rate (DCLG)

**Conclusion**

The indicators above will form a useful basis on which to consider predictive analytics in individual force areas based on demographic profile and analytical and professional predictions within each area of vulnerability. There are many more areas of vulnerability, some of which are counted within core demand.

There is also no doubt that outcome focused problem solving and early action presents opportunities to break the cycle of demand and through good prevention activity change the predictive demand for the police and other agencies. The identification of trends and predictive work enables dynamic resource planning and gap identification and commissioning of services to take place.

To paraphrase Sir Ronnie Flanagan, **"Vulnerability is too important to leave to the police alone."** Every member of the police service at every level and in every function should be alert to indicators of vulnerability and to the array of services (public, private, voluntary) that can be brought to bear to alleviate it. The quality of any society will be evident in the way that it treats its most vulnerable citizens

**ACC Mark Bates – Lancashire Constabulary**
**Chief Supt Kevin Dunwoody - PSNI**

# Chapter 5: Demand Management - A Case Study

This work stream on Managing Demand was led by Superintendent Martin Wilson who at the time was in charge of demand management for Kent Constabulary. The aim of the work stream was to develop an approach to managing demand based around the narrative of the service downsizing, becoming more efficient in the way we manage demand through demand reduction, maximising capacity, exploiting the opportunities around 'going digital', while managing reasonable public expectations for service. The methodology developed within the work stream was to use a risk based decision making process that provided a rationale to articulate the need to stop services or to change the way things were done based on being able to evidence demand. To illustrate the method, work carried out in several forces was used and it is the Kent work that is presented here as a case study.

The first stage was to quantify the actual demand. To do this the work stream adopted the approach that demand can be categorised into the three key areas as previously set out elsewhere in the project. Although a subset of 'Internal Demand,' it was felt that failure demand was an important area to be considered on its own in this work. So the demand areas were:

1. Public Demand
2. Protective Demand
3. Internal Demand / Hidden Demand
4. Failure Demand

Within the context of the whole project, the work stream considered Demand Management against three objectives:

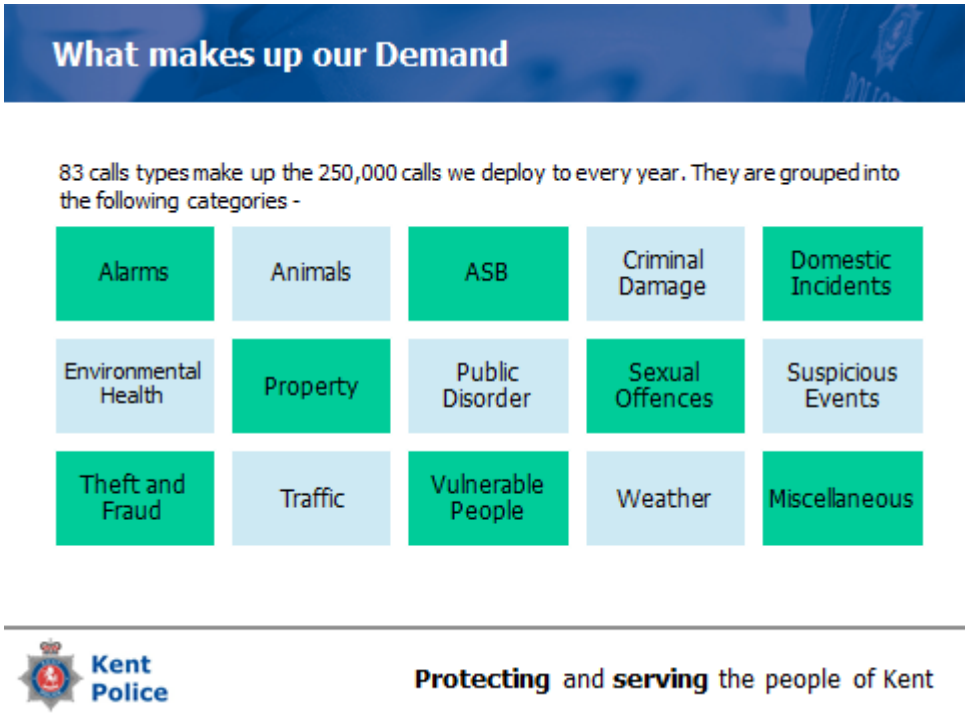
- Develop common processes for concluding how we can respond to demand
- Develop national practice in relation to how we respond to demand, avoiding significant differences of approach whilst allowing for regional variation and localism
- Ensure that the good practice is transferable

One challenge encountered within this work stream was to find a way to get other organisations and bodies whose responsibilities and scope overlapped with those of policing to work together in changing working practices and to adapt or even scrap policies and ways of working. This was a complex and difficult task.

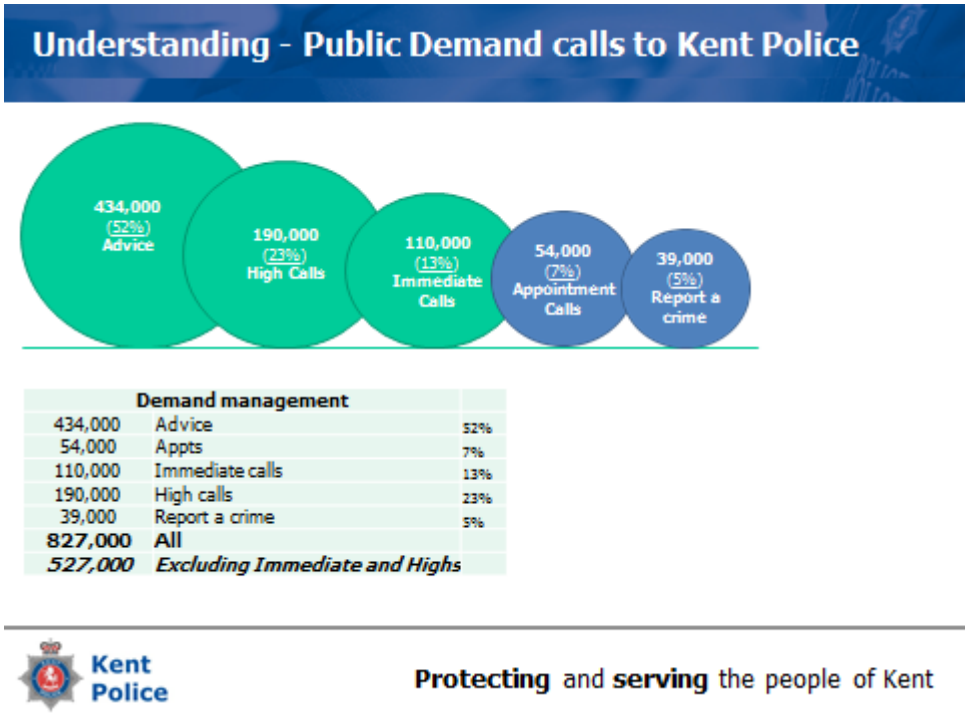
The solution was to develop a greater shared understanding and a more consistent approach to decision making. This requires an ability to concisely present new thinking for wider adoption and to work with the College of Policing and the National Police Chief's Council to deliver guidance and professional practice that will reduce demand, ensure other agencies 'do their bit' and provide a consistency of policing service regardless of region.

### Early Opportunities identified

By recording and analysing the demand around calls for service there appeared to be a number of key themes emerging around repeat contacts and demands for service. These were analysed and a summary was presented in graphic format reproduced below by kind permission of Kent Constabulary.




Kent further analysed their calls for service and broke them down as below:



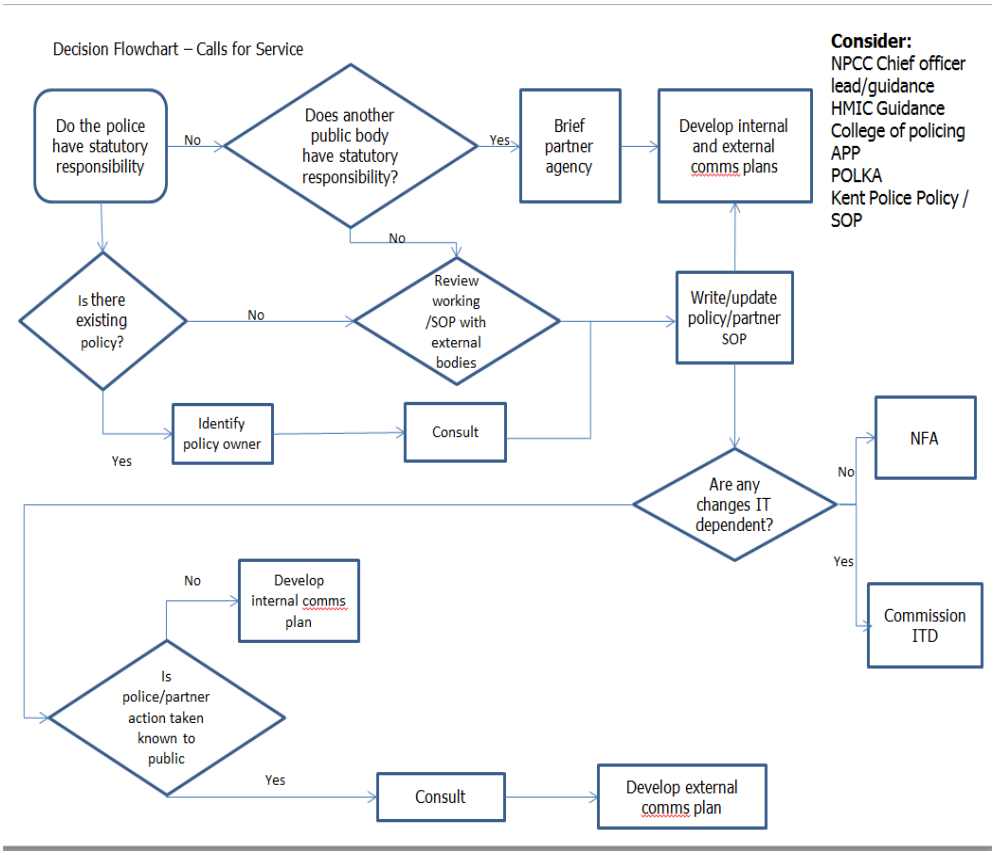

**A number of forces have carried out similar exercises**. In each case it has become clear that public and protective demand calls for service could be grouped or categorised and that the response to these could be varied. There was a need to prioritise the response and the best way to do this was founded upon **managing and understanding 'risk.'**

Whilst there are a number of examples of good practice of how forces are looking to manage calls for service, it is worthy of mentioning two at this point:

- Kent's adaptation of the MoRiLE/THRIVE approach to managing reactive demand
- Metropolitan Police Service – 'One Met Model' and 5 levers of change

## Kent - MoRiLE approach

The Kent approach can be summarised in the flow chart below:




The approach was supported by:

1. Better triage of calls received through the use of Interactive voice response technology (menu of choices using keypad tones or voice) on telephony systems
2. Better triage by focussing control room decisions about response on Threat, Harm and Risk rather than the call type
3. Improved self-service for the public through on-line information and business transactions
4. Improved self-service for officers through the use of mobile computing solutions
5. Revised policy decisions in relation to core policing responses – holding other organisations to account for their responsibilities and better blue light collaboration
6. Digital First in relation to criminal justice – CAPTURE, STORE and PRESENT digitally reducing paperwork and physical evidence like DVDs

The early success of the use of THRIVE and MoRiLE in Kent can be seen below:

- Over 12 months the force introduced THRIVE and enhanced crime recording practices.
- As a result the number of attendances from answered calls was reduced by 3.5%.

- For Kent, whose annual call volume over the twelve months was 845,000 assuming this remained constant it would mean 27,000 less deployments per year.
- 'Bilking's' - All forecourts were written to and provided with information on collecting civil debts through the DVLA and BOSS. In November 2015, a total of 63% crime reports were filed at source by the Investigation Management Unit and in December 2015, this figure rose to 74%.
- Concern for Welfare - when comparing December 2015 with December 2014, the volume of calls has decreased – there were 184 less calls. The deployment of police officers to deal with welfare calls also decreased – there were 120 fewer deployments in December 2015.
- Road Traffic Collisions - in the first 7 weeks following the introduction of the new policy for recording damage only road traffic collisions, there has been 700 less damage only RTC's recorded than during the same time last year.

## MPS – 'One Met Model' and 5 levers of change

It is interesting to compare the Kent approach with that taken by the Metropolitan Police Service who identified 5 Potential levers of change in the way that they responded to calls:

1. Channel Shift
2. Approach to Risk/Threat/Harm/Vulnerability
3. Prevention
4. Partnerships
5. Digital

**1. Channel Shift**:
- Shift a significant volume of public contact away from phone and onto digital channels via online reporting
- Those incidents most amenable to being shifted onto digital channels are low risk, low harm crime where the victim isn't flagged as vulnerable
- This shift will reduce the number of 'immediate response' deployments as more incidents would be resolved entirely online

**2. Approach to Risk/Threat/Harm/Vulnerability:**
- Development of approaches such as THRIVE
- A more thorough assessment of threat, risk, harm and vulnerability at the first point of public contact will potentially result in fewer deployments of front line police officers

**3. Prevention:**
- A greater focus on demand prevention will result in more time being spent on public engagement; specifically in relation to problem solving, providing messages/advice and supporting the public in protecting themselves
- Adoption of Early Action approaches

**4. Partnerships:**
- An investment in partnership working has the potential to develop innovative solutions in support of crime prevention. Through shared ownership and information sharing demand in terms of public contact, incident response and investigation could be reduced.
- A better understanding of what each partner is responsible for would enable clear lines of accountability and the potential to better manage contact, and deploy appropriate

resources. This could potentially deflect some non-crime incidents away from direct police response
- Revisiting the framework for how partnerships manage licensing could also have a preventative impact and reduce incoming demand

**5. Digital:**

- Remote access to core intelligence and reporting systems via tablets will increase the amount of time spent by frontline officers in public, conducting patrols and managing community relationships
- Remote IT access should increase the speed at which investigations are brought to their conclusion and therefore increase investigative churn. Ultimately this may free up sufficient time for investigators to invest more time into 'viable' cases and consequently increase detection rates. This would increase the flow of demand through the criminal justice system and into offender management

**Recommendations**

**T**his work stream made the following recommendations for consideration in the Management of Demand:

1. The strategic adoption of the use of 'MoRiLE' **(Management of Risk in Law Enforcement - see Chapter 6)**

2. The utilisation at first point of contact of THRIVE **(Threat, Harm, Risk, Investigation, Vulnerability and Engagement – see Chapter 7)** and THRIVE + to triage calls based upon T/H/R/V rather than call type

3. Improved self-service for the public through on-line information and business transactions

4. Improved automation of the way we get back to customers and the way we keep them informed of progress

5. Improved use of Interactive Voice Response to direct or 'nudge' people to on-line solutions

6. Improved self-service for officers through the use of mobile computing solutions

7. An increased focus on the benefits of minimising the impact of Internal demand

8. Revised policy decisions in relation to core policing responses – holding other organisations to account for their responsibilities and better blue light collaboration

9. Digital First in relation to criminal justice – CAPTURE, STORE and PRESENT digitally reducing paperwork and physical evidence like DVDs

**Supt Martin Wilson – Kent**
**Ch Supt Kevin Dunwoody - PSNI**
**Ch Ins Jon Bullas – Lancashire Constabulary**

# Chapter 6: Demand Management - MoRiLE

The Demand reduction work stream recommended that there needed to be a methodology for managing prioritisation through identification of risk and consequences. To enable this, two concepts were worthy of further consideration:

- **MoRiLE** (The Management of Risk in Law Enforcement)
- **THRIVE** (Threat, Harm, Risk, Investigation, Vulnerability and Engagement as per Chapter 7)

## MoRiLE (The Management of Risk in Law Enforcement)

The Management of Risk in Law Enforcement (MoRiLE) is an NPCC Programme of work governed through the Intelligence Portfolio. Their 2020 ambition is to develop a suite of digitally enabled risk modelling solutions for Law Enforcement.

The programme has been created through a collaborative approach with over 350 representatives from police forces, ROCUs, and National Law Enforcement Agencies engaged with the programme either as a lead or deputy for one of the twelve project groups, or as a member of the "virtual community." Wider consultation has also taken place with the Home Office, Academia, and Law Enforcement Agencies from the US and Canada to ensure all significant drivers are identified.

The focus of the first two years has been the development of the core principles, the consistent language and methodology required for the full suite of solutions including the creation of Thematic (Strategic) and Tactical risk models, and the implementation of these models into law enforcement. This approach has been successful with over 60 agencies using the Thematic model since its introduction in 2014 and a significant take up of the Tactical model, which is following the same implementation trajectory of the Thematic model since its release to agencies in 2015.

### The need for the MoRiLE Programme

As documented previously, police services in England and Wales have had an estimated real term reduction of funding of 25% since 2010 which, coupled with significant changes in the nature and complexity of demand, presented a major challenge for police leaders. The 2014 HM Inspectorate of Constabulary *Policing in Austerity: Meeting the Challenge* report, supported by analysis of demand conducted by the College of Policing in January 2015, identified that reported crime had fallen, but there was evidence that the level of demand on the police service had grown, with an increasing amount of police time directed towards protecting high risk and vulnerable victims, and managing high risk offenders. These pressures on police resilience led the College of Policing Chief Executive Chief Constable Alex Marshall to state;

*"In every force decisions have to be made about priorities and where to place resources...The evidence shows that while the number of crimes may have fallen, the level of demand on police resources has not reduced in the same way. The changing mix of crime means that over the past 10 years, investigating and preventing crime has become more complex, and the costs of crime for the police have not fallen as much as overall numbers of crimes"*

A National Advisory Group made up of representatives from across policing including senior serving officers and staff, the College of Policing, Police and Crime Commissioners (PCCs) and staff associations and unions came together in 2014 to support a national debate on the further changes

needed in policing. In June 2015 it published a report "*Reshaping policing for the public"*[i] in which it set out five principles:

1. We will seek to protect the public and keep people safe from harm, especially the most vulnerable members of our communities. This will mean focusing as much on early action to prevent and reduce crime as reacting to crime once it has happened

2. We will provide a service that is valued and supported by the public, tailoring the service to individual needs and focusing on the victim

3. We will seek to protect ease of access by a range of means to front-line services including online access and a visible local policing presence that works directly with communities

4. We will enhance capabilities and achieve value for money by scaling up specialist capabilities and standardising functions where appropriate. This will help to maintain capability and resilience across policing but without losing agility when fighting crime

5. We will work in close co-operation with all other organisations involved in public protection to keep communities safe and work with communities so they play their role alongside the police in securing their neighbourhoods. These point towards greater integration between public services, for example through the development of shared public safety plans with single leadership and shared budgets

## The MoRiLE Programme response

These reports outlined the complexity of the challenge faced by law enforcement, and the necessity for a bespoke programme of work focused on the development of **risk modelling solutions** to support the response to these challenges at a local, regional and national level.

The need for a consistent, logical and clear way for law enforcement to understand threat, risk and harm and whether it was "match-fit" to respond to the competing demands in terms of people, equipment, skills and technology provided the impetus for the development of the MoRiLE programme.

The initial phase of work revolved around completing a literature review of risk theory and a review of existing law enforcement prioritisation risk models.

**Risk theory** - There was evidence of some risk theory developed by academics for law enforcement, but they were complex and had not been tested within a law enforcement environment. The review of broader risk theory provided a wealth of information, but again no practical application that could be readily implemented within law enforcement.

**Law Enforcement risk prioritisation models** - A review of risk models across policing identified key elements for a national risk modelling solution and effective practice that could be used as a starting point to develop matrices that would work across all of law enforcement.

Workshops with a core group of law enforcement practitioners from across a wide range of local, regional and national agencies focused on developing the core design principles, a common language and the key factors and criteria to be included in the matrix. These initial matrices were then tested in live policing environments through the agile development of the Thematic model,

allowing them to be reviewed, updated and re-tested until a model was developed that worked for all agencies.

## Current Position

The Thematic (Strategic) and Tactical risk models have been approved by the NPCC Chief Constables Council as Authorised Professional Practice (APP) and are being implemented throughout law enforcement agencies and their partners.

The 2020 ambition of developing a full suite of digitally enabled risk modelling solutions for Law Enforcement is progressing through the MoRiLE sub groups/projects led by subject matter experts within each of the respective areas.

## Future Developments

The MoRiLE Programme aim to achieve their 2020 ambition of developing a suite of digitally enabled risk modelling solutions for law enforcement will be delivered, subject to funding and approval, through two phases:

**Phase 1** – The implementation of a MoRiLE Digital solution that will create the MoRiLE Platform functionality, the automation of the Thematic and Tactical models and the visualisation of the meaning behind this data, leading to the creation of a pool of data which will enhance understanding of threat and risk across policing and lead to the development of a national picture of harm. This will be supported by the creation of a dedicated MoRiLE programme team to drive the implementation of the MoRiLE risk modelling solutions at a local, regional and national level.

