HMICS

HM INSPECTORATE OF CONSTABULARY IN SCOTLAND

Assurance review of Police Scotland demand analysis and management

June 2021

Improving Policing Across Scotland

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HM Inspectorate of Constabulary in Scotland (HMICS) is established under the Police and Fire Reform (Scotland) Act 2012 and has wide ranging powers to look into the 'state, effectiveness and efficiency' of both the Police Service of Scotland (Police Scotland) and the Scottish Police Authority (SPA).[1]

We have a statutory duty to inquire into the arrangements made by the Chief Constable and the SPA to meet their obligations in terms of best value and continuous improvement. If necessary, we can be directed by Scottish Ministers to look into anything relating to the SPA or Police Scotland as they consider appropriate. We also have an established role in providing professional advice and guidance on policing in Scotland.

- Our powers allow us to do anything we consider necessary or expedient for the purposes of, or in connection with, the carrying out of our functions
- The SPA and the Chief Constable must provide us with such assistance and co-operation as we may require to enable us to carry out our functions
- When we publish a report, the SPA and the Chief Constable must also consider what we have found and take such measures, if any, as they think fit
- Where our report identifies that the SPA or Police Scotland is not efficient or effective (or best value not secured), or will, unless remedial measures are taken, cease to be efficient or effective, Scottish Ministers may direct the SPA to take such measures as may be required. The SPA must comply with any direction given
- Where we make recommendations, we will follow them up and report publicly on progress
- We will identify good practice that can be applied across Scotland
- We work with other inspectorates and agencies across the public sector and co-ordinate our activities to reduce the burden of inspection and avoid unnecessary duplication
- We aim to add value and strengthen public confidence in Scottish policing and will do this through independent scrutiny and objective, evidence-led reporting about what we find

Our approach is to support Police Scotland and the SPA to deliver services that are high quality, continually improving, effective and responsive to local needs.[2]

This assurance review was undertaken by HMICS in terms of Section 74(2)(a) of the Police and Fire Reform (Scotland) Act 2012 and is laid before the Scottish Parliament in terms of Section 79(3) of the Act.

[1] Chapter 11, Police and Fire Reform (Scotland) Act 2012.
[2] HMICS, *Corporate Strategy 2017-20* (2017).

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Our review

Since early March 2020, the coronavirus (COVID-19) pandemic has affected all of our lives. Throughout this time, Police Scotland officers and staff have continued to make a vital contribution to the national effort (Operation Talla) to reduce the spread of infection, and ultimately save lives. As with all our work during this period, I want to start by thanking Police Scotland for its participation and co-operation with the review under challenging circumstances.

This review of Police Scotland's demand analysis and management is intended to highlight the significant efforts the service has made to develop its understanding of demand, as well as identifying some areas for improvement. Demand data and analysis are vital for making informed plans for resources and budget, ultimately ensuring that resources are deployed to best meet the needs of the public.

The importance of articulating the wide and competing demands for policing has long been recognised, and featured in the work leading to the formation of the single national police service for Scotland in 2013. There have been various efforts made over the years to capture the demand for policing, and need for this information became more acute as pressure on budgets increased.

More recently, Police Scotland has made public statements about increases in demand posed by major operations, not least the UN climate change conference in November 2021, all at the same time as continuing to police restrictions imposed to limit the spread of COVID-19. This context makes it all the more important for Police Scotland to equip itself with reliable and accessible information on current and future demand, assets and resources, to inform the strategic direction of the service.

In my annual reports 2017-18, 2018-19 and 2019-20, I emphasised the importance of understanding demand and ensuring police resources are structured to meet the needs of communities.

This inspection has assessed the Police Scotland approach under four headings:

- Appropriateness - the appropriateness of the approach to developing demand information, analysis and management
- Alignment - the alignment of the demand approach with the overall strategic framework, including links with the Strategic Workforce Plan and Target Operating Model
- Application - the application of demand information to support resource planning and tasking and co-ordination
- Anticipation - the anticipation or forecasting of demand, using demand information to inform medium to long term planning

Police Scotland's Demand and Productivity Unit (DPU) plays an important part, but this review is of the whole organisation's approach and understanding of demand, and is not a specific review of the DPU alone. We were impressed by the capability of the Demand and Productivity Unit to deliver sophisticated tools that are of real benefit to policing. It is a small unit and the value of its contribution is hampered by capacity to deliver, not capability, and by the lack of a delivery plan that is informed by the strategic needs and tactical requirements of Police Scotland.

All 43 police forces in England and Wales produce a Force Management Statement, which is a self-assessment process that has been in place since 2016 and became a statutory requirement to report to HMICFRS in 2017. This statutory requirement does not extend to Police Scotland. The purpose of Force Management Statements is to show how well each force understands its demand and assets and how it is planning to meet future demand.

In this report, we have taken the opportunity to look at that approach and compare Police Scotland with some forces elsewhere in the UK. Our assessment is that Police Scotland has made good progress in developing a more sophisticated demand approach compared to other UK forces which rely on purely volumetric information.

Whilst HMICS does not currently employ the Force Management Statement approach, I believe Police Scotland should have a systematic approach to self-assessment as part of its continuous improvement and organisational learning.

I am confident that Police Scotland has made significant progress with demand analysis over the past few years and this now needs to develop further to forecast demand and use the information to inform medium to long term planning.

HMICS wishes to thank the officers and staff of Police Scotland who participated in our review, in particular the Demand and Productivity Unit for facilitating our work. Our review was led by Lead Inspector Tina Yule.

Gill Imery
HM Chief Inspector of Constabulary in Scotland
June 2021

Key findings

General

- Police Scotland has made significant progress in developing its understanding, measurement and reporting of demand and productivity. Police Scotland is clear on the need to have a deeper understanding of demand.

- The Demand and Productivity Unit (DPU) has clearly demonstrated that it has the capability to deliver sophisticated demand tools and products that are of real benefit to policing.

- HMICS considers that given the level of stated intention and investment made in developing the demand approach, the limitations placed on DPU capacity are concerning and remains the primary constraining factor in the further development of the approach and realisation of Demand, Productivity and Performance (DPP) project benefits.

- Our analysis shows overall, in comparison with other UK forces, that Police Scotland has progressed well in developing a more sophisticated demand approach compared to other forces which rely on purely volumetric information. However it still has some way to go in terms of fully understanding and articulating the demand on its services. This is particularly true in respect of the forecasting of demand.

Appropriateness

- In most divisions, we found inconsistent understanding of the terminology around demand. This results in variable levels of awareness of key products, differing expectations in terms of analysis and support due to a general lack of clarity and direction around the approach.

- Trust in demand information was also variable across stakeholder groups, with some risk aversion to the shift from reactive to increasingly proactive decision-making and planning.

- There is a need to further develop clear and consistent definition of the drivers, types and categories of demand for all functions across the force. There are still many areas of internal, hidden, unknown, or unmet demand which remain a challenge to quantify and have not yet been fully identified or addressed due to lack of resources.

- Police Scotland requires to better use DPU expertise to adopt a cohesive and consistent approach to quality assurance and compliance with demand standards. This should ensure that the validity of and confidence in demand information is maintained and best use is made of the developed demand approach.

- Visibility of demand baseline products has been very restricted with limited analysis and recommendations for further action. HMICS acknowledges that these issues are to be addressed in the next iteration of the baseline product.

- Failure demand on the whole is not being considered in a systematic way across the force and there remain major opportunities for efficiencies to be driven out across the organisation in this respect.

- HMICS has validated the processes undertaken to assess data in source systems, examining its integrity, identifying any data cleansing or manipulation required (an example would be eliminating duplicate records) and is satisfied these comply with good practice.

- HMICS has also validated that the Standard Weights and Measures approach is well developed and captures the expected level of detail. However conversion to the corporate data catalogue is still a work in progress.

- HMICS considers there is a requirement to further build on the approach to capturing the assumptions, caveats and quality issues around demand information (source systems, data repository and measures) and ensure increased transparency around these in analytical products.