**Phase 2** - The advancement of the MoRiLE Digital solution to provide a dynamic contextualised functionality across the full suite of MoRiLE solutions, delivering greater analytical understanding of the threats, risks, and resource capacities and capabilities. This will be supported by the use of more sophisticated matrices developed through the learning from the digital solution, academic understanding and cutting edge digital technology including AI and Machine Learning, supporting both bespoke and holistic responses to the full range of issues faced by law enforcement and their partners.

## Summary

The ambition of the MoRiLE programme is to integrate a suite of digitally enabled risk modelling solutions across Law Enforcement and aim to do this through a core team, a MoRiLE Digital solution and the continued support across all law enforcement agencies through the collaborative approach.

Through this approach the programme will deliver bespoke risk modelling solutions for law enforcement that will develop as needs change and academic, operational and organisational learning improves.

**DI Chris Dowen**
**NPCC MoRiLE Coordinator**

# Chapter 7: Demand Management - THRIVE

Austerity has affected the whole Police Service and this has brought a number of significant challenges around areas such as resourcing and structural change. This, alongside the on-going issues of capability and capacity, has led to the police service as a whole reviewing and revising its approach to demand.

This guide offers insights into typology of demand and predicting demand. It generates discussion regarding the significant element of risk and what information does the service need in order to inform decision making regarding resourcing in the current policing landscape. The chapter on Big Data scopes opportunities presenting themselves through the use of big data and analytics and the picture of 'need' and 'vulnerability' against demand profiling. It goes on to describe how the police service might 'fill' the picture around these two elements and the impact this has on demand outstripping resources.

From the debate generated around 'managing demand' an opportunity has emerged in terms of addressing risk factors, resourcing, demand and delivery of one standard of service to our public at first point of contact.

This opportunity revolves around the introduction of one framework for risk assessing public need, vulnerability and other key elements of service delivery, that can be defined through a simple risk framework, or 'procedural reasoning system' **(Dr Ross Ritchie, Loughborough University)**.

West Midlands Police have developed THRIVE and introduced a system known as THRIVE + in their call management centres that risk assesses the call, the circumstances and provides an appropriate response. This is now presented here as a case study.

**THRIVE+**


This approach has been in the psyche of policing for over 5 years and most recently adopted and developed by forces such as West Midlands Police (WMP) within its 2020 change program in order to look at demand through a formal risk framework to inform decision making and ultimately resourcing.

## Why THRIVE+?

Critically, WMP and many other Forces have had to review their demand profile against resourcing within a shrinking financial envelope. However, even more critical is NOT to lose the Peelian principles of prevent, service delivery and protection.

The original aim of the THRIVE+ risk framework within WMP was to focus on the Public Contact area of business in order to support the rapid identification of T/H/R/V as well as investigative, engagement and intervention/prevention opportunities from the caller at the first point of contact.

Using THRIVE+ to support the management of public expectations of service delivery at this initial stage through more 'right first time' deployments, ensures, as far as practicable, the public gets the resource they need to protect them from harm. THRIVE (+) information gathered is used to assess risk in order to deploy the most appropriate resource to the incident and to minimise variance in decision making across all requests for service.

Critically any approach to risk and demand has to be effective in not only understanding the demand presented through calls for service but also the opportunities this presents to change the demand profile of an organisation. Many forces have undertaken exercises in demand profiling to establish repeat calls for service and identify repeat locations, (shops, stores), vulnerable individuals or high intensive users, (children's homes). However, in all the approaches to identifying causes of demand little has been done to understand and identify a *Nationally* agreed and appropriate risk assessment and resourcing decision at the first point of contact.

## How to do THRIVE+ and Demand Profiling

It is impossible to review all items or files when examining any police service's calls for service data to establish an understanding of resourcing/police activity. There is just too much information to gain any clear understanding. In this situation it is prudent to use a statistically valid dip sample, and, in most Forces that have undertaken this approach, the sample is taken from *randomly selected* public calls for service incidents. Once these records have been identified they give a certain level of confidence that the sample assessed can apply to the population as a whole.

At a recent National event held to review a number of Forces' approach to demand management and resourcing, the approaches taken by West Yorkshire and West Midlands Police were shared. Both were similar in their data assessment but critically WMP utilised the THRIVE+ model in its decision making within the Contact arena.

## WMP approach to demand management and change

WMP utilised 3 statistically valid dip samples to identify an accurate view of the volume of demand presented. The research question asked was, ***'What is the scope for reducing demand on police services by grading incidents differently and responding to calls to 101/999 through different channels or with different service levels'.*** The objective was, ***'To establish a new set of service/grading options which will allow WMP to allocate resources more effectively when responding to calls for service'.*** The initial dip sample focused on 3,200 calls for service records offering a data capture picture recording the circumstances of the incident and the way in which WMP responded. It also offered an opportunity to analyse the 'as is' incoming demand picture and use the data to quantify the impact of applying the THRIVE+ risk framework and different service levels (grades).

## Initial Outcomes

The original dip sample gave a baseline demand profile against current grading profile and started to influence the development of new service offers/grading's (see below).

**P1: Immediate** – An incident requiring the police to attend as soon as possible and preferably within 15 minutes (Response)
**P2: Priority Response** – An incident requiring the police to attend but where any risk can be managed until we attend within 60 minutes (Response)
**P3: Priority Investigation** – An incident requiring the police to attend but where any risk can be managed until we attend within 8 hours (Response at Transition State 1)
**P4: Scheduled Investigation** – An incident requiring the police to attend but where any risk can be managed until we attend via an appointment (Investigation)
**P5: Initial Investigation** – An incident which does not require the police to attend and can be investigated via phone or other means. This will be managed via an appointment (Investigation)
**P6: Neighbourhood Resolution** – A neighbourhood issue requiring the police to attend but where any risk can be managed until we attend via an appointment (Neighbourhood)
**P7: Support Incident** – An incident requiring the police to complete a non-emergency task (Force Support)
**P8: Internally Generated Task** – An internally generated incident requiring police. The activity will be completed by the officer creating the incident (Creating Department)
**P9: Contact Resolution** – An incident which does not require the police to attend and can be resolved by Contact staff (Contact)

The second statistically valid dip sample was undertaken and the research question posed here was, '***To what extent does the THRIVE+ risk assessment framework provide an effective basis for assessment for calls for service and matching incident to most appropriate police resource*'.** The objective was to, **'*Establish whether grading calls for service using the THRIVE+ risk assessment produces a similar demand profile*'**

1200 records were analysed and assessed using the THRIVE+ framework and from the new service offers the most appropriate response selected based on this assessment. Paramount to any decision making was the requirement to record the 'THRIVE+' to draw out critical factors in decision making and then compare and contrast the outcomes against the initial dip sample.

The approach supported not only WMPs understanding of demand and public need, but also supported a clearer understanding of what resources ARE required against service offers to deliver against appropriate demands.

The methodology and use of THRIVE+ provided WMP with a baseline understanding of demand against current and future service offers/grading's. This has developed into an opportunity to re-structure its service offer to the public and influence resource allocation against the new grading profile P1-P9.

A final dip sample was undertaken to continue to test the same methodology, this time utilising a sample of 421 randomly selected calls for service incidents identified from each of the current grading's to produce a total dip sample of 2105 incidents and assess against a new service offer and in particular start to 'predict' future step changes in demand profiling. For example utilising the new service offer/grade P9, whose definition means:

- There is no requirement for the police to attend

- The incident can be resolved via phone or other means
- The incident doesn't demonstrate any THRIVE + requirements
- The incident has been resolved by Contact Staff

WMP predict, through the implementation of THRIVE+ at the initial call from a member of the public, a realisation of a 5.86% increase in using the P9 service offers/grading – ultimately meaning no police response required to an additional 48,000 incidents.

The implementation of THRIVE+ **and approaches similar to WMP**, are being seen across police services to try and manage demands, provide auditable and accountable risk based decision making, reduce pressure on frontline service whilst continuing to deliver great service to our public. **However there is no consistency on approach, commonality in language, IT, training etc.**

## Nationally – THRIVE + the next Steps

As outlined in the beginning of this chapter every Police Service is facing continuous challenges re financial constraints and service delivery, demand and resourcing to public expectations and needs. Each service has adopted its own approach, project and programme thinking re future policing delivery. This Chapter describes WMPs approach to this and the use of THRIVE+ to influence their decision making and resourcing. However, the approach offers more than simple demand reduction or demand change.

Many police services are adopting the principles of THRIVE and in order to review the National picture and share WMPS findings, a THRIVE+ demand workshop was held in March 2016. This brought together leads in change management and contact from over 30 police services, representatives from HMIC, College of Policing, academics and external consultants.

We were seeking to identify whether there was an appetite and willingness to nationally embed THRIVE+ at the first point of public contact with 999 and 101 operators and two workshops were undertaken with this group.

***Workshop One Question*** – Nationally, can you see THRIVE/+ being implemented? What do you see are the risks/threats/opportunities?

***Workshop Two Question*** – Nationally, can you see THRIVE/+ being implemented in your force area in Force Contact? What do you see are the risks/threats/opportunities?

## National Conference Feed Back Themes

Overwhelmingly the answer was 'yes' to adopting THRIVE or THRIVE+ within their organisations and within their Contact arena, however there were a number of themes that came out of the National Conference and these have been broken down into 5 areas.

1. **Training** – There have been a number of approaches taken by forces to delivering THRIVE. These have varied on content and duration e.g. days and hrs. There is a view that training is key to the delivery of THRIVE and the initial training should be delivered with further on-going training periodically. The consensus was that training should be a day as a minimum with further nudges style training as a follow up. Overall there should be a national approach around definitions, content, duration etc.

2. **IT** – No forces have yet updated their IT systems to support THRIVE and allow staff to record their decisions. It is expected that WMP will be the first to do this as their THRIVE + implementation is aligned to a larger force project which gives them the ability to update their computer systems. The general consensus was that computer systems should be updated as a minimum to ensure they use the THRIVE terminology. This will support the proliferation and embedding of THRIVE in forces. In addition, it can be used as part of performance measures to check and balance the benefits and service levels following the introduction of THRIVE.

3. **Consistent approach** – A big question has been raised about what is the model for? Is it a risk assessment model or a demand reduction tool? **The consensus is that it should be used as a *risk assessment model* with the potential bi-product of a reduction in demand**. The tool is generally used in the Contact centres and there is a question of whether it should be used in other areas? WMP is currently developing a force wide approach so that all staff will use the tool when making decisions.

   The THRIVE wording appears to be interpreted differently by different forces. It was felt that a benefit to a national approach would be to have consistency around these definitions. This would enable greater understanding between forces but also have direct cross border benefits.

   THRIVE is seen as a tool that works with the NDM where previously we only mentioned risk and harm. A national tool should be agreed by the College of Policing to ensure a standardised approach. The tool would benefit from an agreement of understanding by the IPCC and the HMIC to assist their investigations. A consistent approach by forces would support the tools use by partners who may work with a number of forces and are more likely to see the benefits of their involvement if nationally agreed.

4. **Service Levels** – It was felt that the use of THRIVE in some forces has increased the length of call duration. However, the increase in the call time has been reduced in some forces once further training has been provided but overall it was felt there has been an increase. This was seen by some as a negative in terms of service levels offered to the public and a risk to the organisations implementing THRIVE.

   However, others felt that despite this risk the introduction of THRIVE has seen a reduction in overall demand and better risk identification ultimately resulting in a better service to the public. The tool allows you to question the needs of the caller using a standard approach and to make the right decision dependant on the needs of the caller. The tool supports a right resource at the right time approach however, to truly realise this goal a review of forces grading / crime policies is required.

5. **Culture**- It was felt that to realise the full potential of the tool forces' culture needs to change. Staff need to be empowered to use their professional judgement. This approach needs to be supported by senior leaders and disseminated appropriately. The tool provides the ability to understand why and how a decision was made which will give confidence to colleagues when taking action due to someone else's decision. However, it should form part of a bigger piece of work around culture.

## Recommendations

1. To agree a set of national principles of THRIVE+ aligned to and based on the College of Policing Principles of Risk and the International Standard (ISO) of Risk Principles. The principles to be agreed to aid the implementation of THRIVE+ and to ensure the model is successfully embedded within any organisation

2. An NPCCC agreed approach to using THRIVE (+) in all Police Contact areas of business

3. Agreement to set up a working group to nationally agree language and develop approved practice through the College of Policing

4. To nationally agree training levels required to support staff in delivery

5. To share ICT developments, training products, performance management, best practice, learning and development through the College of Policing

6. To implement a National continuous professional development centre for THRIVE (+)

**Supt Jo Smallwood**
**West Midlands Police**

# Chapter 8: Internal Demand

A considerable amount of effort around understanding demand has concentrated on the relatively easy to measure area of public demand and to a lesser degree around protective demand. Yet the significance of internal demand as a drain on resources, capacity and cost cannot be underestimated and the potential gains are huge if it is understood and addressed. Although there are many methods of analysing business processes and value streams that could be deployed to review internal processes, the key to success is the engagement with staff to change behaviours.

The internal environment of an organisation refers to events, people, systems, processes, structures and conditions inside the organisation that are in the main under its control. However, there are considerable external influences that also result in internal demand such as HMIC inspections, Home Office returns, Freedom of Information requests etc.

The policing mission, organisational culture and style of leadership are factors typically associated with the internal environment. As such, it is this internal environment that influences activity, decisions, behaviour and attitudes. Changes in the leadership style, the organisation's mission or culture can have a considerable impact on operability and ultimately service delivery.

The internal business environment comprises of factors which impact upon the capacity and capability of our resources to thrive and deliver. Unlike the other domains of Public Demand and Protective Demand, the service has a large degree of control over these internal factors. As such, there is a growing view that managing the demand that we create internally is the key to successfully creating capacity to enable mission to be delivered. Research identifies key themes that impact upon the internal environment – Culture, Leadership, Innovation and the Mission statement

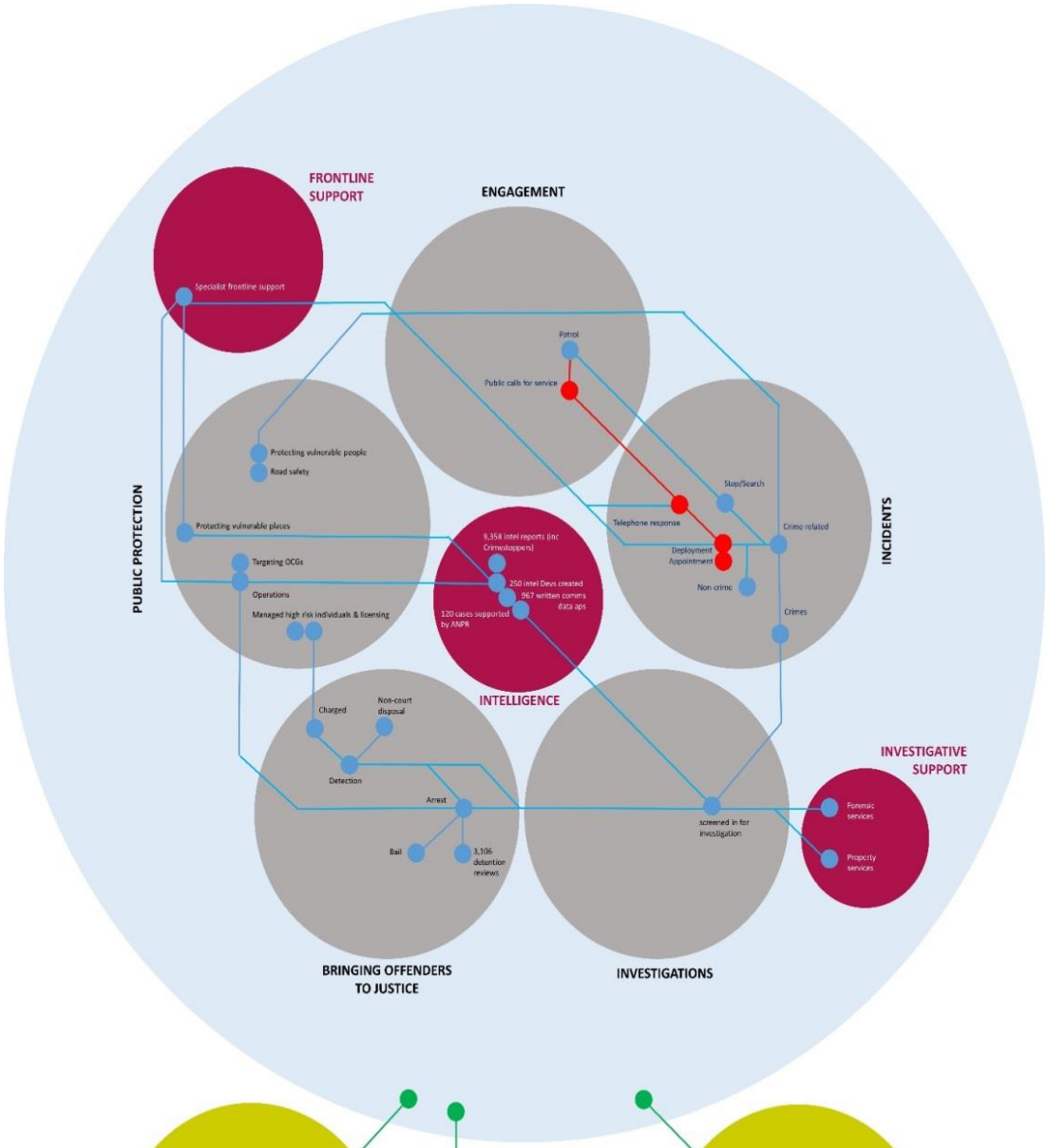
**Worked conducted within the MPS**

The MPS have done a lot of work on Internal Demand which generated considerable interest when presented at the Understanding Demand conferences delivered as part of this project.

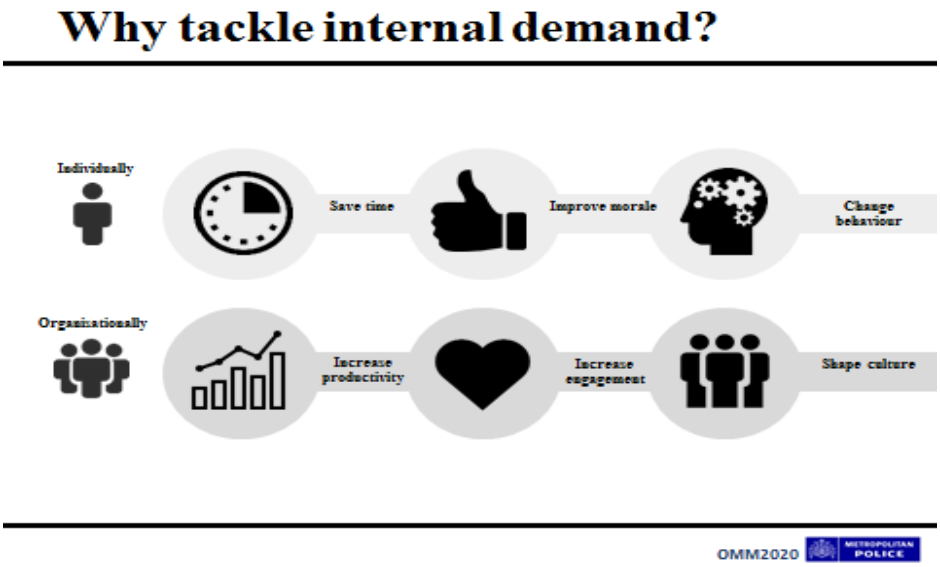
From the outset, MPS adopted a definition of Internal Demand as a basis for their programme:

***'The time and resources spent on activities created by and for ourselves within the police service. This includes day-to-day admin, attending meetings (that are not a legal requirement), as well as other processes we follow and pieces of work we generate which have not come as a direct response from public contact'***

A considerable amount of work was carried out to identify the workflows within the MPS which was summarised in graphical form as a 'tube map' reproduced below by kind permission of the MPS:



Tackling internal demand was identified as a priority for the MPS for a number of reasons




The approach taken focused predominantly around staff and adopted the following process

- Workshops with staff to understand the themes of internal waste/failure
- Once identified, survey staff on the themes identified to understand over a specific period the time spent on these activities and the value added
- LEAN workshop's to identify solutions
- Design and consult
- Make recommendations

**Other options to review Internal Demand**

The MPS adopted a staff engagement approach to understand internal demand, other forces have adopted data based initiates where they take snapshots of activity over a specified period (e.g Operation Veritas, Gwent and South Wales) – these are focused on demand but specifically on the productivity of officers, understanding what they are doing and how long it takes them. The methodology to use would need to be agreed and it will need to be multi-faceted to ensure that activity is captured at all ranks and levels.

A scoping exercise such as this will:

- Establish a benchmark for activity to allow comparisons once interventions are made
- Provide data to allow activity based analysis
- Identify areas/themes of internal demand for further research and solution design with a specific focus on waste/failure
- Allow an opportunity to cost activity and potentially provide financial benefit realisations

Follow up activity would include:

- Survey of staff to understand the themes identified around internal demand – what is it that staff feel the organisation creates internally for them that is **in their view waste/failure**
- **LEAN** workshops to discuss the waste/failure and seek solutions from staff
- Design and consult

- Make recommendations

**Benefits of understanding internal demand**

The main benefits of understanding and managing internal demand amount to 'Doing the right thing, at the right time, with the right resource in the right way' and it does this by looking at the processes, the flows of work and evaluating these against the outcomes to be achieved. It ensures that administrative and support processes are applied in the right sequence and only when needed and significantly it looks at the individuals and teams as part of that value stream. Their contribution is maximised when they are empowered and engaged increasing personal productivity and innovation and minimising waste incurred through errors, quality control checking and failure.

**For the individual:**

- Listened to
- Empowered
- Feel valued
- Facilitate innovation
- Create capacity
- Increase capability
- Improve moral
- Change behaviour
- Change culture

**Organisational Benefits:**

- Provide capacity for clear leadership
- Enhance engagement with staff
- Eliminate waste/failure activity and increase productivity
- Improving the quality of service delivery
- Shape/change culture
- Recognise and reward
- Deliver organisation mission

**Other potential outcomes:**

- Process activities are reduced
- Process efficiencies are realised
- Process improves value for money
- Workforce understanding of process is enhanced
- Workforce more readily identifies the value and purpose of process activity
- Workforce suggest improvement activity
- Workforce feels more engaged with the 'business'
- Managers recognise and value workforce successes and share effective practice
- Leaders assign responsibility based on capability rather than command chain

**Ch Ins Jon Bullas**
**Lancashire Constabulary**

# Chapter 9: Demand, Efficiency and Effectiveness - PEEL Inspections

**Inspection of police performance and demands**

In 2014 the Home Secretary commissioned HMIC to devise an assessment that would allow the public to see from a small number of easy to understand categories whether their local force is performing well or badly when it comes to cutting crime and providing value for money. This commission was pre-dated by a request from the police service that judgments of performance should be rounded, take account of the operating context and represent the breadth and complexity of what the police really do. HMIC's response to the commission has been to develop the PEEL assessment of police forces.

In March 2017 the third PEEL assessments of each police force in England and Wales will be published by HMIC (https://www.justiceinspectorates.gov.uk/hmic/). PEEL uses three tests to assess and make graded judgments of how well each police force keeps people safe and reduces crime. The three tests, or pillars, are:

1) **Effectiveness:** which is an assessment of whether appropriate services are being provided by the police force and how well those services work. The effectiveness of prevention and investigation services are assessed and, in the PEEL 2016 assessment, HMIC placed particular emphasis on how forces identify those **who are most vulnerable** and how services are tailored to protect them from harm.

2) **Efficiency:** which is an assessment of whether the manner in which the force provides its services represents value for money and how well the forces are planning to meet future demands for services. The PEEL 2016 assessment placed particular emphasis on how well police forces understood the demands for their services and how these demands are expected to change over the coming years. It also considered how the understanding of the demand for services was being used to organise and manage the force's people and assets; this included how the force was assessing its future capability needs and the steps it was taking to equip its workforce to meet those needs.

3) **Legitimacy:** which is an assessment of whether, in providing services, the force operates fairly, ethically and within the law; this includes the treatment of those who receive services from the police and the treatment of the people who work in police forces to provide those services. The assessment within the PEEL 2016 assessment considered how forces seek feedback from the public and, more importantly, how that feedback is used to improve their practices. In assessing the extent to which police staff and police officers themselves feel that they are treated with fairness and respect by the forces, HMIC examined how well the force attended to the wellbeing of its workforce; this included psychological wellbeing and mental health.

4) **Leadership**: in addition, to the three tests or pillars, PEEL assessments include an examination of leadership which is crucial in enabling a force to be effective, efficient and legitimate. This is assessed at all levels of the organisation and, in PEEL 2016, paid particular attention to how forces were supporting the development of their leaders and whether the leadership expectations were clear and shared throughout the force.

Each of the three pillars has a number of core inspection questions about specific aspects of police work. These questions are refined each year to take account of prevailing circumstances and

priorities for policing following consultation with a wide range of interested parties, including police forces, Police and Crime Commissioners and the public. HMIC's inspections use a variety of different approaches in gathering both quantitative and qualitative information to answer the inspection questions. The approaches include the analysis of documents and data submitted by police forces, reviewing case files, undertaking surveys, conducting interviews and observing police practice. HMIC also makes unannounced visits to police stations and other locations to observe what the police do and how they do it – these visits provide the opportunity to talk to frontline staff and officers about the work that they do.

Based on the extent to which the inspection findings meet specific grading criteria, HMIC will make a graded judgment of each core inspection. These grading criteria take account of any pertinent standards and were developed with the help and advice of a wide range of subject matter experts and interested parties, including the College of Policing, police forces, police and crime commissioners and other interest groups. For each of the three pillars and each of its constituent core inspection questions, there are four possible graded judgements:

- Good – if the grading criteria are met;
- Outstanding – if the grading criteria are exceeded;
- Requires improvement – if the grading criteria are not met; and
- Inadequate – if there are serious or critical shortcomings in the force's practice.

The PEEL assessments are reported as a set of narratives about the force's effectiveness, efficiency and legitimacy which support the graded judgments. PEEL provides an overview and information about how each police force is performing and it facilitates comparisons both across England and Wales and from year to year.

It should be remembered that the PEEL assessments of effectiveness, efficiency and legitimacy are of the overall performance. Therefore, it should not be presumed that every aspect of work and every action that staff and officers have taken would attract the same graded judgment; this applies in both directions - just as it would be inappropriate to elevate the overall assessment because of individual examples of outstanding performance it would be inappropriate to assess a force's performance as lower than how it performs overall, simply because individual aspects failed to attain the expected level of performance.

Predictably there will be those who want to re-order HMIC's findings into a form of league table and to conclude from the resultant league positions which forces are the best and the worst performing. Whilst there may be a superficial temptation to do this, a more sophisticated approach is required to represent the breadth and complexity of contemporary police performance. What matters are the reasons and factors why some forces have been assessed more highly than others and these are to be found in HMIC's individual force reports. A full consideration of the issues that are raised in each is the key to understanding an individual force's assessment and how matters have improved; not least in response to the findings and judgments of the first two PEEL assessments.

At the end of the PEEL year (in March), HM Inspectors of Constabulary bring together all the judgments made throughout the year, with other findings and information, to produce a rounded annual assessment of each police force; this is the HMI's assessment. It takes account of the context within which the force operates, extraordinary events and significant developments within the police force and the police force area.

**Context and challenge**

Making consistent and comparable judgments of different police forces is in itself challenging because of the geography, demography and the structure of society vary widely both across and within force areas. These variations create some markedly different needs for police services. This is often referred to as the '*operating context*' and is closely associated with the '*demands*' for police services; whilst the importance of both of these is widely recognised, they remain poorly understood and their use in both managing and assessing performance generally lacks sophistication.

To help to orientate users of the PEEL assessments, a small number of key facts are provided to answer some basic questions about the police force and the police force area at the time the assessment was made. These questions include:

- Geographically, where is the force area?
- Geographically, how big is the force area?
- How many people live in the force area?
- How many police (staff + officers) are there?
- How busy (using recorded crime as a proxy) are the police? and
- What do the police cost?

For each police force, the key facts are supplemented by '*contextual facts*' that have been developed by HMIC and the London School of Economics (LSE) and they provide a way of describing '*how challenging (or demanding) different areas are to police*'.

England and Wales is made up of over 181,000 small areas known as census output areas (OAs). These have been defined by the Office of National Statistics to group together people with similar characteristics and to include, on average (median), 125 households. The size of the geographical area covered by each OA varies according to the population density in different parts of the country. The largest OA in England and Wales covers 20,166 hectares, and the smallest less than 0.02 hectares. A football pitch is approximately 0.75 of a hectare. A profile of each OA has been created using over 1,000 socio-economic variables that relate to a number of different topics including (but are not limited) to:

- Economics, employment, and [housing] wealth;
- Employment;
- Health and Disability;
- Education Skills and Training;
- Housing and Services;
- Living Environment;
- Demography & Ethnicity; and
- Built environment (e.g. housing stock)

An econometric model has been developed that is based on the detailed profiles of the OAs and over 43 million police incidents from 17 different police forces. The socio-demographic variables explain 80% of the variation in the number of police incidents – put more simply, it is possible to predict the [reactive] demands for police services to a very high degree of accuracy.

The model has been applied uniformly to each of the 181k OAs in England and Wales to predict the number of incidents. For the first time, this provides a standardised map of all of England and Wales. The police incidents may be sub-divided into:

- Crimes - which may be further subdivided into the groupings that have been defined by the crime tree
- Grade 1 and grade 2 incidents
- Anti-social behaviour incidents

The predicted number of incidents for each OA varies considerably. However, there is a very small number of OAs with very high levels of demand; **approximately 1% (1800) of the OAs contain approximately 14% of all the predicted number of incidents in England and Wales**.

A super-concentration of demands in approximately 1% of the output areas and less than 10% of the geographic area is a phenomenon that is common to each of the 43 police force areas (albeit that there is variation in the proportion of the predicted demands). This concentration of demands identifies those areas that represent a very high challenge to police.

The areas of very high challenge are characterised by high levels of social deprivation or a concentration of commercial premises (including licensed premises) and in some cases both.

While the concentration of demands in a small number of locations (covering a very small area) may be helpful in focusing resources, **it is not the totality of demand**. The provision of services extends beyond those areas that are a very high challenge to police and includes the least challenging and most remote areas. The challenge of providing services throughout a police force area is a function of many things including the size and topography of the area, the road network and how congested the roads are. These considerations influence how police resources are organised and managed – for example, where police officers are based and their working patterns. Notwithstanding these wider considerations, the standardised prediction of demands has the potential to help in:

- Understand the demands for services
- Inform choices about service provision (i.e. priority setting)
- Inform the allocation of resources (i.e. funding)
- Inform the organisation of people, assets and resources (i.e. strategic design) including the choice and organisation of enabling services
- Inform the management of resources to produce the prioritised services (i.e. performance management)
- Prioritise scrutiny, inspection, research, etc; and
- Qualifying or mitigating judgments of performance.

The advantage of analysis at output area level is that it supports a people-centred approach. Differences in the socio-economic characteristics of people who live in different area are reflected in the information that is collected in large data sets such as the census, the Ordnance Survey point of interest data and other quasi-economic sources. Analysis of this information has revealed the strong association between the socio-economic characteristics of people who live in different OAs leads to different behaviours which in turn result in the demand or police and other public services.

**Dr Peter Langmead-Jones**
**HMIC and GMP**

# Chapter 10: 'Big Data'

Big data is about generating valuable insights and predictions from large datasets using econometric techniques. Big data is the new 'term' on the block, as for the first time in history we have large, complete and consistent organisational level data sets available. This data is available for many years, which is very valuable from an econometric point of view.

These datasets lend themselves well to be empirically analysed. It offers a completely new and objective approach to understanding issues and allows us to disentangle cause and effect. This much better understanding of issues will help to direct resources more effectively and develop policy interventions that aim at the root cause of issues and not just the symptoms. It can also be used to optimise processes; in fact it can be used for everything for which there is data available over several years.

Having said that, big data/empirics are still in its infancy in policing, as it is in other industries and sectors. Policing has a natural advantage over other industries in this space, as its datasets are comparatively good and complete. This presents an opportunity for the police service as it can act as one of the lead innovators in big data applications, if it partners with the right institutions. If the police service makes the right choices, then 'big data' will soon be a cornerstone of understanding and managing demand.

A word of warning might be sensible at this point - good empirics is extremely powerful but bad empirical work can easily allow one to draw the wrong conclusions, direct resources to the wrong place, or lead to the wrong policy conclusion. This can be both very dangerous and very costly. To do good empirical work requires solid training in econometrics, typically a PhD, hence a very different skill set that can be found in typical consultancies. The skill shortage is intensified by the financial industry acting as a large magnet for good talent, leaving in my opinion the market quite empty outside academia.

I have observed that some organisations pin their hope on machine learning and AI (on which I will elaborate below.) Both methods offer clear methodological improvements for particular issues, but seem to get marketed by consultancies as a fully automated solution that provides empirical insight without the pre-requisite of the corresponding training. This is not without issues. To make an analogy – changing from a sports car to a Formula I will not solve problems of bad driving. Also, using a Formula I car for some everyday use might not be a particular good use of resources.
That should not stop the police service from engaging with, and embracing big data. If it finds a reliable partner that has the specialist empirical knowledge, then it can be a very powerful combination for the better. The payoff from it will be substantial. In addition, I believe it is essential that the police service(s) develop a specialist in-house 'translation' capability that has both the training to understand the output from the data scientists and the internal gravitas to initiate change within the police organisation.

But let's get back to the practical side of empirics and some suggestions on what it can be used for. For example, I have developed with my team at the London School of Economics an empirical model that allows us to make fairly precise predictions about likely annual demand in very small areas, also called **output areas**.

Many might have heard about our initial demand predictions for the high-level categories of crimes, grade 1 and 2 incidents and ASB. We are in the process of extending this to each of the 9 categories of the Home Office Crime Tree including:

- **Level 3** (Violence against the person, sexual offences, robbery, theft, criminal damage and arson offences, drug offences, possession of weapons offences, public order offences, miscellaneous crimes against society),
- **Public Safety Welfare** (Domestic incidents, concern for safety, missing persons, suspicious circumstances, civil disputes, sudden death, suspicious package),
- **Transport** (RTC – death / serious injury, road related offence, highway disruption)
- **Property crime**
- **Violence** (against people and sexual offence)

In total we will have predictions for 22 categories, but this can be refined further in the future if there is interest for it.

We can make these predictions of likely demand as much of the variation can be explained by the nature of a particular space and the people that reside there. We calculate our predictions based on freely available open data, namely from the census, POI, and house price data. These data sets give us a good empirical picture of people and space and the interaction between and across.
There are press reports that some forces already use our initial (but coarse) crime and incident predictions to direct police officers and other social services to areas with high likely demand. The idea is that prevention is both cheaper and better for society than having to respond to a call for service. By deploying resources to trouble areas ex-ante might help to solve problems before they can grow into something bigger.

To give an example, I met a Dutch Neighbourhood Police Officer (Wilco Berenschot: @WT_Berenschot) at a recent policing conference in the Netherlands who had developed the concept of a fold-up police station, where he takes a fold-up table and 2 chairs and sits down with residents in high demand areas for an hour at a time. Supposedly people are most happy to engage, and share intelligence. It seems to work particularly well with people that the police typically never reach. Whether or not this is a model that would work in Britain is a matter of debate, but what it shows is that directing police and other resources into high demand areas is beneficial.

Prediction is a keyword which is often used and misused in Policing. To me the word has two meanings: (1) understanding demand (levels) in small geographic footprints while allowing for a long time period, or the other way around (short time, wide space), and (2) predicting that a particular incident will happen in a specific location and within a meaningfully short time period (e.g. next 6 hours). While the former is very feasible, the latter is difficult for many reasons. For a start this will not be possible but for most common crime groups and only if these crimes occur in a spatially concentred area (e.g. around particularly poor areas). Even if we could predict likely occurrence of events well, the police service is both organisationally and legally not geared up for it yet. Organisationally, the service is organised around calls for service and so everything is geared towards reacting. Preventive procedures are widely underdeveloped, as is there a very weak legal body that would protect an officer when taking preventive measures.

Another good use of ‘big data’ is the internal optimisation of internal processes. One of our first projects for Greater Manchester Police was around understanding sickness of police officers and staff. We found when looking at the overall days lost the largest categories were psychological disorder and muscular / skeletal. The former was growing particularly fast and we could identify a particularly high relapse rate in that category.

That meant to avoid further long and expensive sickness absence the sergeants needed to be trained in spotting signs and having an opportunity to pass the case on to an in-house specialist.
To give another example, PCSOs were 10% more likely to report sick than their fellow officers, but when controlling for the fact that PCSOs are considerably younger (and a slightly different gender mix) their sickness propensity went up by 25%. This shows why proper regression analysis is so much superior to classical summary statistics, as we can now control for all sorts of confounding factors. After all, life - and policing - is more complex than a two dimensional picture and with 'Big Data' we have both the data and the empirical techniques available that allow us to draw a much more nuanced picture.

With enormous progress in cloud computing we have now the powerful computing infrastructure available that is easily within the budget of every police force (without any compromises on security). We also have the empirical techniques readily available, as well as the data. So why don't we all just use it?

**Dr Tom Kirchmaier**
**The London School of Economics**

# Chapter 11: Predicting Demand

## Predicting Demand

Predicting demand is complex and challenging; this is predominately due to services being information rich but knowledge poor. Considerable amounts of data are already available to services but not necessarily used. This is largely due to a capability gap caused by reductions in previous years of analytical resources. As a result, many forces find themselves in a position where they have neither the requisite skills and experience or the equipment in terms of software, to predict demand or if they do there is insufficient capacity in terms of properly experienced analysts to do so. Services that are fortunate enough to be in a position to attempt predicting demand are doing so in an uncoordinated and inefficient manner, failing to make the best use of **big data and predictive analytics** and with mixed results in terms of effectiveness. Furthermore, their predictions are heavily weighted towards crime prediction which is only a small portion of overall demand.

Five key areas were identified that could currently be predicted and that also had value as the police service progresses towards more effectively predicting demand based on R/T/H/V. These areas where identified as **victim vulnerability, call demand, location based demand, serial offending and strategic resourcing**.

### Context of Demand Prediction

There are four temporal dimensions which should be considered when predicting policing demand which include baseline, cyclical, surge and trending. In relation to the temporal elements to predicting demand:

1. **Baseline** can be defined as what organisations consistently experience due to internal or routine and on-going work.

2. **Cyclical demand** is that which is recurring, predictable and may be time-bound or **seasonal** e.g. Christmas, football season, school holidays.

3. **Surge demand** can be described as short term spikes due to an unforeseen event, for example a murder, civil emergency e.g. floods or public disorder or secondly surges resulting from planned events such as a concert, G8, Rugby World Cup or Olympics.

4. **Trending demand** is long term and strategic or short term due to a localised problem and would include emerging trends around vulnerability such as Cybercrime, Digital Exploitation, Child Sexual Exploitation and Terrorism.

### Managing Expectations and Predictive Accuracy

There are many myths around how accurately and comprehensively demand can be predicted. When considering this forces should take into consideration the financial cost effectiveness of predicting demand and also an assessment of future developments bearing in mind the Pareto effect applies (beyond a certain point the effort required to achieve accuracy is vastly disproportionate to the effort required to achieve the improvement).

Furthermore, the ability of predictive methodologies and systems are overstated, they do not alone provide solutions. Even complex forms of analysis such as multiple regression analysis will not provide answers. They merely provide information drawn from an evidence base.

***It is the professional judgement and interpretation of the information provided and the tactical, operational and strategic decision making as a result of the information which forms the solutions.***

## 1. Baseline Demand

**Predicting Baseline Location Based Demand - London School of Economics – Demographics and Deprivation**

By drawing on multiple data sets over a long period of time the LSE work (as detailed in Chapter 10) provides a deeper understanding of demand leading to increased efficiency and effectiveness through the targeting of resources and interventions. Ultimately the objective of the work is to predict all aspects of demand (where, when and who) resulting in the aforementioned interventions and deployment having the potential to reduce demand and provide cost savings. The method provides a baseline predictor for location based demand that is at an early stage and is yet to be practically applied or tested operationally - but reports demand prediction levels of accuracy as high as 85%, which is higher than similar models such as the neighbourhood needs index and the vulnerable localities index.

In total 185 different indicators are considered which is significantly higher than other models. The result is what is described as an area based index which can be utilised to characterise whole police force areas or parts of police force areas and at different times by provision of an area index of demand (AID score of 0-100), the higher the score the greater the level of predicted demand in this locality.

**The Vulnerable Localities Index**

Referred to as the VLI, this is a method which can help to identify residential neighbourhoods that require prioritised attention for community safety. The purpose of the VLI is outlined by the Jill Dando Institute (2016) as being to ***"Help policing agencies to systematically classify communities into prioritised areas"***

The VLI integrates data collected at the neighbourhood level which includes recorded counts of burglary dwelling, criminal damage to a dwelling, income deprivation score, employment deprivation score, the count of 15-24 year olds and educational attainment. This data is then used to create what is described as a composite index value of vulnerability for a locality.

The VLI and LSE work are very similar in intent with the major difference identified as the predictive accuracy of demand with the LSE research scoring much higher.