- The work of the DPU has been consistently re-prioritised to meet emergent need (such as COVID-19) diverting attention away from planned activity. This continual reactive approach to their work, especially given limited capacity, has curtailed delivery of some of the original benefits of the new demand approach.

- HMICS confirms that all of the deliverables from the DPP project were produced within negotiated timescales and to budget, however it is unclear as to whether the benefits have yet been fully delivered.

Alignment

- There is limited evidence that the work of the DPU is systematically used to inform the development of key strategies across the organisation. There is no evidence of formally established processes in place to feed demand analysis into these strategies and the strategy development process.

- Demand analysis is not yet meaningfully used or considered in the development of the financial strategy or financial planning or utilised in the determination of investment decisions.

- HMICS found a lack of clarity in the organisation regarding the purpose and status of the Target Operating Model (TOM). It remains unclear how demand information or analysis products are being meaningfully used in the development or revision of the TOM.

- HMICS found that demand information and analysis is not used in any systematic way to inform or support decision making concerning overall officer or staff numbers, recruitment intakes or strategic changes in skills mix.

- Further development of the strategic workforce planning process is required to more effectively set out how it will continue to be informed by demand analysis and respond to changing requirements.

Application

- Processes which link tasking and co-ordinating to resource allocation and subsequently to workforce planning remain unclear as yet, as does the remit of the Organisational Design and Delivery Group (ODDG).

- HMICS is supportive of the revised arrangements for national and regional tasking and co-ordinating (i.e. the move to a quarterly Operational Delivery Board and the introduction of a formal Regional Delivery Board (RDB) structure) and will consider how to monitor their effectiveness in our scrutiny planning process.

- The additional demands of the revised levels of operational tasking may generate further demand on the DPU. This could lead to a requirement to produce bespoke or 'deep dive' analytical products and redesign of dashboard products, impacting on any planned work. Therefore a robust prioritisation process for such work will be required.

- Some local policing divisions have progressed well in the development of improved analytical products which use demand, performance and productivity/resource information to better support area and divisional tasking and co-ordination. However this is not consistent across all divisions.

- There is a lack of awareness, understanding and visibility of the demand dashboard products developed for use in local policing divisions. This raises an associated risk of silo'd approaches to local implementation and usage.

- The results analysis of tasking and co-ordinating delivery and resourcing decisions (at both national and local level) is not systematic. This requires further consideration at all levels of the organisation to ensure that evaluation of impact on outcomes is considered.

- There is a lack of clarity as to how Police Scotland knows it is meeting demand effectively - relating to whether the level of service provided meets a pre-defined or agreed service standard or public confidence/satisfaction measure.

- HMICS considers the evolution of the Resource Allocation Model (RAM) into the Demand Profiling Tool (DPT) is very positive. This is more aligned to our expectation of a dynamic system of resource deployment reflective of demand and need, which effectively informs workforce planning and organisational design.

Anticipation

- Demand analysis and management is routinely described as 'complex and difficult'. There is some reluctance within Police Scotland to make further financial investment and commit culturally to master this discipline as an organisation.

- Benchmarking with forces in England & Wales, showed that a variety of approaches to demand analysis and management had been adopted. Most forces found it challenging to forecast future changes to demand and were better at describing current demand.

- The DPU has maintained an ambition to implement some form of demand forecasting but has been constrained by resources and re-prioritisation.

- Police Scotland has made good progress in developing its demand approach in some respects compared to other forces. However they are no further forward in terms of forecasting demand.

- The DPU currently operates within a Minimum Viable Structure and has multiple specialist staff, many of whom are key single person dependencies and / or employed on temporary contracts without sustainable funding arrangements.

- The DPU has demonstrated that it has the capability to deliver sophisticated tools that are of real benefit to policing. The value added by the DPU is limited by its capacity to deliver, rather than its capability and by the lack of a plan that is informed by the strategic needs and tactical requirements of Police Scotland.

- There was strong support for the DPU function and what it has achieved, however many were still unaware of its work or the added value that DPU products could provide.

- In developing the Full Business Case for the re-design of the Analysis and Performance Unit (APU) and Demand Productivity Unit, proposals should be considered for the further development of the demand approach and the DPU itself.