**Predicting Victim Vulnerability**

As the 2015 HMIC Vulnerability report outlined, many forces are well positioned in identifying vulnerability, however, conversely, several have much to do in this area. Existing approaches heavily rely on a referral process which fundamentally remains reactive and is further underpinned by professional judgement which is notoriously in-equitable in its application. As such, great progress can be made in terms of more accurately predicting vulnerability and risk, where there is still a significant capability gap.

This area is one where the potential use of big data and predictive analytics can greatly increase the efficiency and effectiveness of police services in predicting victim vulnerability and risk. ***Once***

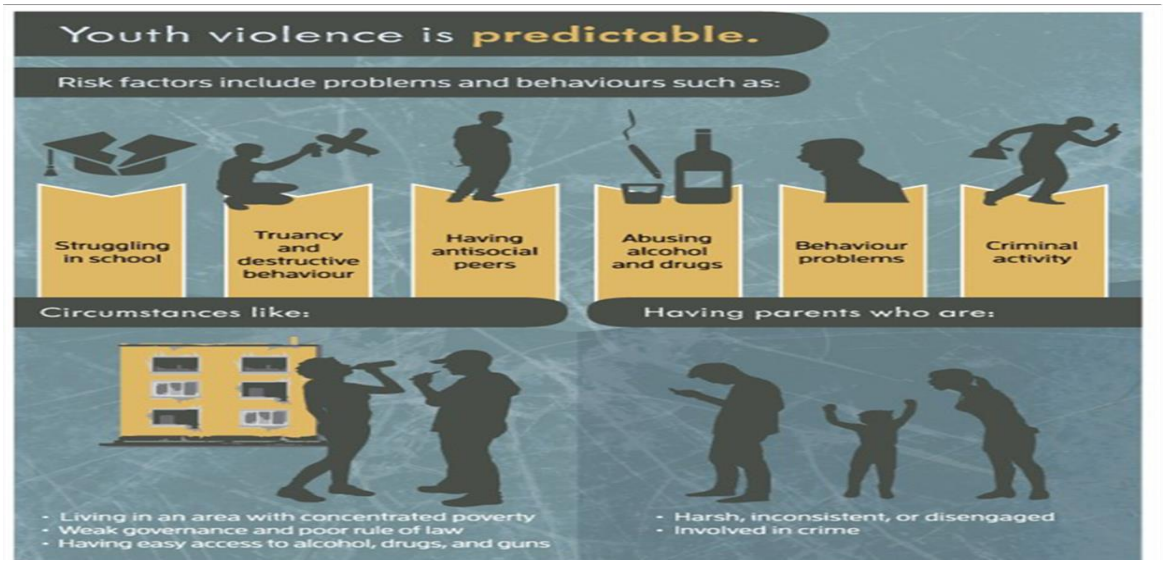
***vulnerability and risk can be more effectively and accurately identified, early interventions can be maximised and used to prevent or manage this identified demand.***

**Metrics for Predicting Vulnerability**

At present there exists no defined 'over-arching' metrics for predicting vulnerability. This is in part because there is currently no agreed definition of vulnerability amongst police forces but also because vulnerability can encapsulate any number of harm causing behaviours. This could include CSE, domestic abuse and other violent and sexual offences, all which have empirical evidence based research that identifies individual pathways to victimisation. The adverse childhood experiences (ACE) indicators are at present the most inclusive predictors which include;

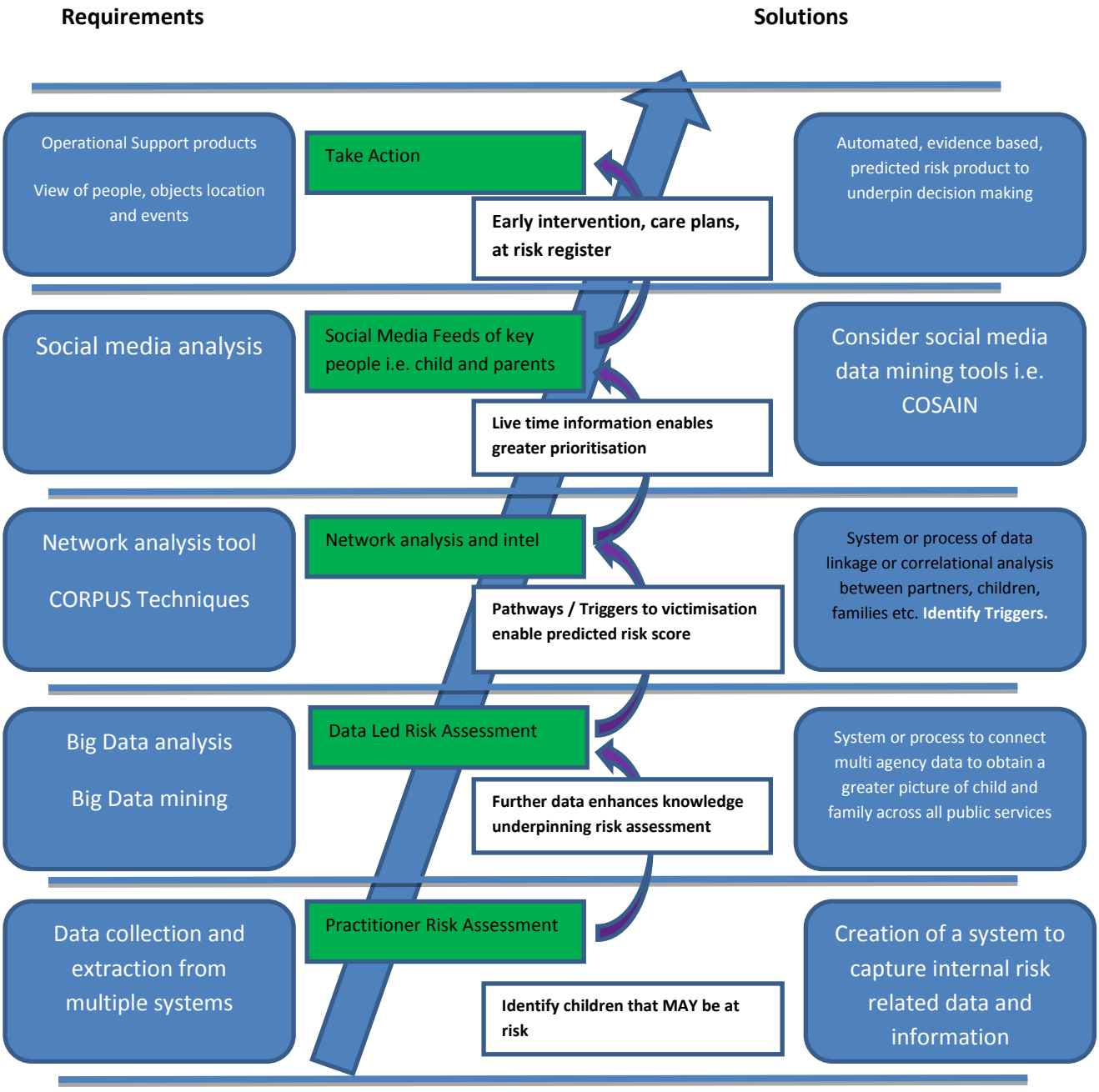
- Sexual abuse before age 18
- Emotional abuse by parent/loved one
- Physical abuse by parent/loved one
- Emotional neglect by parent/loved one
- Physical neglect by parent/loved one
- Loss/abandonment of or by a parent
- Witnessed abuse in the household
- Drug/alcohol in the household
- Mental illness in the household
- Loved one incarcerated.

An example of predictors in respect of an individual area of vulnerability is depicted below and is from the World Health Organisation Representation of Predicting Youth Violence




When considering options for building a vulnerability or harm prediction model, the framework detailed on page 59 could be applied. The example used here is in respect of child abuse but the framework could be built upon any defined predictors. We can see that by following stages 1-3 we can use technology better to provide a more efficient and effective risk assessment for victims. This can then be factored into the decision making of both the police and agencies such as social services, directing care plans and interventions to prevent vulnerability and risk evolving into harm.

This framework is a Potential Big Data and Predictive Analytics Escalator for Vulnerable Children – adapted from a flow chart outlining the predictive analytics stages and tactical stages applied (Accenture, 2015)




**Predicting Baseline Risk and Harm**

Police forces need to be able to more effectively predict the risk within their communities and the harm that can be caused if risk is not successfully identified, managed and prevented from escalating. There are existing methods to assist forces in creating a paradigm shift away from traditional reactive volume based policing models to one that focuses on identifying vulnerability and risk and directing interventions in a multitude of methods to prevent harm ever occurring. Such interventions can manifest themselves as simple capable guardianship in the form of tasking and co-ordinating resources in areas of high risk and harm, to place based joint public services and

partnership approaches to combat vulnerability through early intervention, referred to in some forces as Troubled Families or Early Action. An organisational policing response structure can be maximised to tackle R/T/H/V by adopting a tiered approach as outlined in Appendix 1.

**Harm Indexes as a Baseline Indicator**

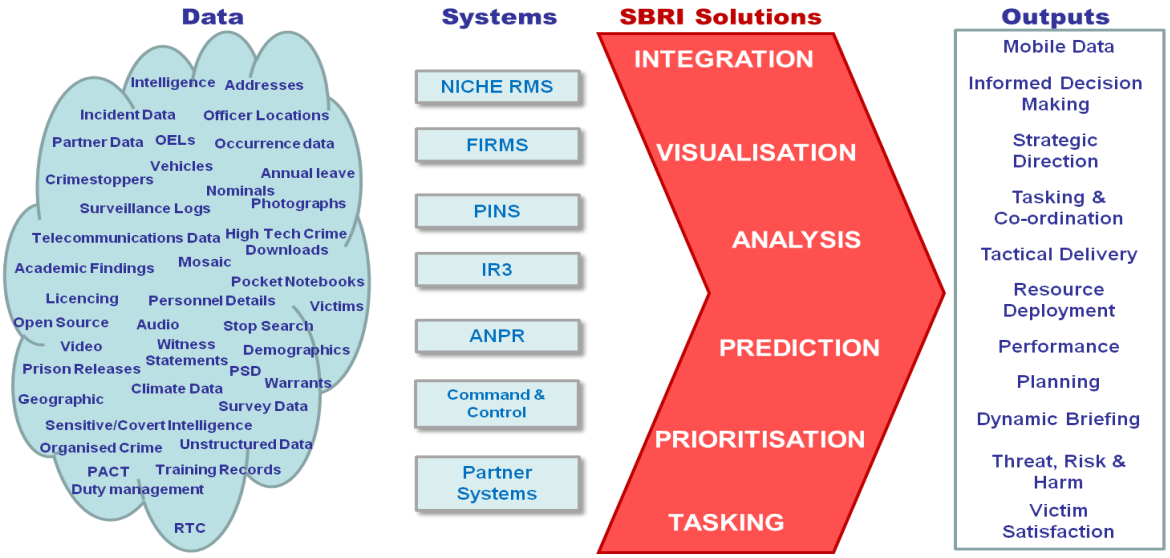
Harm indexes such as the '*Cambridge Harm Index'* have potential to identify a police forces level of vulnerability to inform operational deployment by moving towards what has been described as '*harm-focused policing'*. By providing a method for police services to weigh the harm caused by criminality, alongside other information, services can better inform their decision making in terms of identifying their vulnerable communities based on harm, as opposed to volume of crime for enhanced levels of focus and deployment (Ratcliffe, 2015).

By identifying and predicting harm caused to a community as opposed to volume of crimes, which is the traditional method for identifying areas for intervention, police services can become more effectively aligned to the most vulnerable communities where the majority of high harm score crimes are committed.

**Next Generation Predictive Policing**

This is essentially a form of risk terrain modelling. Innovative approaches are utilised to pull data from multiple disparate sources and is a strong example of how to combine digital media with the principles of 'big data' and 'predictive analytics' to create a 'real time' location based tasking and co-ordinating capability. The system compiles data into real time information that supplies front line decision makers with the capability to make rapidly evolving tactical and operational decisions in terms of the tasking and co-ordinating of their resources. Such approaches are closely related to the systems which are currently used by Kent and Los Angeles Police Department. These automated predictive policing technologies use a data processing model called a '**Self-Exciting Point Process of Modelling Crime'.**

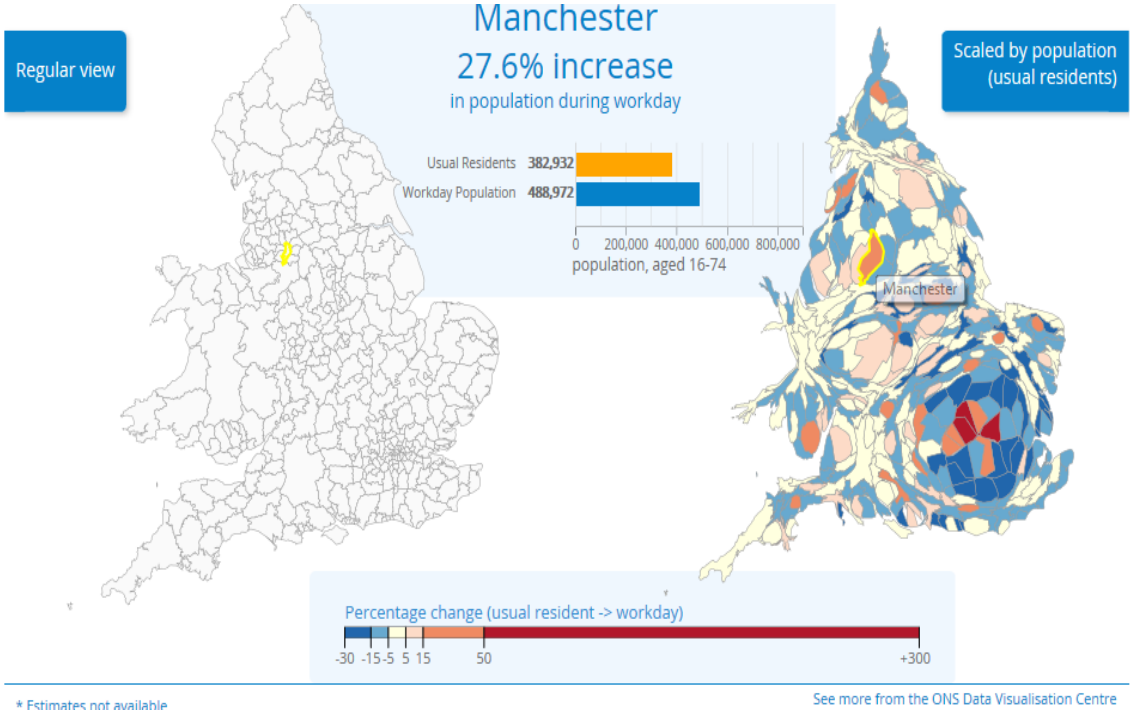
An example of the flow of 'big data' is illustrated below which is a data flow of **Next Generation Predictive Policing (NGPP) System** Utilised by South Wales Police. Such an approach could enable forces to configure the setup of an operational predictive solution to match their identified vulnerability based demand, maximising resource allocation and deployment in a manner that maximises harm prevention and reduces vulnerability within communities.




**Predicting Transient Populations**

Transient populations can have a high impact on the level of demand placed on police services, particularly in areas with large economic hotspots such as highly populated city centres. The largest and most easily accessible form of transient population information is found within the census 'workday population change' data. Research has shown that this is the strongest correlation with crime and demand (Malleson, 2015). Utilising this information effectively can assist services in co-ordinating their location based resources to maximise their effectiveness. Areas such as Nottingham and Manchester are a strong example of the level of deviations that can be experienced. For instance, between the workday hours (9-5pm) Manchester experiences a 27.6% (106, 400 people) increase in population size with surrounding residential areas experiencing significant reductions. As such, resource deployments could achieve greater efficiency if more fluid deviation between workday locations could be achieved.

The below screen shot illustrates workday population information obtained from the national census:




## 2. Cyclical Demand

**Predicting Victim Vulnerability in Terms of Cyclical Demand**

In essence examining the past is the most accurate indicator of future events. This is another area in which big data and predictive analytics should be advanced. This is especially true in terms of cyclical demand. To more effectively identify demands in terms of this temporal context, police services need to invest more time in analytically examining information at their disposal to identify correlations with demand and cyclical events to inform their planning.

## 3. Surge Demand

Surge demand can be caused by any spontaneous incident. However, most commonly a surge in volume is often misinterpreted as a surge in demand. On occasions the two may correlate. Such surges are most often caused by serial offending of acquisitive crime and are best tackled using existing traditional approaches.

**Near Repeat Victimisation**

The methodology of identifying serial offending from repeat victimisation is well established and has a high degree of predictive accuracy. In essence the principle is simple, victims of domestic burglary are at the highest risk of repeat victimisation for two weeks after the initial crime. Research indicates that the offenders are often returning, serial perpetrators. The length of future predictions is limited to two weeks, after which point their accuracy decreases. The methodology is also only applicable to domestic burglary which only accounts for a small level of serial offending.

**Optimal Forager Theory**

The foraging principle works on the assumption that motivated serial offenders operate in the same manner as foraging animals. As a result they will return to locations where they have previously been successful in terms of their offending. This research is again predominately in the area of domestic burglary and although there is a proven high degree of predictive accuracy, its ability to predict future locations of serial offending is limited to similar time frames as the near repeat methodology. Similarly to repeat victimisation, the methodology consists of predicting a future area of crime demand based on the foraging behaviour of motivated serial offenders.

**Crime Linkage Analysis**

In terms of identifying and predicting serial offending, crime linkage analysis is fundamental. It is of note that this methodology can in theory be used for all crime types. However, it has been identified that there is very little work conducted at an operational and tactical level to identify linked crimes (Halford, 2015). The importance of this is essential in early identification of travelling crime groups who can be responsible for high volumes of crime and generate a large demand in reactive conspiracy investigations and targeted patrolling. Currently services rely on tangible methods of linkage from sources such as CCTV, forensic and witness evidence. However, research identifies that logistic regression analysis can be a strong tool to identify linked crimes through analysis of their behavioural and physical characteristics. However, currently, methods to conduct this are intensive and require high levels of analytical capability.

**Geographical Profiling**

Once linked crimes are identified services, can make use of underutilised tactics such as geographical profiling to more accurately tackle serial offending. This tactic is particularly useful for identification of the likely locality of the home or base of serial offenders for which the tactical and operational tasking of capable guardian resources can be deployed, in conjunction with traditional intelligence led approaches, thus further increasing the effectiveness of location based methodologies. Existing literature has identified that this methodology can be used to tackle a variety of serial offending.

It is of note that research has identified that this tactic can be used in conjunction with other methodologies such as near repeat victimisation and optimal forager theory. Doing so has potential to greatly increase the effectiveness of location based capable guardian tactics but it has identified that there is a significant capability gap in producing geographic profiles for which investment in training and development would be required to produce this at a localised level.

**See the below table for** an outline of potential methodologies for predicting the demand of the identified operational priorities:

| Demand Type | Baseline | Cyclical | Surge | Trending |
|---|---|---|---|---|
| **Victim Vulnerability** | Big Data & Predictive Analytics<br><br>Cambridge Harm Index | | No Methodologies Identified | Big Data & Predictive Analytics<br><br>Cambridge Harm Index |
| **Location Based** | Optimal Forager & Near Repeat<br><br>Demographics and Deprivation<br><br>Cambridge Harm Index<br><br>Transient Mobile Data | Cambridge Harm Index | Optimal Forager & Near Repeat<br>Cambridge Harm Index<br><br>Transient Mobile Data | Social Media Data Mining<br><br>Transient Mobile Data |
| **Serial Offending** | Crime Linking<br><br>Optimal Forager & Near Repeat<br><br>Geographical Profiling | | Crime Linking<br><br>Optimal Forager & Near Repeat<br><br>Geographical Profiling | |
| **Calls for Service** | Big Data & Predictive Analytics | | Big Data & Predictive Analytics<br>**SNS** data mining | Social Media Data Mining |
| **Strategic Resourcing** | Regression Analysis and Demand Forecasting<br>Combined with Task Analysis and/or Process Evolution Simulation Data | | | |

## 4. Trending Demand

### Predicting Victim Vulnerability in Terms of Trending Demand

Predicting any demand in terms of trending demand is extremely difficult. Recent events such as operation Yew Tree and the CSE investigations within Rochdale that are subject to the Goddard enquiry both show events that are highly publicised can instigate a trend based rise in demand. For example, recent increases of historic sexual offences and rapes are linked to operation Yew Tree. Due to the very nature of much of these operations and enquiries being unforeseen, or widely believed to be unforeseen, it makes their prediction and the knock on impact incredibly unreliable to predict.