Recommendations

Recommendation 1
Police Scotland should develop a demand framework and delivery plan as soon as possible to include the implementation of a structured engagement model to support the effective analysis and interpretation of demand information.

Recommendation 2
Police Scotland should integrate the development of the annual demand baseline product with the force strategic assessment to ensure a more strategic focus, consistency of approach and address areas where demand information is currently lacking.

Recommendation 3
Police Scotland should develop a cohesive approach to failure demand as part of a corporate continuous improvement and organisational learning framework.

Recommendation 4
Police Scotland should further build on the approach to capturing the standards, assumptions, caveats and quality issues around demand information (both source systems and data repository) and ensure increased transparency around these in designing and delivering analytical products.

Recommendation 5
Police Scotland and the Scottish Police Authority should, in line with a demand framework, review the operational leadership, governance and focus of their scrutiny processes around demand analysis and management.

Recommendation 6
Police Scotland should further strengthen its approach to strategy development to include consistent involvement of demand analysis and organisational design elements.

Recommendation 7
Police Scotland should set out a transparent process for the provision of organisational design support including how demand analysis is used to inform decision making concerning officer and staff numbers and calculate the demand and capacity imbalance at an organisational level.

Recommendation 8
Police Scotland should further develop its performance reporting framework to better integrate demand information and analysis and provide improved transparency at local level.

Recommendation 9
Police Scotland should further promote demand products, including direct input and support to divisional management teams, regarding their use and benefits, as well as setting out the role, responsibilities and authority of the Demand and Productivity Unit and Analysis and Performance Unit in providing support and guidance.

Recommendation 10
Police Scotland should ensure consistency and compatibility (not requiring mandatory compliance) in revised tasking and co-ordinating processes and the associated use of demand products across all local policing divisions.

Recommendation 11
The Scottish Police Authority and Police Scotland should commit to further development of the demand forecasting approach to support medium to longer term planning and decision-making.

Recommendation 12

Police Scotland, in its development of the Full Business Case for the Analysis and Performance Unit re-design needs to include proposals for further development of the demand approach and the Demand and Productivity Unit itself.

Background

1. Since the inception of Police Scotland, and indeed as part of the business case for a single national force,[3] the need for a better understanding and articulation of the nature of demand for policing services has been recognised. This work has been ongoing in a number of forms since 2012, with limited tangible progress, and as continued pressure on budgets became apparent the need to better evidence the increases and changes in demand became more pressing.

2. In particular, the joint SPA and Police Scotland 10-year Strategy, 2026 Serving a changing Scotland[4] concluded that demand for police services would grow and that Police Scotland would need to be more agile and flexible to respond to threat, risk and harm in public, private and virtual spaces. The strategy committed to the creation of a dynamic deployment model that reflected demand and enabled better matching of resources to that demand. Similarly the Joint Strategy for Policing (2020), Policing for a safe, protected and resilient Scotland,[5] states that by better understanding performance and demand, Police Scotland can place officers and staff where they will have the greatest impact. The strategy commits to investment in data, digital, analysis and intelligence.

3. HMICS recognises that a consistent narrative has been presented by Police Scotland in terms of increases in demand in areas such as major events and cyber-crime. This justification has been used to support the maintenance of police officer numbers, but has typically not been supported by numerical evidence and analysis. HMICS considers that having a credible and effective demand analysis and strong management approach is crucial to providing the evidence of changes in the demand profile which can effectively support operational, resource and budgetary planning.

4. The Combined Full Business Case (FBC) for the Demand, Productivity and Performance (DPP) and the Local Policing Development (LPD) projects, cited them as critical enablers for the delivery of the SPA and Police Scotland 2026 Strategy, which was approved by the SPA Board on 28 June 2018.[6] The Demand and Productivity Unit (DPU) was created as a key deliverable of the DPP project in June 2019[7] and established with limited resourcing as a Minimum Viable Structure (MVS) with some consequential limitations on outputs.