### Trending and Surge Demand as a Cause of Crime Displacement

It is highly likely that serial offending will be the fundamental cause for trend and surge demand and this has historically led decision makers to make instantaneous reactions. Such reactions can and do have a negative impact on demand if ill considered. This is particularly prevalent in respect of near repeat victimisation and optimal forager theory which can both produce crime displacement. This is as a result of the targeting of smaller scale 'super critical' hotspots, almost always as a reaction to a trend or surge in serial offending of a specific crime type. It has also been identified that there are two specific methods to combat such displacement. Firstly, the most accepted method is the generation of tasking and co-ordinating based upon 'sub critical' hotspots. These are much larger than hotspots generated as a reaction to surge or trend offending and as a result the serial offending dissipates. However, in reality these often take greater levels of resources to manage. Secondly, the use of geographical profiling to complement the identification of a surge or trending 'super critical' hotspot, possibly through prediction based on near repeat victimisation or the optimal forager theory of prediction.

### Predicting Trends Based on Social Media

Internet based social media and open source monitoring platforms provide forces with the capability to identify rapidly emerging demand trends if used correctly and at both a local and strategic level. Their current use is predominately within intelligence gathering. The social media tracking based systems automatically filter data on actual and inferred geographical locations. This allows users to monitor events, live incidents and 'trending' information in defined areas. Such a capability would for instance allow police services to predict where a demand may occur based on social media information. For example a trending 'hash tag' (#) may identify a future predicted demand eg #fightoncorporationpark. In doing so an early deployment or intervention can prevent the demand occurring. The methods are applicable to demands from threats such as spontaneous EDL marches or football related organised violence for instance. However, there are restrictions in the software supplied but in such a vacant area it provides a strong starting point for further evolution.

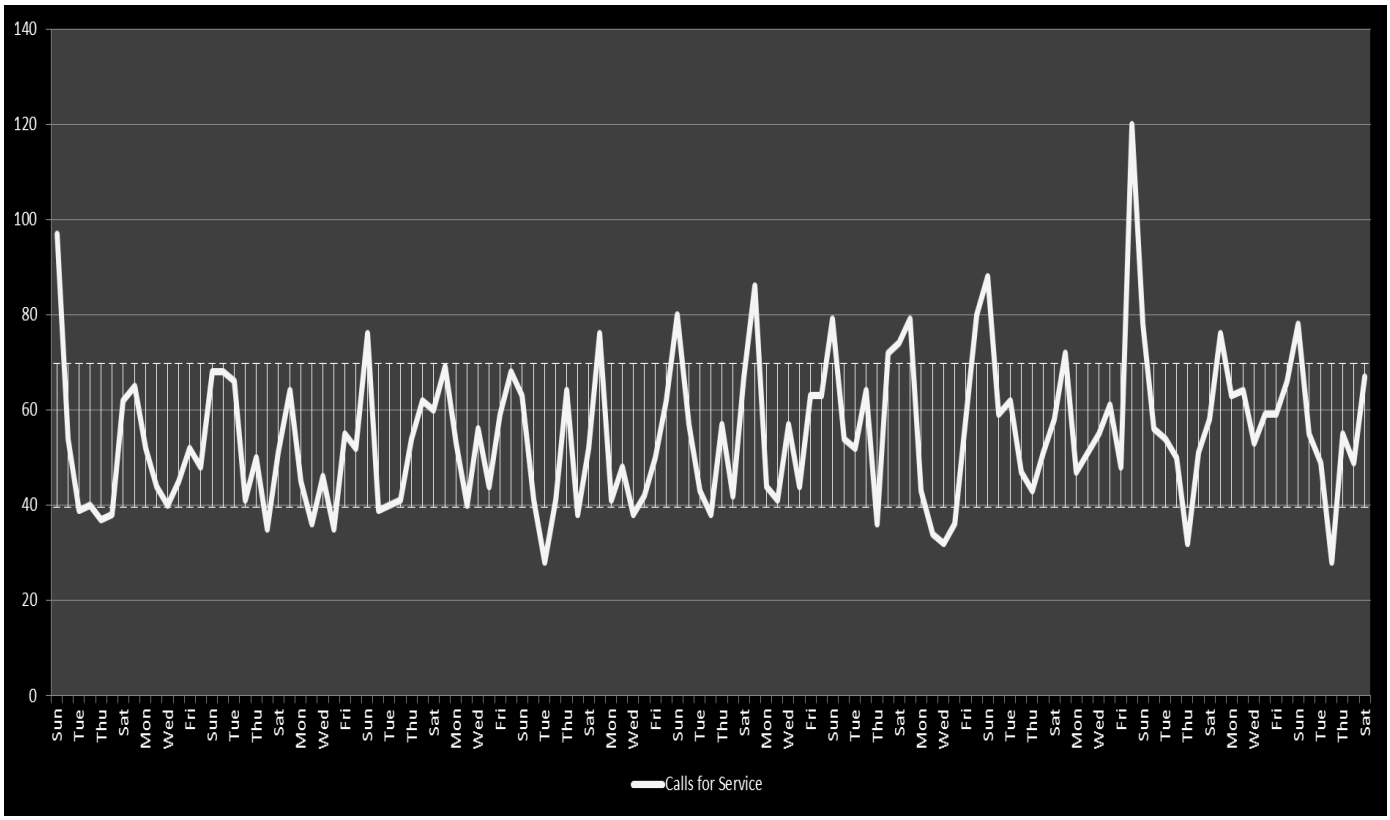
### Predicting Call Demand

Having available resources at the right location and at the right time is critical to keeping communities safe and instilling public confidence. A key element in ensuring resources are detailed and deployed effectively is understanding the demands linked to calls for service and accurately predicting what resources are required in the future. This predicting, or forecasting, of calls for service can be carried out in a number of ways, in its simplest form a linear forecast model is used, which simply states that the number of calls for service that a police force will face today is likely to be similar to what they faced in the previous year's on the same day. Although an extremely crude

and oversimplified illustration, many of the most accurate analytics predicting call for service demand use this concept as the basis for their algorithms, increasing accuracy and completeness by adding additional variables.

Algorithms aimed at predicting calls for service can consider a virtually endless amount of variables, including those taken from regular events such as days of the week, months, seasons, sporting/entertainment events and holidays, to more spontaneous inputs such as extreme weather conditions, crime sprees, civil unrest and community tensions. Some of the most advanced forecasting tools in this category add values taken from social media data, traffic flow information or sentiment analysis to their calculations, in an attempt to increase accuracy and provide a complete picture.

Using cyclical demand, as an example, the impact that regular events such as days of the week, months, seasons, sporting/entertainment events and public holidays have on calls for service can be better predicted. The chart below illustrates this cyclical demand in respect of reports of assaults by days of the week. The below is a Linear display of cyclical calls for service. Adding this information to the baseline calculation would produce a more accurate prediction tool. This accuracy could be increased even more by adding the likes of seasonal information, payday, public holidays, key entertainment/sporting events and other regular variables identified by regression analysis techniques**.**



**Summary**

From examining methodologies and best practice in respect of predicting demand it has become evident that there is great potential for using predictive processes to underpin strategic planning within police forces.

But there needs to be an acceptance that by its very nature in police work, any prediction will never be 100% accurate. Nor does it need to be that accurate to be useful. The value of being able to predict demand is in its ability to underpin strategic decision making decision on an evidence base that is better than what exists at present. Culturally, the biggest and most pressing paradigm shift that senior leaders should seek to encourage is to move to reducing demand through prevention and of harm and alleviating vulnerability by using prediction methods to target harm and vulnerability as opposed to volume. To achieve this, then forces need to adopt the three most simple, but important forms of prediction (spatial, people and forecasting) which provide much greater levels of effectiveness in tackling harm and vulnerability, and its associated demand.

In respect of spatial based predictions, police forces must aim to use the demographic based information available from tools such as that provided by the London School of Economics, to position their local resources in communities that need support most.

Forces should use harm and risk based models such as the Cambridge harm index and MoRiLE to make greater use of the capable guardianship at their disposal, through developing tasking and co-ordination plans that focus on alleviating vulnerability through problem solving and collaborative working.

In respect of predicting person based demand, forces need to call on the 'big data' at their disposal and underpin it with the empirical pathways to victimisation and recidivism to generate evidence based intervention and early action frameworks. This ensures those at the highest risk get the right help.

Finally and possibly most importantly, forces should use the methods discussed in this chapter to identify their priorities, then, through proper forecasting and evaluation of these demands along with information on staff capacity and capability, they can begin to plan the future configuration of their organisations to be more efficient as well as more effective in their ultimate aim of keeping people safe.

**DI Eric Halford**
**Lancashire Constabulary**

# Chapter 12: What we can't Predict – A Co-ordinated Plan for Future Research

## 1. Defining Vulnerability

As described in previous chapters, prior to researching methodologies and practical approaches to predicting risk, it is important that we be clear on defining vulnerability. Although victims of certain crimes are almost always by definition vulnerable, child abuse for example, there is still much confusion over what constitutes vulnerability. This is evident in the myriad of approaches to tackling vulnerability outlined within recent HMIC publications.

Once the service has reached a consensus on how vulnerability is defined it can then be assessed more accurately if methods exist to predict it or, more likely, where gaps exist and how they can be filled.

## 2. What we can't Predict - Predicting Victims and Offenders

Clearly it is not appropriate to await a national consensus on defining vulnerability before measures are taken on analysing how it can be predicted. As such, this report adopted the stance that by definition victims of many offences, for instance child abuse, domestic violence, rape, sexual assault and radicalisation, are almost always vulnerable.

In doing so, this area was identified as by far the greatest void in terms of literature and best practice examples of prediction, in all temporal dimensions. Although current work is on-going within certain services in an effort to better predict persistent offenders of domestic violence and the risk of becoming potential victims of child sexual exploitation, many areas remain unexplored. This includes predicting risk of victimisation of crimes such as rape, human trafficking, child abuse and radicalisation to name a few. All of which can be achieved through similar methodological approaches which would likely identify very different correlations and pathways for which prevention and safeguarding interventions can be put in place.

## 3. Blockers and Facilitators to Predicting Demand

*Cost Effectiveness* - The cost of predictive methodologies is continuously identified as a blocker to services adopting processes based on 'big data' and 'predictive analytics'. It was not uncommon to identify costs between £500,000 and £1 million for analytics providers to conduct proof of concepts in relation to a single strand of demand, for instance predicting victim vulnerability in relation to child abuse. Full implementation costs are significantly higher. The South Wales 'Next Generation Predictive Policing' approach is a strong example of how to seek innovative funding streams. However, these are not always sustainable and the longevity of future funding streams such as the PIF is not known. For these reasons it is essential that this area is championed from a central source to maximise effectiveness and sustainability in terms of reducing this cost. Clearly, in the best interests of constancy this should be done in close consultation with the Police ICT Company.

Overarching these issues is the question as to whether such providers provide value for money and whether forces are maximising the existing knowledge and capability within. **Police Scotland** is a fine example of practitioners developing a strong data based system for minimal costs.

***Data Sharing*** **-** The issue of data sharing was also a consistent blocker. Any predictive methodology is only as strong as the data upon which the predictions are made. A general rule is that the greater the level of data the more accurate the predictions. Currently services predominately have access to only their own information. A limited level of multi-agency data could be accessed through data sharing agreements within multi agency hubs or with outside agencies such as troubled families. However, obtaining such data access is problematic and time consuming.

**Therefore it is strongly recommended that a review be conducted in terms of current data sharing statutory obligations with recommendations on how services can maximise these in the context of predicting demand.**

Furthermore, examples exist of collaborative data sharing arrangements for academic research purposes which, through collaboration, police forces could access.

***Ineffective Use of Analysts*** **-** Finally, a recurring theme across all identified demand priorities and temporal dimensions and underpinned through focus groups held by the College of Policing was that analysts were not being used to full effect. The importance of analysts cannot be understated in the context of predicting demand.

However, despite this fact it was established that two main issues were persistent in respect of analysts. Firstly, that there was a lack of awareness within police services about the capability of analysts. Analysts who attended focus groups identified that their predictive skill set and capability is high but '*they are not being asked the right questions'* with their primary corporate function remaining that of identifying and measuring traditional performance indicators as opposed to predicting future demands and emerging trends or threats.

Secondly, that as a result of the reduced capacity of analysts, in part due to the issues of austerity experienced by all police services, that some no longer have time to conduct other non-operational duties. In essence their capacity is fully utilised on analysing data in relation to criminal investigations with no capacity for work in relation to predicting demand.

**The sub group recommends that services review their current number and use of analysts and re-assess this in the context of an evolving service which requires capability to predict demand**.

It is recognised that further research is carried out in terms of exploring the opportunities for predicting demand and these are highlighted at **Appendix 3.** This offers an insight into the forms of demand and their temporal dimension which remains unstudied and requires further investigation to inform the Police Service.

**DI Eric Halford**
**Lancashire Constabulary**

# Chapter 13: Productivity

## 1. What is Productivity?

The Office of National Statistics (ONS) describes Policing as a collective service which is provided to all and that individual, households and communities cannot be excluded from the benefits of those services.

They also recommend that public service output should be estimated as a volume measure comprised of two separately observable outputs:

- The ***quantity*** of goods or services
- The ***quality*** of goods or services

This is complicated for policing as the outputs are non-market outputs in that they are provided free of charge at the point of delivery and provision is not intended to cover the cost of production. To deliver productivity the ONS describes four conceptual approaches by which the policing service could be measured.

1. ***Input methods***: Measure output by units of input
2. ***Activity method***: Measure outputs by activity that depends on activity performed by staff
3. ***Output method***: measure output directly by counting what services the consumer receives (not those offered)
4. ***Outcome method***: The overall benefit the community receives as a result of the policing output.

The Input and activity measures are not considered by the ONS as ideal methods of measuring output , and whilst they can be applied to collective services where output and outcome methods are not achievable, they should be treated with caution. The outcome method is complicated due to the number of interdependencies that would exist when attempting to establish a link between a change in community behaviour and a policing output (i.e. reduction in deaths on the road due to a change in driving behaviour being linked to impact of speed awareness courses). Therefore the preferred method to use is that of the output method.

This is reinforced through the Eurostat handbook which classifies three types of methods for public sector output (A-C) but recommends Method A which is an output indicator approach. Under this approach the indicators should cover all services provided, are weighted by cost of output and are as detailed as possible and quality adjusted.

**Therefore it is recommended that an output measure for productivity is used.**

In the USA McKinsey & Company [1] described productivity from a government perspective as one of three things:

- Continue to deliver the same quantity or quality of service outputs at a reduced cost
- Improve delivery of services (quality or quantity) outputs for the same cost
- Transformational service delivery through planned investment

**It is therefore recommended that these three descriptors to define productivity and an output methodology are adopted as the core definition of and for measuring productivity**.

[1] *What is public sector productivity: Tony Dankor and Thomas DohrMann: www.mcKinsey.com*

## 2. What are the measures of productivity?

In order to measure productivity it is necessary to define what a unit of measurement of productivity is and how it can be applied to any measurement or performance regime to account for any derived efficiencies. In simple terms productivity is a monetary or time based measure as described below.

- ***Productivity hours***: This is a time based measure that relates to time (hours) saved/reinvested from an improvement directly attributable to an increase in productivity that can produce more outputs

- ***Productivity Pound***: This is a cost based measure that relates to finance (£) saved that is directly attributed to an increase in productivity

In order to translate this into a resourcing model as an efficiency saving, the time element of productivity should be converted into a percentage improvement change (especially if you are seeking to either increase the demand throughput of a unit or reduce the resourcing required to deliver the service.) To achieve this, it is essential that the service and processes undertaken that are subject to the productivity (efficiency) assessment are fully understood, so that the full benefits of the change can be determined.

## 3. What are the steps for delivering productivity?

In simple terms there are four steps in undertaking a productivity assessment:

- **Benchmark and baseline service subject to productivity**

Making a service function more productive is predicated upon the fact that you understand how all the component parts of the process you are trying to make more efficient work and the time allocated to particular tasks.

- **Define and agree what you are hoping to achieve from the process**

Determine and agree which productivity approach is applicable to the area of business under consideration.

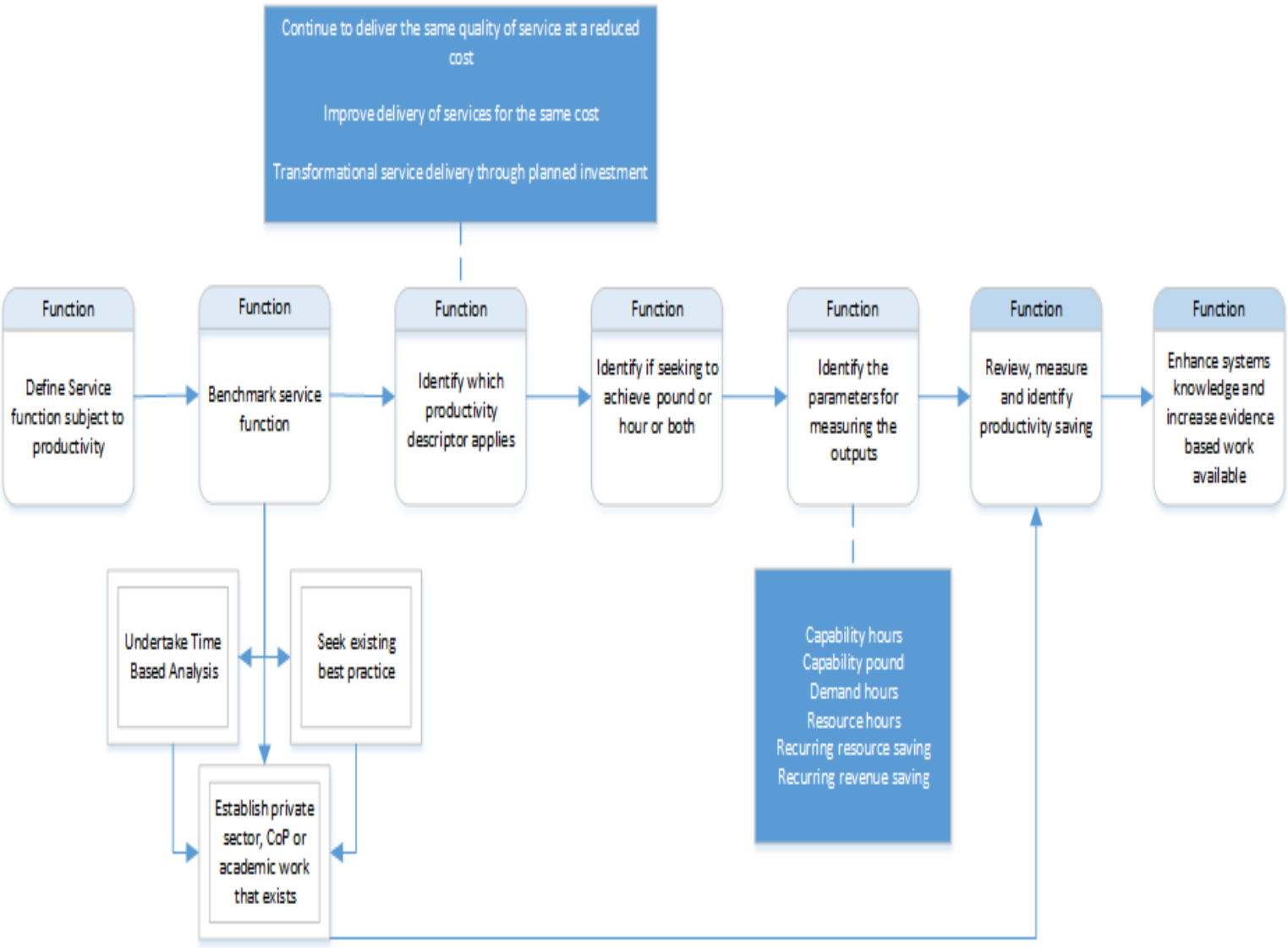
- **Identify the right people to undertake and deliver the review**

Determine if this is a local management/team review, part of an inspection or audit or a corporate change process

- **Ensure that the results are used to inform service knowledge**

Collate and feedback all the information into a single point of contact to enhance the organisational knowledge base and ensure ethical application across the whole organisation as part of continuous improvement.

This is illustrated in the process map overleaf:




## 4. What does the productivity model look like?

Policing whilst simple in concept, as described by the Peel principles, is complex in delivery. The core role of policing has evolved over time to support societal change, austerity in public service and also greater accountability about how the community wishes to access support from public services at times of crisis.

Therefore, when designing the model it is important to ensure that it adopts a whole system approach, is simple and is translatable across multiple parts of the organisation. For this reason the productivity model is presented as a wheel, in that it would be cyclically applied, where each sector of the wheel is interdependent with the others. The aim behind the wheel is to consider **eight key areas** that collectively underpin how, when and to whom we deliver service (see productivity wheel on the next page)


| Sector | Key areas | Productivity measure | Key activities | Component outputs |
|---|---|---|---|---|
| People | Culture and welfare | Hours | Improve discretionary effort – increased capacity hours | Staff more culturally engaged - shared purpose<br><br>Active work time increased<br><br>Right staff employed to undertake the work |
| | | Hours | Reduce non activity work time – increased capability hours | |
| | | Hours | Recruitment ethos – values and behaviours – increased capability hours | |
| | | Hours | Reduce Sickness – increased capacity hours | |
| Technology | Mobile technology | Hours | Increased operational activity in the community – increased capability hours | Increased outputs on the activity the organisation needs delivering<br><br>Fewer but more focussed and useable assets |
| | Force infrastructure | Pounds | Reduced asset costs and capital replacement costs | |
| Logistics | Resource management | Hours | Reduction in lost capacity hours | Fewer hours lost through ineffective tasking<br>Increased output to resource volume |
| | | Hours | Increase in capability hours | |
| Waste | Internal demand | Pounds | Asset utilisation – increased recurring revenue saving | Fewer hours spent on internally generated demand<br>Less demand activity shifting between service functions<br>Fewer but more focussed and useable assets |
| | | hours | Internally generated activity (email, meetings, bureaucracy) – increased capacity hours | |
| Delivery | Service reduction/focus | Hours/ Pounds | Demand management by stopping activities – increased capacity hours | Increased output upon what needs to be delivered<br>Fewer hours spent upon 'non-contributing' tasks |

| | | | | |
|---|---|---|---|---|
| Environment | Estate | Pounds | Efficient and effective estate - increased recurring revenue saving. | Fewer hours lost through inefficiency as estate designed to optimise activity contextual to functions being undertaken<br>Increased timely output through flexible service delivery |
| | Agile working | Hours | Effective resource utilisation - Increased capability hours | |
| Partnerships | Prevention | Pounds | Long term change to behaviours that reduce calls for service across whole public sector – Increased capacity hours | Equitable share of demand aligned across services.<br>Fewer hours lost through reduction in duplication of activity undertaken<br>Increased cost saving through sharing of assets<br>Increased output activities through use of citizens |
| | Early intervention | Hours | Effective methods of preventing/ minimising police activity related to know issues – Increased capacity hours | |
| Skills/Training | Multifunctional activity | Hours | Streamlining training, abstractions – Increased capacity hours | Increase output as skill set reflects service function need<br>Additional staff talents identified and utilised to improve quality of service provided<br>Training delivered within minimal impact upon service delivery |
| | Delivery of training | Pounds | Training solutions – recurring revenue savings | |

The outputs in relation to improved productivity would therefore combine factors like improved effort, reduced waste, defined skill base, technology and environmental suitability, along with logistical delivery, what is delivered and equitable share or workload to provide a whole system realistic and evidence based improvement in terms of increased productivity hours or productivity pounds saved.

## 5. How do you apply the model?

The productivity wheel can be applied in two ways:

***Marginal gain improvements***: These are when you tweak and make small changes as continuous improvement across the component parts of the process under review to either:

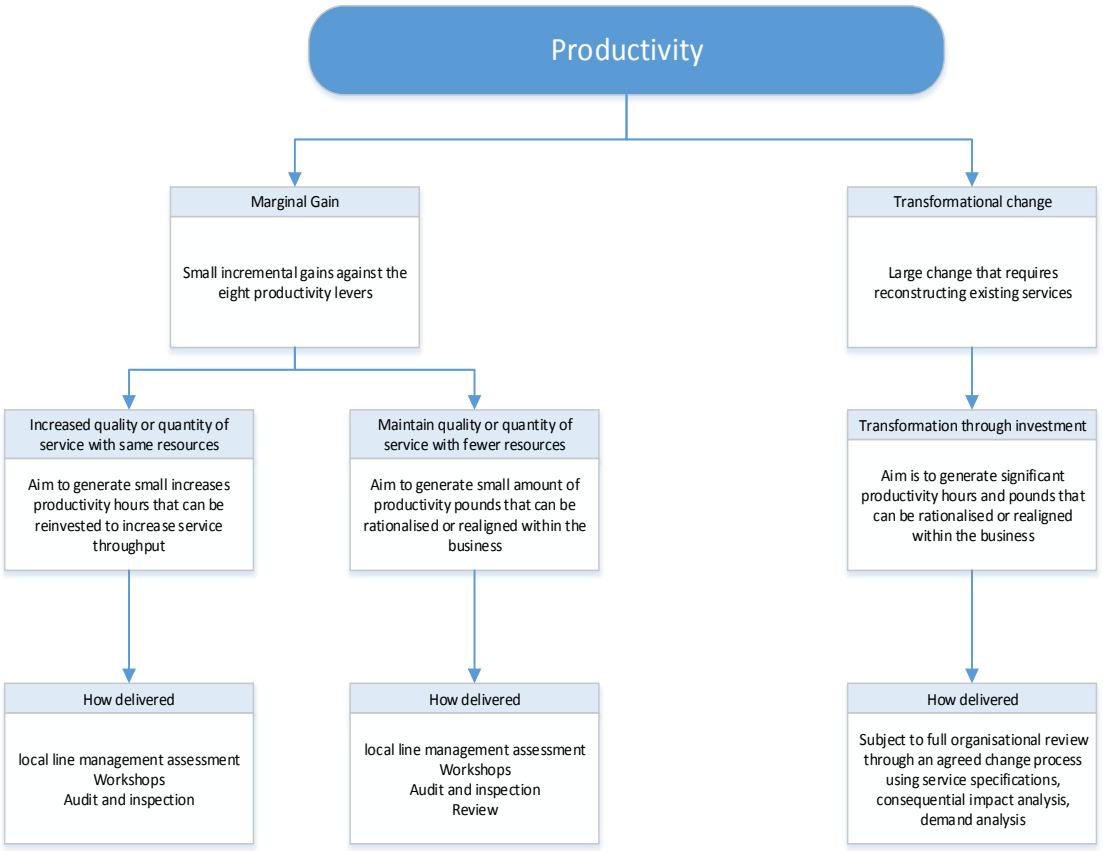
- Continue to deliver the same quantity or quality of service at a reduced cost
- Improve delivery of services (quality or quantity) for the same cost

These can be adopted and delivered at a team, function or service level through first line management or change leads as appropriate. It is important to note that the consequential impact of any tweak to service needs to be considered because if the efficiency/improvement gained through productivity includes transfer of work/activity to another function then that function also needs to be included within the productivity assessment. This would then be collated at a force level to ensure ethical application and identification of good practice within the wider organisational environment

***Transformational change***: This is when the requirement is too big, too complex or too sensitive to be delivered through marginal gain/continuous improvement.

## 6. Transformational service delivery through planned investment

Transformational change is likely to link to risk based decisions around PESTELO2. As such it requires detailed evidence based analysis and financial investment to facilitate the change. Under these circumstances this would form part of a corporate change management process and the productivity wheel should be included in the evidence based decision making that shapes the service delivery model. This is important in order to make the initial transformation as efficient as possible and then being able to apply the model post implementation as part of continuous improvement. The areas considered are Political, economic, social, technological, environmental, legislative and organisational.




## 7. The practical approach to productivity

Once you have determined the definition of productivity you wish to adopt the wheel can be applied in a number of ways. For marginal gain activity it can be delivered through:

***Workshops/team meetings***

By empowering staff to make mature decisions around redesigning their service function it will enable first line users to develop improvements in efficiency through productivity from which they (and the organisation) will directly benefit. This would be delivered through existing governance structures. Below is a simple template that has been designed to facilitate corralling the practitioner thinking into the process of productivity. Within the electronic version are notes to facilitate/support completion.

***Inspections***

By utilising existing inspection frameworks and adopting the model as part of the inspection will facilitate an 'external' perspective to be obtained which can be used to determine where potential efficiency activity can be targeted both at an operational and organisational level.

A simple example of an audit report is attached at **Appendix 2** to aid individual forces decision making.

For ***Transformational Change*** the productivity model should be built around existing change management structures, governance arrangements, and decision making processes. This will involve the existing approaches that forces have in place or consideration/ adoption of a different model where the productivity will be expressed within the business benefits section of any resulting business case.

There are many methodologies for delivering transformational change and any model adopted for a particular force or service needs to align to the cultural and structural needs of that organisation. This chapter does not set out to compare or contrast such methodologies or recommend any particular model that is currently embedded within forces or collaborations.

However for those seeking to explore an alternative model an example of a transformation change process/model is shown below.

This model is predicated upon designing a service specification which is essentially a functional redesign of the service requirement (force, collaboration, regional ) that needs to be delivered and then benchmarking that service requirement against existing service provision as a method of understanding any consequential or residual impact. An example of a service specification for integrated Major Crime is attached illustrated overleaf.

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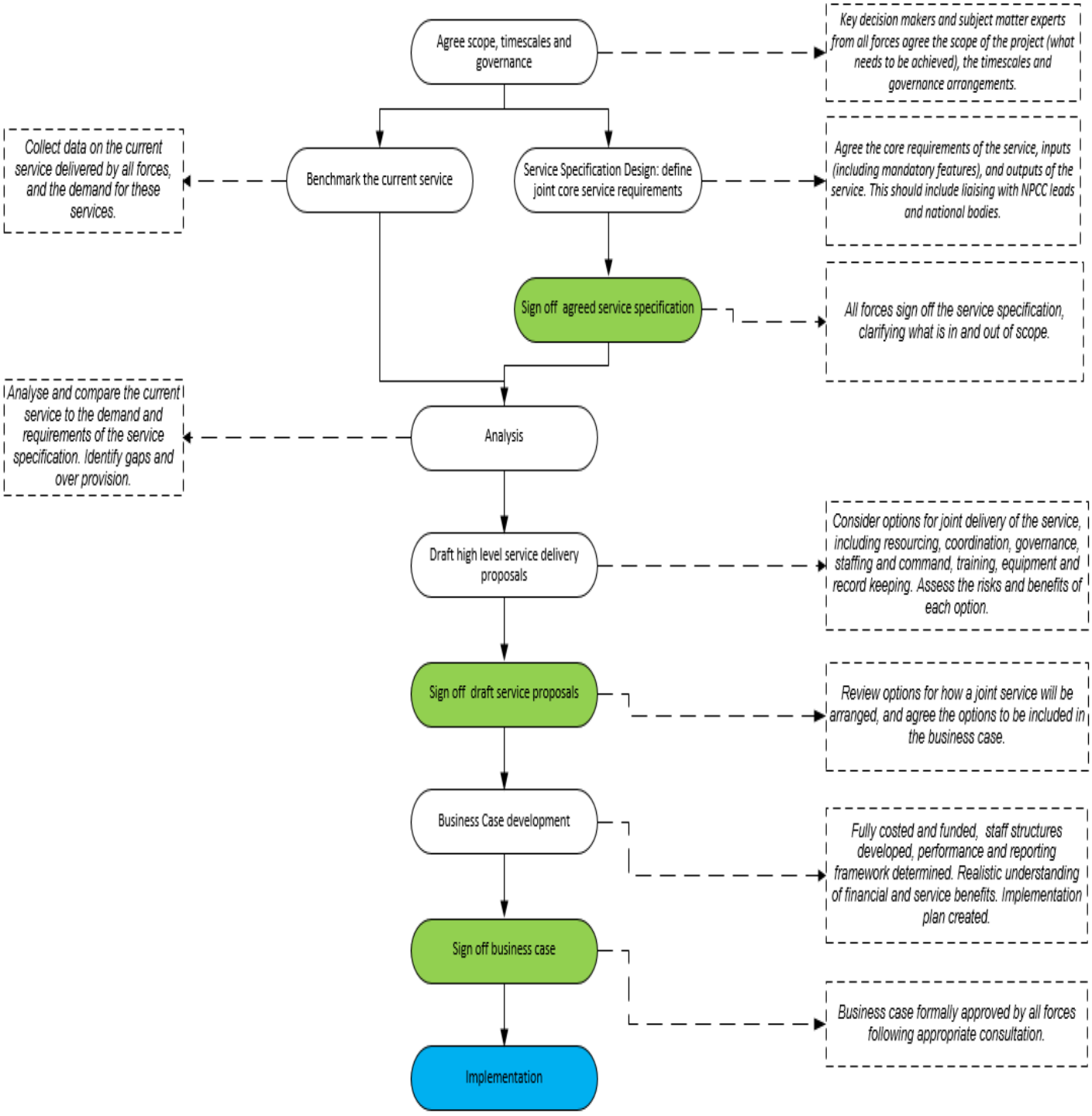
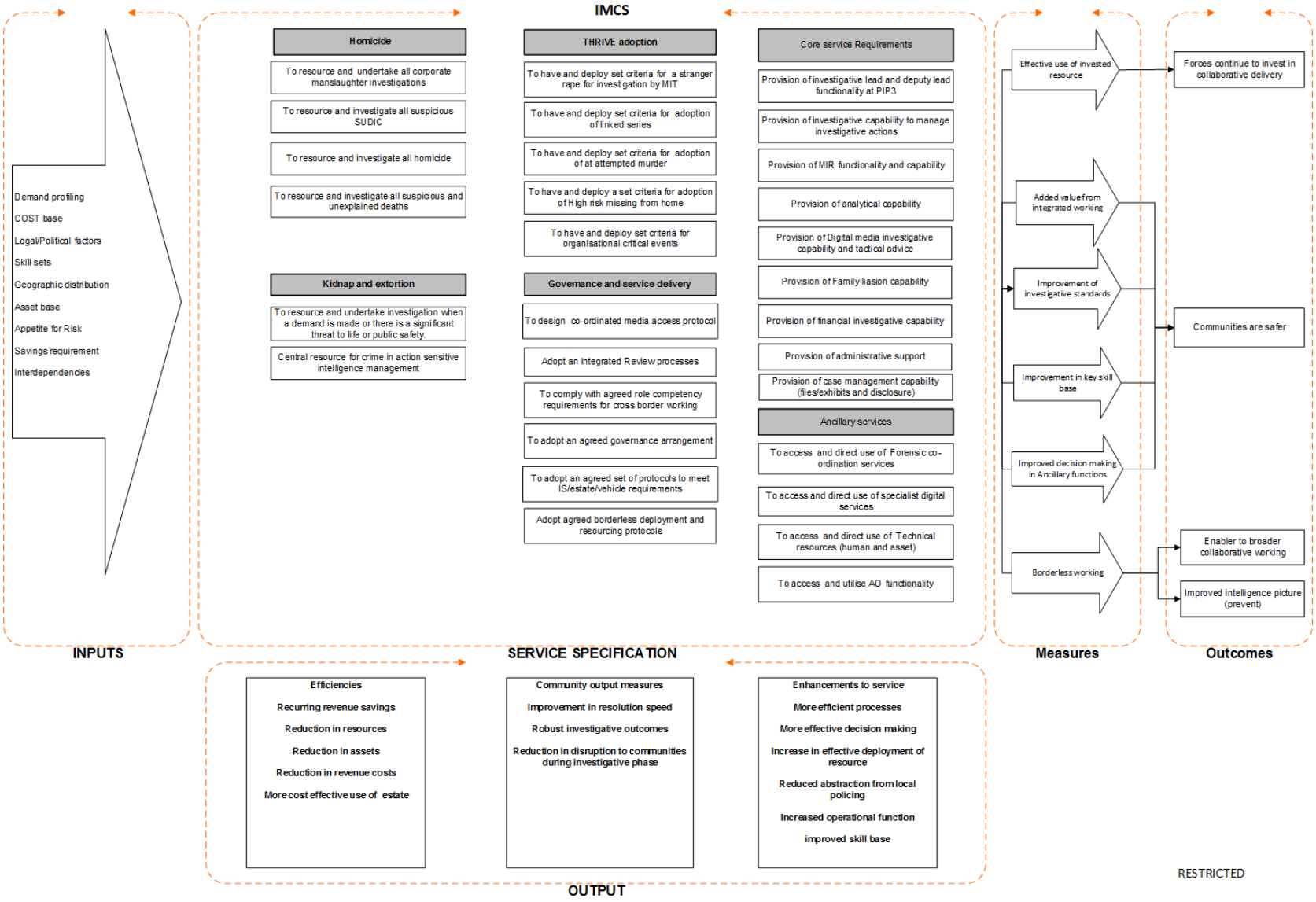
**North Yorkshire Police**






RESTRICTED

# Chapter 14: Resourcing

Resourcing in its simplest terms relates to the available capacity and capability to service demand. However, as policing is a collective service provided to all and recognising that individuals, households and communities cannot be excluded from the benefits of those services, means that demand cannot be simply measured by time taken to complete requests for service. It is more complex and needs to account for the fact that:

1. Each police force has national, regional and legislative requirements to support
2. Each police force is subject to the service needs of its communities (normally delivered through the Police and Crime plan) which may include services which go beyond what would be described as core policing
3. Each police force is required not only to keep communities safe but also enhance and support their feeling of safety
4. Each police force needs to work with other public/private and third sector agencies to help address vulnerability, threat and harm to those most at risk

Therefore, it is important that each force understands demand, capacity and capability against the backdrop of the services it needs to provide. Underpinning this is a consistent clear strategic direction set by the Chief Constable who provides the leadership that enables the organisation to understand:

- the parameters and approach(es) that the force adopts in order balance demand and resources against the competing priorities at local, regional and national level
- the level and appetite for risk and the degree of risk that can be tolerated within the organisation
- how individuals within the organisation are empowered to drive improvement, productivity, innovation and change
- the cultural identity of the organisation

This chapter sets out to provide some simple definitions of demand and also how different approaches and models might support or inform an organisation's decision making by discussing:

- What is demand?
- What types of demand are there?
- How can demand be measured?
- What is Resourcing?
- What is a Resourcing model?
- The role of MoRiLE in resource modelling.
- What does that mean for my force?

## 1. What is Demand?

Understanding demand is predicated upon defining what demand is and how it is measured. Whilst it is accepted that demand is linked to volume it is more than just numbers and needs to be uncoupled from an assessment of calls for service, cases types , missing persons and detainees etc.

For this piece of work and chapter, demand is defined as a time based measure which relates to the whole resource time cost that an activity takes to complete.

In understanding demand there are a number of factors that need to be considered:

- Not all demand occurs from a call for service. Technology plays an important part in policing and technologies such as ANPR or models of predictive policing can lead to the police generating activity and then demand (effectively self-generating calls for service)

- Proactive policing that sets out to prevent or deter criminality (thus reducing demands elsewhere within the organisation's work stream) will generate demand, for example through our Public Protection Units

- There is complexity within demand that is intrinsically linked to R/T/H/V which needs to be uncoupled and understood. Each of these will have a significant but different impact upon the resources required to deliver service

- Some demand cannot be easily measured as it is a societal requirement associated with a community's feeling of safety and linked to medium or to long term prevention and intervention activities

- Some demand cannot be addressed by the police in isolation and requires integration with other sector organisations.

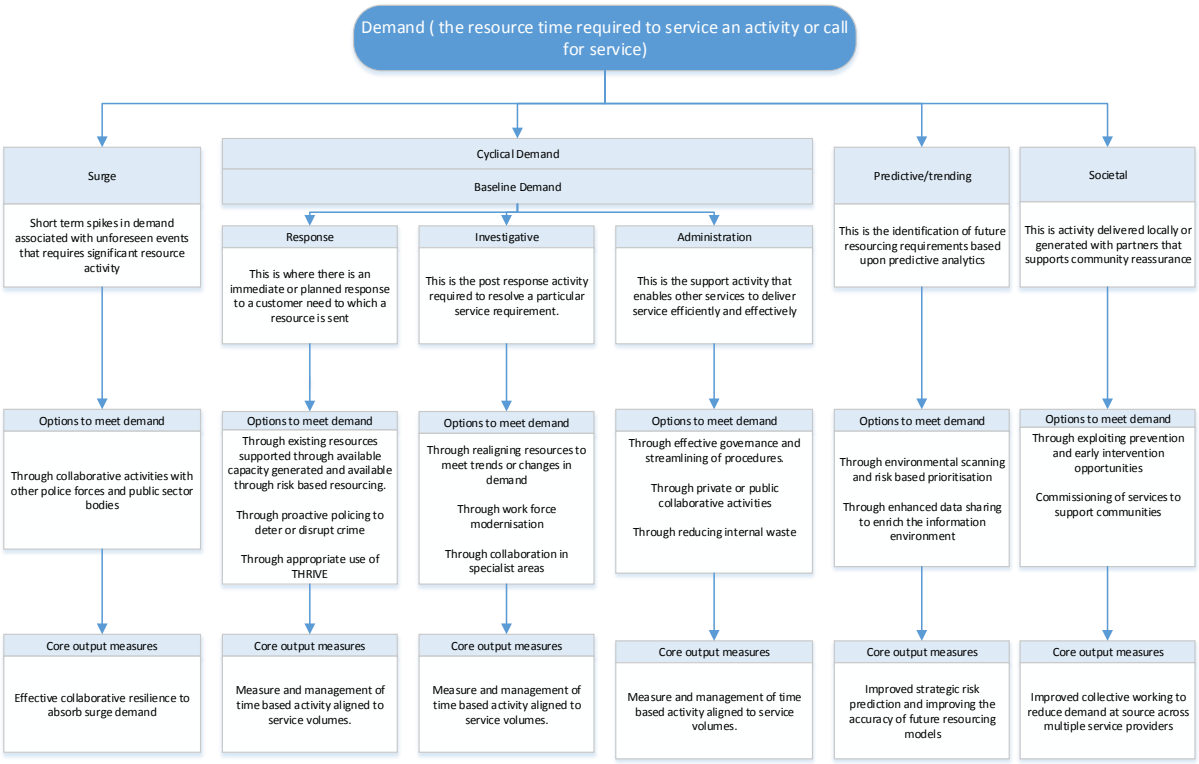
- Predicting future demand and the need to align to your organisation's tolerance for risk

## 2. How does demand vary over time?

Demand is dynamic. It is not a constant and varies over time. When considering how demand varies it is possible to describe the variation in multiple ways – so, for simplicity it is proposed to discuss the different types of demand described in previous chapters that are encountered by the policing service and predominantly linked to keeping communities safe with the addition of Societal demand which links more to the communities feeling of safety. So, to recap, demand derives from external and internal sources:

1. Surge
2. Cyclical
3. Baseline
4. Trending
5. Societal

These five types of demand variation have been illustrated below, along with suggestions on methods or approaches a force could consider in order to meet the change and the type of outputs they might want to consider when seeking to determine resourcing capacity.




## 3. How can demand be measured?

If you accept that demand is a time based measure then the key to measuring demand has to be linked to time. To effectively apportion time to function it is necessary to understand your processes, how they are influenced by complexity, who can deliver each step of the process (skills) and what the impact of technology, environment and culture is upon that time based activity. Each force will approach this in a slightly different way so set out below are some pointers to facilitate and support decision making:

- Map and describe your processes by function and ensure that they remain live and pertinent over time.
- Benchmark and test your thinking against what other forces are doing
- Ensure that, for each type of demand that is considered, that it is analysed and measured in a consistent manner that reflects that demand type
- Underpin demand and resource modelling with the cultural development of the organisation
- Use productivity/continuous improvement as a method by which demand time based measures are refined in order to increase the accuracy of the information thus enabling a more focussed and streamlined resourcing model
- Align demand management/resourcing with strategic organisational risk
- Identify a single point of contact within your organisation to own this area of business (both in terms of resource and technology) in order to manage demand proactively and seek to improve future planning around predicting and managing future demand and the resources required to furnish that demand

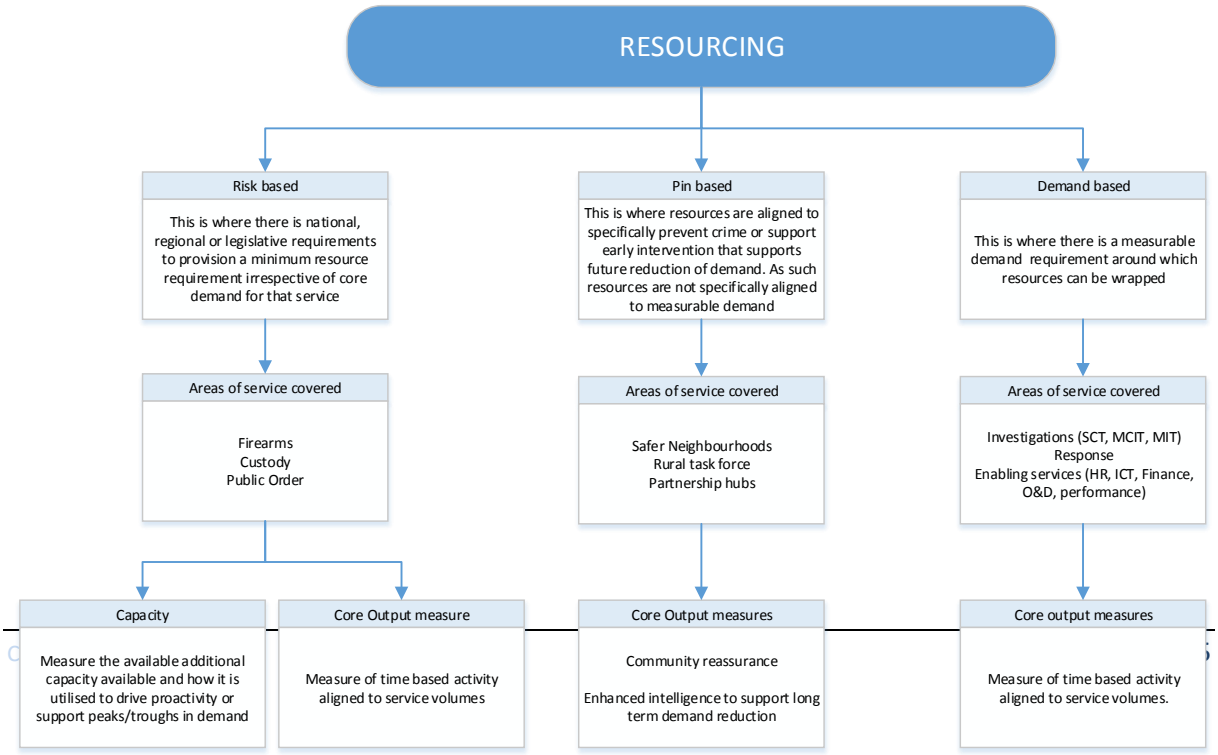
## 4. What is Resourcing?

Resourcing in its simplest terms relates to the available capacity to service demand, but it is more complex and needs to account for the fact that within policing there are layers of services that need to be delivered. The approach adopted looks to structure resource modelling into three discrete areas:

***Risk Based resourcing*** identifies areas of business where resource numbers are set through prior agreement (National, Regional, Local) irrespective of core demand. Resource modelling would then seek to define and calculate time based activity linked to both core (what they are designed to deliver) and secondary (what additionality the organisation requires them to deliver) service functions. This amount of demand can then be subtracted from resource hours to identify either available capacity and capability or a resourcing shortfall. The organisation can then determine how that shortfall can be risk managed or how the capacity could be most effectively utilised on behalf of the community, for example, by providing additional capacity to cope with surge demand, or deliver proactive policing activity.

***PIn (Prevention/Intervention) based resourcing*** identifies service requirements to prevent future demand or support communities feelings of safety through visibility and engagement which might not be related to a call for service and therefore not be demand led due to the fact that the demand may be unknown or unquantifiable/measurable at a particular point in time. This type of resourcing therefore needs to be delivered in a different way. Allocating resource for these areas of business is often down to professional judgement, in combination with available capacity. Whilst the numbers in totality may be an estimation, what is important is that those resources are apportioned equally and fairly across the community in a transparent manner that can service prioritised community need (R/H/T/V.) Such resourcing seeks to adopt an integrated long term approach to demand reduction by addressing causation.

***Demand based resourcing*** is the simplest model and relates to the majority of services delivered by policing. It seeks to package resources around predetermined levels of predicted demand activity where the function that delivers the service has some control around when, where and how the service is delivered. Resourcing models would be built to account for cyclical, baseline and predictive demand but not surge demand.



## 5. What is a Resourcing model?

A resourcing model is a method of determining the resource required to service an area of activity.

Whilst collectively policing is the same, each force will have its unique issues which will result in different pressures and complexities around service delivery.

There are numerous different ways to construct a resourcing model and there are companies /software suppliers that will support organisations in undertaking resource modelling. This section sets out to describe some of the ideas that could be adopted or adapted by forces when considering resourcing with appended examples of how it might be used.

The simplest models are measurable resourcing models, either designed to identify capacity or the resourcing requirement to meet demand. Within these there are complexities around capability, infrastructure, logistics, technology which will influence the model and how it is adapted to suit the geography, population density, depravation and risk tolerance of the organisation. This links back to the approach for improvement as set out within the chapter on productivity.

Translating the models into a resource calculator that will calculate both the resource requirement (demand based model), or the capacity available (Risk based model) is relatively straightforward. The complexity relates to how forces collate and extract data from force systems, undertake predictive future demand assessment and align time based activity into the model. As there is no agreed standardised set of force systems, no standardised approach to data acquisition and no standardised delivery model across forces, there will always be variation between forces. Minimising this variation would facilitate closer working and sharing of data sets that could be utilised with confidence for multiple forces.

PIn based resourcing, however, is different and should be considered on a case by case basis. Whilst it is accepted that the activities undertaken by this type of resource model will never fully equate to a known demand there is still an expectation to measure the positive outputs of the activities undertaken including qualitative feedback. The **Vulnerable Localities Index** created by the Jill Dando institute which looks at six factors (Burglary dwelling, criminal damage, income deprivation, employment deprivation, count 15-24 year olds, educational attainment) is a good starting point to apportion resources based on a relative scoring mechanism. Forces should then seek to develop this approach using factors appropriate to the force area (such as rural isolation, transition population, ageing population demographic etc).

## 6. The role of MoRiLE in resource modelling

MoRiLE is a relatively simple tool to develop a range of methods that assist decision makers in identifying and prioritising Threat, Risk and Harm. It sets out to create a structured methodology and language through a suite of complementary risk prioritisation tools to help assess organisational Capacity and Capability to respond. In doing so it will inform and support how force resources are aligned to current and future need. As a risk prioritisation model it will also sit comfortably alongside a multiple resource model approach in that the force will be able to prioritise both within and across each model. In this it will enable risk based prioritisation at a force level or at a resource model level. This would be advantageous in that it will rank risk by resource model enabling a broader and more effective service delivery strategy for different parts of the force.

## 7. What does that mean for my force?

Each force will have their own internal structures, their own vision underpinned by embedded strategies and approaches. This chapter on resources is not designed to direct forces but aims to help inform how forces may wish to consider resourcing, how they might wish to describe it both internally and externally and options to consider.

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# Chapter 15: Process Mapping and Value Streams

One of the starting points for understanding demand is to understand the process through which any service provision passes. Any service or transaction can be broken down into a set of steps and mapped out using one of a number of different approaches. One approach which helps to identify and categorise each step into either a value adding activity or a wasteful activity is known as Value Stream Mapping (VSM).

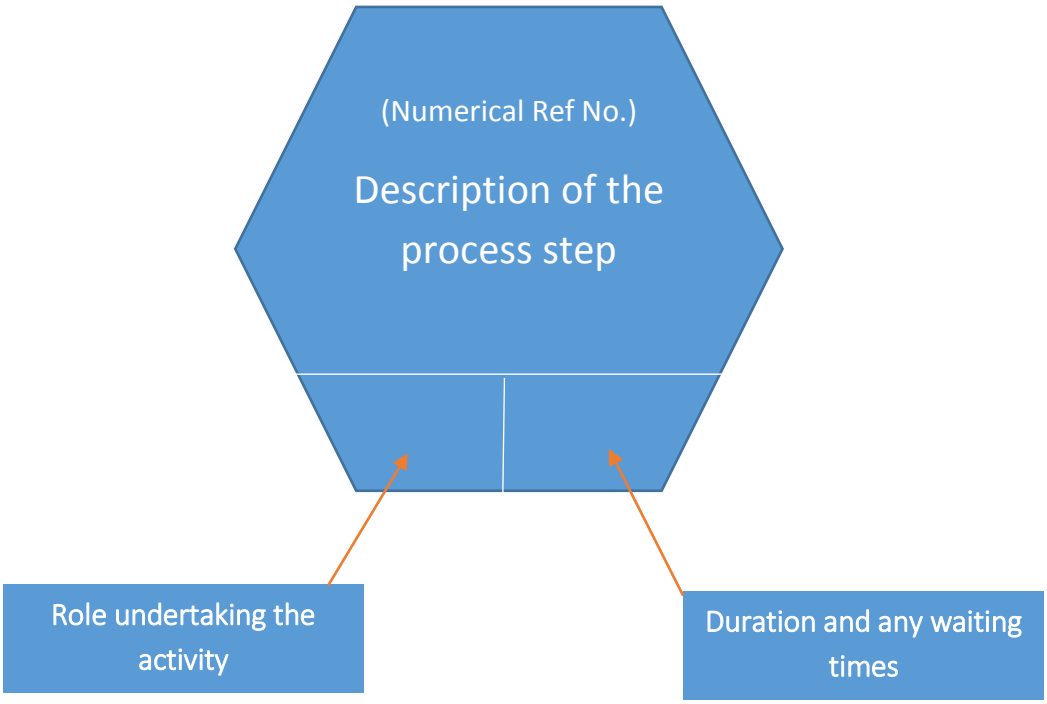
This approach also identifies a third category, 'necessary but not value adding' activities which cover process steps that add no direct value from a service user perspective but the steps are still necessary to fulfil another stakeholder requirement. Examples include completing performance monitoring data for a central team or performing an audit check. The following paragraphs describe a variant of VSM developed and used by West Yorkshire Police (WYP).

VSM is commonly used as part of the continuous improvement initiative and is closely linked with the application of 'Lean' within an organisation. Like all Forces, WYP has a public duty to deliver an efficient policing service and an important tool in helping it face that challenge is the identification of waste and inefficiency in our processes, redesigning them so that they are lean and efficient and in turn making the Force capable of dealing with its demand more effectively.

**1. Capturing the 'As Is' Value Stream Map**

The starting point for WYP is an examination of the current 'As Is' process for any given area of the organisation, both operational and support. For example, these might range from prevent, response and investigative processes through to officer recruitment or the payment of invoices. The 'As Is' once completed will give the review team a baseline which it can use to compare the current process in terms of cost, resources, timescales, throughput times etc. against any new process design. WYP identifies the 'As Is' map by holding workshops with key subject experts and uses the locally developed variant of VSM to capture the various steps of the current process. During the workshop each process step is considered by the group and is allocated a category based on the three referred to earlier i.e. Value adding, waste (Non-value adding activity), and necessary non-value adding. These are represented on the maps using either a blue hexagon, an orange hexagon or a yellow hexagon respectively. Hexagons were used because they are an easily sourced 'post-it' note and make the identification of the various categories much easier on a complex map.

Each step is described in the main body of the hexagon and placed on to a large piece of paper often attached to the wall. Each step in the process (captured on the colour coded hexagon) is joined to the next in the process with an arrow. In addition to describing the various process steps, the hexagons also capture who is undertaking the activity, the estimated duration of each activity and any waiting times between each activity (queues, bottlenecks etc.). A sample 'post-it' note hexagon and what to capture on it is shown below:




Deciding which category each step falls into often involves discussion within the group. The blue value adding activities are usually those which are necessary and add value to the final product from a service user's perspective.

To help identify those which are wasteful, we consider the 8 wastes. These are:

- **Excessive transportation** – of paper work, samples, prisoners etc.
- **Unnecessary inventory** – holding a stock of material which is unnecessary or too large
- **Excessive motion** within the working environment – caused by badly designed offices, insufficient equipment e.g. one photocopier located away from where most of its use is generated
- **Waiting** e.g. in a queue or papers sitting in an in or out tray for several days
- **Over production** e.g. making too many copies of a document, sending out lengthy performance data that no one reads etc.
- **Over processing** - over engineering within a process, belt and braces, etc.
- **Work defects** - waste demand and re-work caused by faults created at a previous step within the process e.g. wrong details on paper work which are then passed on to another department etc.
- **Inadequate skills** - people not having the appropriate skill to undertake the activity effectively.

The third category, necessary non-value adding activities, are any activities we must do but that add no direct value to the final product from a service user's perspective.

## 2. Developing the 'To Be' Process Map

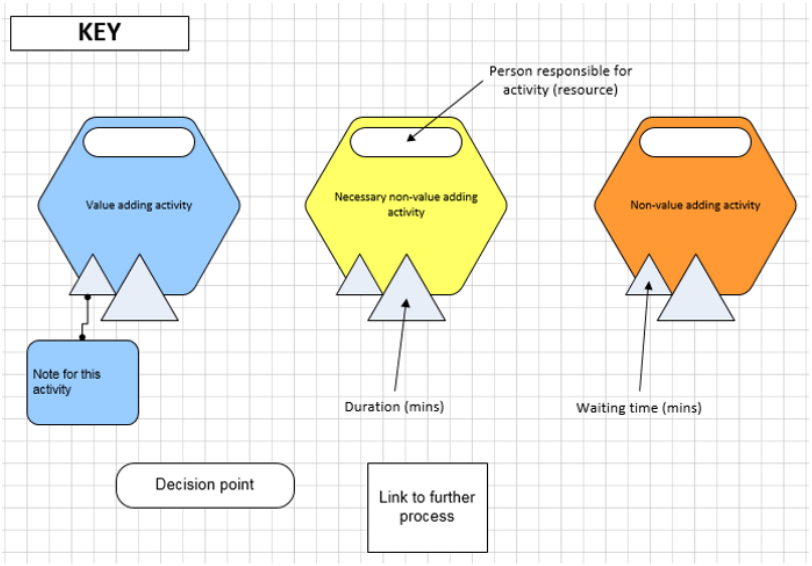
On completion of the baseline analysis and any other appropriate research including benchmarking, data triangulation, in depth examination of the various activities etc. the focus of the work will move on to the new more efficient design for the process under consideration. This will begin by considering the waste steps and necessary non value adding steps and consideration is given as to how these can be designed out or minimised within the new process.

The value adding activities cannot be ignored as there may be more efficient and effective ways of undertaking these e.g. reporting crimes on-line rather than by making a telephone call. On occasions, a number of steps can be removed altogether and replaced with new ones based on the review team's wider research and the willingness to adopt transformational change by those who own the process.

Based on this analysis, the new design can be developed using the same VSM approach described above i.e. workshops with subject experts, capturing each step on the appropriate hexagon etc. On completion, and providing there is adequate data, a comparison can be made between the new 'To be' design and the original 'As is' design to assess the resulting efficiencies in terms of savings, shorter processing times, increased capacity, etc. These changes can then be considered against the original or new demand profile to ensure the process capability is sufficient.

WYP has automated the VSM approach described above. The maps are produced using MS Visio utilising pre-defined icons which capture all the underlying data including duration, waiting times, resources etc. On completion of the map, the data can be exported automatically to MS Excel for analysis using pre-defined spread sheets. The Excel spread sheets have also been designed specifically with the local managers in mind. They allow these managers to undertake what-if scenario tests using just the Excel element and the impact of their changes can be seen immediately. This can assist managers in considering and testing alternatives to optimise and to take greater ownership of the final design.

A summary of the symbols used as well some additional notation is shown overleaf:




On-going monitoring of the new process designs can be undertaken using the Statistical Process Control (SPC) method as well as Process Capability calculations. WYP has developed local variants of these tools which are offered to service managers to help them identify whether their new process designs are working and whether further refinement is required.

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**West Yorkshire Police**

# Chapter 16: Demand and the funding formula

This piece of work is cognisant of the national debate around the future of the funding formula and recognises that other forums are currently established to progress this key area for the service. To assist these discussions CC Finnigan requested that a Task and Finish group complete a piece of work around the below key questions:

***How should what we have learnt so far about 'demand', or 'the need for policing' feed into the Police Allocation Formula (PAF)***

This group was led by **Alexis Poole (Performance lead, Devon and Cornwall Police)** and the below details the process and findings.

## The Task

National Police Chiefs' Council (NPCC) Performance Management Co-ordination Committee (PMCC) commissioned a Task and Finish Group to feed the learning from the work on understanding Police demand into the next allocation formula review. This group was asked to deliver an early view, ahead of the wider pieces of work, as at the time there was a possibility the next review was imminent. Whilst the work was underway the Policing Minister announced there would be no further progress on the next version of the formula until the NPCC capabilities review is complete. As a result the NPCC Finance and Resources Co-ordination Committee did not initiate the planned working group which this work was meant to link to. (Of note, following the completion of this task the Policing Minister resurrected the work which is still on-going.)

The task and finish group explored the previous 2015 PAF process, and the lessons learnt from both approaches. It also sought insights from NPCC Leads, the other understanding demand work stream leads, and the views of delegates at the recent understanding demand conferences.

## Key Findings

This paper **does not detail all of the considerations and deliberations of the work**, but aims to outline the key findings to date and suggested next steps. Determining how the resources to deliver policing could follow the need, requires clarity as to the future **mission and purpose of policing**. This remains elusive and needs agreement across the service and between the service and the Home Office in order to drive the allocation of police resources. The relationship to the wider findings of the **NPCC Demand Work** and **NPCC Specialist Capability Review** cannot be overstated as the funding of the service in the round must be considered.

The group agreed that there were **two principle drivers** for the amount of police resources needed in an area. These were:

- The demand / context / need for policing services.
- Any physical factors about that area that makes policing it complex, which would not be reflected in the demand (for example sparsity)

Additionally, there are also **economic factors** which affect the cost of delivering policing services, which were accounted for previously through the area cost adjustment.

This work only considered the demand / context / need for policing services. A series of questions were established to determine which demands might be most appropriate to be considered within a future formula;

1. Is it a significant demand?
2. Is it variable by force?
3. Is it legitimate police business?
4. FINALLY if a demand remains in consideration – Is it measurable?

Asking these questions about the many types of demand which arise in policing resulted in wide variations in views about what was a 'significant demand'. Many things were suggested to be significant, despite being relatively modest commitments in the scale of total police budgets. It was also the case that smaller forces considered some matters significant, which were not raised by larger forces, for example policing football. Similarly the extent to which demand varied between forces was not well understood. A PAF should not be concerned by demands which fall across all forces equally. There was an over estimation of variation amongst those who provided a view. The question of whether the demand under consideration was legitimate police business identified some opportunities for potential transformation and reopened the debate about the mission and purpose of policing.

The most significant sources of demand put forward were: **resident population; transient population; crime; vulnerability and alcohol**. Measures are identified or identifiable (although there may be contention about them) for all of these except vulnerability. It is suggested that **next steps** are to seek confirmation on the focus of the police service on protecting the most vulnerable and commission the research to **seek a robust indicator of vulnerability in communities**.

Previous learning shows that most models allocate around **75-80%** of funding in the same way, this being largely driven by resident population levels as this is the strongest predictor of demand. Debate could focus on how to allocate the remaining **20-25%** of funding.

The principles set in the 2015 PAF process whilst widely supported, create tensions. A 'clear and easy to understand' model, using 'robust' independent metrics will struggle to reflect the complexities of police demand. A model which is 'stable' is unlikely to adapt to 'future demand'. Most future demand is not well enough understood to be able to be reflected in measures which meet the standard for 'robust'.

Learning from the existing PAF is that the more the formula seeks to reflect demand, the more complex and opaque it can become. However the previous PAF has never been fully implemented, with floors and ceilings used to reduce the excesses of its consequences. The service is not able to manage big swings of funding, with big winners and losers. This is in part because of the large proportion of police spending on officer's salaries, with the associated lead time to recruit and train. This reminds us that a fully demand led formula can produce results which are **unpalatably far from the status quo** and which are not workable in practice.

The 2015 PAF process **did not consider factors** which increased the complexity or cost of delivering policing in different force areas. Current work has focused on demand but consideration needs to be given to factors which are suggested to increase cost such as **sparsity** and to the potential for an **area cost adjustment**.

An objective measure of the need for policing or police demand remains elusive and any robust answer is likely to fall short of the aspiration to be 'clear and easy to understand'. It is likely a model based on best estimates of demand will create 'winners and losers' and transition will be complex. Conversations during this task have led to a series of questions which are beyond our scope to answer now. These do however suggest consideration should be given to a **completely alternative approach.**

- Exclusions & Limitations of this work
- This piece of work did not explore the following issues
- Local Council Tax precepting.
- Specialist funding for example for counter terrorism policing.
- Funding delivered through PCCs such as that for victim services.
- How these multiple funding streams combine at the force level to fund the totality of policing services.
- The capital city specifically and the particular need for policing in either the MPS or City of London Police.
- The analytical methods used to develop the relationship between metrics in the formula.
- How the formula could relate to the funding of specialist capabilities in the future as this work is not yet complete.

Throughout the wider work stream there has been a reflection that understanding and managing demand would be greatly improved by revisiting and **affirming the mission and purpose of policing**. This would allow us to be clear what we are being funded to do and ensure resources follow that purpose. The current National Policing Vision for 2020 describes "The mission of policing is to prevent crime and protect the public." The absence of a discussion and a view on the current and future mission reduces the insight that can be offered on how funding should be allocated to deliver policing for the future.

There have also been reflections that there has not been enough debate about **service standards** and how the balance between national **Approved Professional Practice** and **local independence** can be struck, whilst allocating central funds based on the need for policing.

**Acknowledged Learning**

**Home Office staff** have provided insight into the constraints and complexities of the process as well as the learning from it. They have also shown a real willingness to engage in developing a future approach with the police service.

- There is no accepted measure of need for policing and the **use of objective proxies** has generally been supported as preferable to the use of police provided data. The reduction from the significant number of metrics in the PAF to those put forward in 2015 was driven by a need to simplify the approach so it could be well understood by stakeholders. This concept may need consideration **as a simpler formula may not best reflect need**.
- With such a large overall budget £7/8 billion being divided it is inevitable small changes to the formula create impacts of millions of pounds for individual forces. This is very hard to avoid and makes the process **highly controversial**.
- In testing multiple models it becomes apparent that **75-80%** of the total is always **allocated in the same way**. This means the real debate is about how **20-25%** is allocated which **does not follow the resident population levels**

- It is also the case that the large variation in **sizes of forces** means that certain approaches, if they are favourable for the big five forces, have a significant impact on the total budget available for all the remaining forces.
- Most metrics excluded were because;
    1. They were already captured elsewhere, i.e. highly correlated with something already in the formula.
    2. The data quality was not robust enough.
    3. The Principal Component Analysis excluded them because their explanatory power was low.

The **HMIC** has been working with the **LSE** over an extended period to describe the challenge and 'need' for policing based on a **large set of publically available data**. This data has been analysed with multiple years of police incident and crime data from initially three, but a growing number of forces, to build a model to describe policing context across the country. The work is well progressed with significant stakeholder buy in and potential to influence the way funding is allocated between forces. The work broadly identifies the resident population, their socio-economic status and the physical infrastructure as the key factors in determining challenge.

It is suggested this work proves the concept that **a funding model can be developed to ensure resources follow the need for policing**. The work also potentially allows an exploration of what the results of funding formula built in this way could be. Through the Task and Finish Group the lead academic Dr Tom Kirchmaier has met and shared an understanding of the work to date with both the Home Office and the College of Policing. Like much of the work in this area, and many of the discussions, this work focuses on demand which is known and recorded (sometimes referred to as 'front door demand'). It could however be developed further to consider a wider view of demand.

**Factors which met all four criteria**

There was strong support for **resident population** being the single greatest determinant of the need for policing services. This was not felt to have been a large enough factor in the 2015 formula and has the potential to bring a degree of stability alongside more volatile measures.

Many forces supported consideration of **transient population** and a credible measure has been put forward for tourist movement although this does not account for regular commuter movement.
It was strongly felt that **crime** should be considered, and further work is needed to determine the best proxy for the crimes which matter the most.

There was widespread support for consideration of **vulnerability,** although this would require significant consideration of a clear definition and generally acceptable robust measures.

The 2015 formula considered **alcohol** and this was broadly supported although with, at the minimum, a further reformed 'bar density' measure and a desire to see off licence consumption considered as a driver of crime in the home.

**Developing Exemplars & Possible Approaches**

Learning from previous approaches to the task may suggest that the dialogue is richest when informed by exemplars which move beyond the complexity of the abstract formula. The Service could commit the capacity to develop exemplars and work towards a degree of consensus between leaders.

**Recommendations (To be considered immediately in the light of the 14th September 2016 letter from the Minister)**

1. The NPCC consider the following matters

a. The vast majority of issues around funding and demand will not be central to this process. An allocation formula **need only focus on demand which varies by force**. How might the service establish a shared view on this?

b. Are the previous principles fit for purpose, or are some of higher importance than others, such as stability?

c. Does the service have a view on transition arrangements which could be put forward?

d. What is the potential impact of the **specialist capabilities review** on the PAF and how do the current timelines work together?

e. Is there an appetite to consider and progress or discounting, an **alternative approach** to implementing a new PAF?

f. How will consideration be given to factors excluded from this work?

   i. Physical factors about that area that makes policing it complex, such as sparsity

   ii. Economic factors which affect the cost of delivering policing services, which were accounted for previously through the area cost adjustment.

   iii. The relationship with local funding through precepting

   iv. Other funding streams

g. Does the service wish to proceed to **develop potential metrics** and consult across forces on them in advance of the Home Office proposal.

**Further considerations**

2. The service should consider commissioning insight in to what we mean by **vulnerability**, and how we might measure complex and co-existing needs in communities which create a need for policing. This could potentially be achieved by expanding the LSE work with HMIC but would need agreement across many NPCC portfolios due to its cross cutting nature.

3. The NPCC should determine the medium term aspiration to provide **greater insight into police demand** to inform future spending reviews rather than the PAF.

**Alexis Poole**
**Performance lead, Devon and Cornwall Police**

***NB***

***Chapter 4 on Vulnerability and potential measures around vulnerability was completed after the Task and Finish group had published its findings as detailed within this Chapter.***

***Also, the Policing Minister has resurrected work into the Funding Formula which is currently on-going and as such it is recognised that the debate has moved on.***

***However, it was felt relevant that this Chapter be retained in order to evidence the work undertaken to correlate the links to better understanding demand.***

# Appendix 1: Table on Tackling Vulnerability

| Tackling Vulnerability Through a Structured Organisational Policing Response | | | | | |
|---|---|---|---|---|---|
| **Stage** | **Operating Environment** | **Methodology** | **Tactical Solution** | **Policing Priority** | **Potential Resource** |
| 1 | Strategic | Neighbourhood /Vulnerability Needs Indexes<br><br>Or<br><br>LSE Demographics Model | Organisational Level 'Place Based' Resource Structuring | Local Policing | BCU Locations<br><br>Joint Agency Public Service Delivery |
| 2 | Strategic | MoRiLE | Organisational Level Specialist Capabilities Deployment | Serious Crime | Firearms, Roads Policing, Surveillance, Organised Crime Units |
| 3 | Tactical | MoRiLE | Localised Risk Prioritisation | Local Policing and Emergency Response | Neighbourhoods Policing, Frontline Response, CID, PPU |
| 4 | Tactical | Harm Indexes | Local Level Capable Guardianship | Local Policing and Emergency Response | Neighbourhoods Policing, Response, Targeting |
| 5 | Operational | Big Data Vulnerability Identification<br><br>NIM Framework | Early Intervention -Victim And Offender Based Vulnerability Prediction | Local Policing and Emergency Response | CSE, PPU, MARAC, MAPPA, MASH, Early Action, Troubled Families |

# Appendix 2: Sample Internal Audit Form

| INTERNAL AUDIT REPORT | | | | | |
|---|---|---|---|---|---|
| **Audit Reference** | | **DATE OF AUDIT** | | | |
| **Business AREA** | | | | | |
| **Area subject to Audit** | | | | | |
| **Requirement (embed TOR )** | | | HMIC /NYP/ NATIONAL | | |
| **Auditors** | | **Personnel seen** | | | |
| **Legislative drivers (if any)** | | | | | |
| **Procedure/policy reviewed** | | | | | |
| Data sources | | | | | |

| Assessment areas | Reference SOP | Observations/ good practice/ non conformances |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

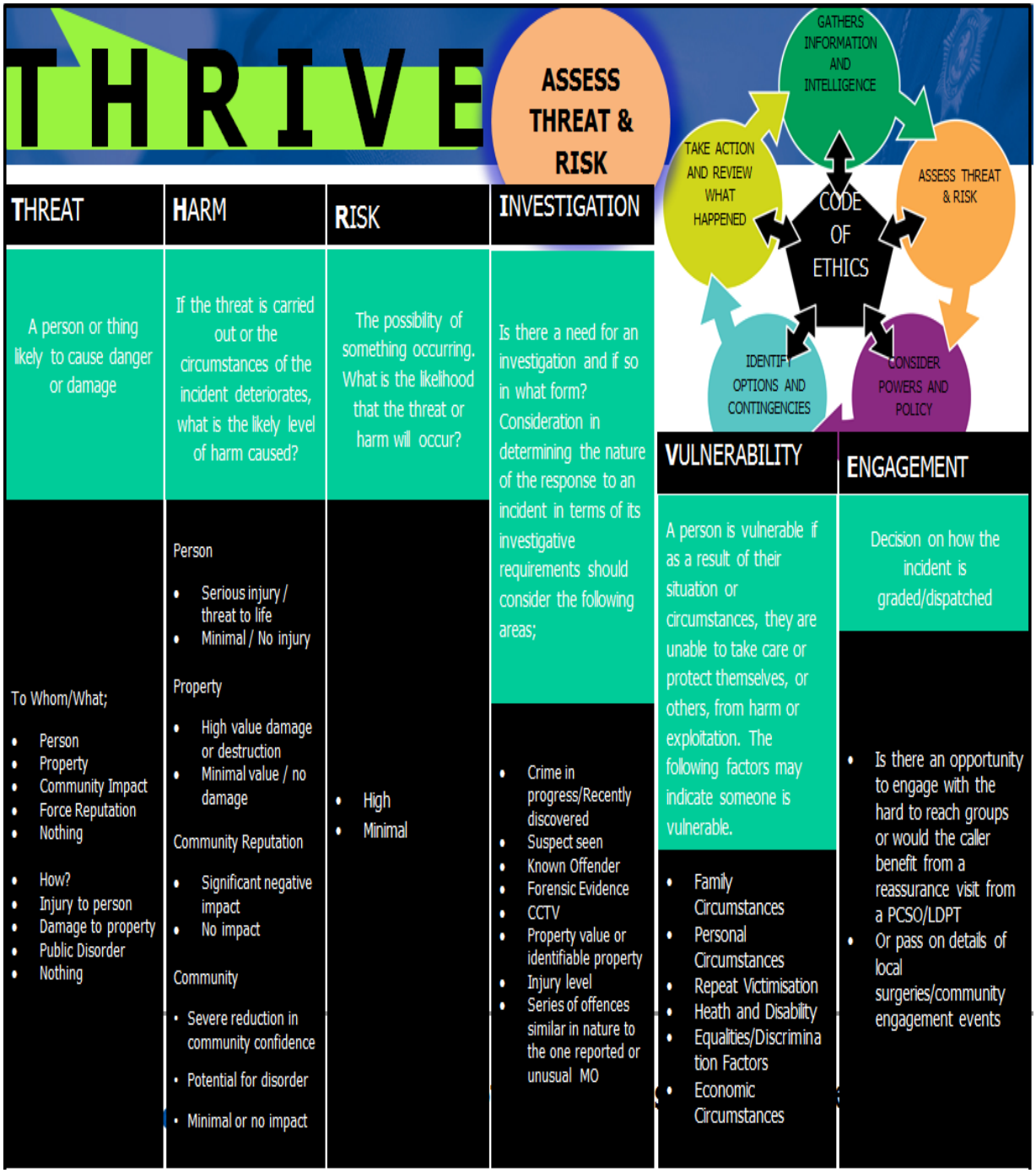
| PRODUCTIVITY assessment | | | |
|---|---|---|---|
| **AREA** | **Question** | **Y/N** | **if No please make observation as to why you have selected no** |
| People | Did the staff appear fully motivated | | |
| | Did the culture of the organisation support the staff to deliver | | |
| Training/skills | Where the right blend of skills and training evident to deliver the work they were expected to do? | | |
| Technology | Did they have the right tools to effectively deliver service? | | |
| Environment | Was the working environment well set up to maximise service delivery | | |
| Logistics | Was the workload aligned to when the staff were available to provide service | | |
| Internal Waste | where all the processes efficient and minimised waste | | |
| Service delivery | was all the work undertaken necessary to meet the organisations need | | |
| Partners (where applicable) | was the work equitably shared with partners | | |

# Appendix 3: Demand Prediction requiring further Research

| Areas of Demand Prediction Requiring Further Research | | |
|---|---|---|
| **Demand Type or Research Field** | **Temporal Dimension** | **Further Research Requirement** |
| **Vulnerability** | N/A | Defining Vulnerability with Policing |
| **Intelligence** | N/A | Study In relation to Reduction in Intelligence Levels and its Causes and Implications |
| **Victim Vulnerability** | Baseline, Cyclical, Surge, Trending | Big Data and Predictive Analytical Approaches to Predicting Risk of Child Sexual Exploitation |
| **Victim Vulnerability** | Baseline, Cyclical, Surge, Trending | Big Data and Predictive Analytical Approaches to Predicting Risk of Domestic Violence |
| **Victim Vulnerability** | Baseline, Cyclical, Surge, Trending | Big Data and Predictive Analytical Approaches to Predicting Risk of Sexual Offences |
| **Victim Vulnerability** | Baseline, Cyclical, Surge, Trending | Big Data and Predictive Analytical Approaches to Predicting Risk of Child Abuse |
| **Victim Vulnerability** | Baseline, Cyclical, Surge, Trending | Big Data and Predictive Analytical Approaches to Predicting Risk of Radicalisation |
| **Location Based** | Baseline, Cyclical, Surge, Trending | Comparison Of Efficiency And Effectiveness Study In Terms Of 'What Works' |
| **Location Based** | Baseline, Cyclical, Surge, Trending | Maximising Crime Diffusion Benefits and Limiting Crime Displacement Impact |
| **Location Based** | Trending | Creation of Methodologies to Predict Trending Location Based Demand |
| **Location Based** | Trending | Advancement of Current Software Based Approaches to Predicting Trending Location Based Demand |
| **Location Based** | Baseline, Cyclical, Surge, Trending | Development of Localised Practical Crime Linkage Applications and Processes |
| **Location Based** | Cyclical | An examination of Geographical Profiling in a Cyclical Context |
| **Location based** | Baseline, Cyclical, Surge, Trending | Development of Localised Practical Geographical Profiling Applications and Processes |
| **Calls for Service** | Cyclical | Identifying Optimal Solutions for Predicting Cyclical Calls for Service |
| **Calls for Service** | Baseline, Cyclical, Surge, | Big data and Predictive Analytics to Identify triggers |

| | | |
|---|---|---|
| | Trending | to Sure and Trending Demand |
| **Location Based** | Baseline, Cyclical, Surge, Trending | Comparison Between PredPol and Predictive Methodologies |
| **Overall Demand** | N/A | Process Evolution and Forecasting to Predict Overall Demand |
| **Overall Demand** | N/A | Process Evolution and Forecasting to Predict Overall Demand for Resource Planning |

# Appendix 4: THRIVE



# Appendix 5: Internal Demand in the MPS

# INTERNAL DEMAND IN THE MET

## What is internal demand?

***The time and resources spent on activities created by and for ourselves within the police service. This includes day-to-day admin, attending meetings (that are not a legal requirement), as well as other processes we follow and pieces of work we generate which have not come as a direct response from public contact.***

## Why tackle internal demand?

**Individually**

Save time | Improve morale | Change behaviour

**Organisationally**

Increase productivity | Increase engagement | Shape culture

## Our approach

1. Team sessions to explore the variety of internal demands and how to group them into themes
2. Workshops with frontline practitioners across a variety of business groups in order to identify high frequency and high impact internal demands, and to explore their causes

**THE WORKSHOPS**

- Primarily focused on internal demands which frustrated and impacted on people negatively
- Seeking to identify where possible the time spent on these demands and how they affected people
- Involving mostly constables, sergeants, inspectors and their police staff equivalents
- Initially consulting with the operational frontline, including Emergency Response, SNTs, Borough CID, MetCC, MetDetention and Roads Policing

## The types of internal demand we identified

| TRANSACTIONAL | PROCEDURAL | CONVENTIONAL | DEVELOPMENTAL | EXPERIMENTAL |
|---|---|---|---|---|
| Activities which are concerned with addressing basic requests, orders, purchases and faults. Typically concerned with the Met's physical assets, finances and suppliers and ICT *(e.g. Calling 63333, booking a meeting room, requesting uniform)* | Activities which are grounded in legal or organizational operating procedures. Often concerned with risk management, information management and compliance *(e.g. FOI requests, crime risk assessments, Merlin/Crimint+/CRIS entry)* | Activities based on or in accordance with what is generally done or believed. Rooted in traditional patterns of behavior and often concern documenting work and communicating within and amongst teams *(e.g. team performance returns, briefing notes for senior officers)* | Activities which are directed at developing and assisting staff in their professional and personal lives. Relate to conduct and performance, health and wellbeing and learning and professional development *(e.g. mentoring, quality assurance, action plans, writing QSRs)* | Activities which are based on untested ideas and techniques, taking place in an attempt to generate innovative and radical new ways of working *(e.g. local initiatives, random control trials)* |

## What people talked to us about

***Focusing on frustrations and perceptions of wasted time within the sessions meant that issues relating to more positive forms of internal demand (developmental and experimental) were less likely to feature.***

1. **Time wasted using unintuitive and poorly designed IT systems**
2. **Time spent trying to resolve issues of ownership and responsibility driven by team or OCU remits coupled with performance considerations**
3. **The impact of an inconsistent and unproductive compliance regime, undermining professional judgment and knowledge**
4. **Excessive layers of supervision and governance creating a complicated and often slow-moving decision-making process**
5. **Time spent on a PDR process which does not contribute meaningfully to personal development**
6. **The cooling effect that the Met's compliance and performance regime has on fostering innovation and scaling up local initiatives**

*Demand Analysis Team* © MOPAC 2016

OMM2020 METROPOLITAN POLICE

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