5. On 16 July 2020, Internal Auditors presented their Demand and Productivity Internal Audit Report to the SPA Audit and Risk Committee.[8] This report detailed the findings of the Internal Audit and the processes in place to assess the overall and component source demand on Police Scotland. Key findings included that Police Scotland had made significant progress in developing its understanding, measurement and reporting of demand and productivity and that the DPU was working to address ongoing issues relating to the availability and quality of data used within the approach and how it will be rolled out beyond local policing. HMICS concurs with these findings and has taken cognisance of the recommendations from that Internal Audit during our review.

[3] Outline business case for Police reform (September 2011).
[4] Police Scotland - 2026 Serving a changing Scotland (June 2018).
[5] SPA Board, Joint Strategy for Policing (2020), Policing for a safe, protected and resilient Scotland, 25 March 2020 (Item 8a).
[6] SPA Board Meeting, Minute, 28th June 2018 (Item 16).
[7] DPU structure was approved by Change Board in February 2019 and MVS structure was fully populated by September 2019.
[8] SPA Audit Risk and Assurance Committee, Demand and Productivity Internal Audit Report, 16th July 2020 (Item 3a).

6. The DPP project was completed on schedule and an internal End Project Report considered in December 2019. The DPU operates within the current MVS as a business as usual function (part of the Analysis and Performance Unit). The DPU has a current focus on operationalising the Resource Allocation Model (RAM) and improving the Demand Baseline through continued data development and the development of a forecasting approach to demand analysis.

7. An internal Post Implementation Project Review was reported to Change Board in March 2021 (delayed due to COVID-19). Such a review is undertaken when there has been sufficient time to demonstrate the business benefits of a project. The review confirmed a number of successful deliverables from the project and also identified some areas which still require further development (see Appendix 1 for the HMICS assessment of the FBC).

Financial position

8. As noted above, the challenges of achieving a balanced budget have existed from the outset for Police Scotland.[9] This continued pressure became increasingly apparent in terms of maintaining the overall number of officers at or above 17234. Having achieved well in excess of the original savings target for rationalisation of legacy forces, Police Scotland again raised concerns regarding their ongoing financial sustainability in 2019/20. At the SPA Board in September 2019 it was noted that financial stability, in the form of a balanced budget, was contingent on a structural correction to revenue funding of £70m at that point, in addition to the working assumption of a £20m uplift for real terms protection and annual increases thereafter indexed to wage growth.

9. Police Scotland were able to demonstrate that without corrective action the deficit would grow significantly over five years, with a forecast deficit of £66m in 2020/21. Following the Scottish Government revenue funding settlement for Police Scotland, which at £50m year-on-year growth was £30m higher than modelled, a revised deficit of £36m was proposed for 2020/21.

10. A key lever for Police Scotland to manage a deficit budget toward a more balanced state has always been the strict control and gradual reduction of officer and staff numbers. The Chief Constable consistently asserted that given the backdrop of transformation activity and the significant estimated operational impacts of Brexit, COP2610 and a potential Independence Referendum, such staff and officer reductions would not have been realistic.

11. As recognised by both Audit Scotland and Internal Auditors, the approach and processes that support Police Scotland's financial management have improved considerably. Better, and sustained, engagement with business areas, the quality and depth of information available for control and planning have all supporting the effective management of Police Scotland's tight financial position. This, alongside the development of a narrative around the impact on demand for policing services, supported a revised budget settlement in late 2020 which has now effectively balanced the budget for 2021/22.[11]

[9] Financial deficit (revenue budget) first reported in Annual Audit 2014/15 as £8.8m and subsequently as £20.5m in 2015/16, £16.9m in 2016/17, £34.3m in 2017/18, £35.6m in 2018/19 and £22.8m in 2019/20.
[10] 26th United Nations Climate Change Conference of the Parties to be hosted by Glasgow in November 2021.
[11] SPA Board, Draft Budget 2021/22, 24 March 2021 (Item 6).

12. When it was established, Police Scotland inherited a political commitment to maintain 17234[12] police officers across Scotland. HMICS has commented consistently that the number of officers is not a useful measure of effectiveness. This position was amended as part of a manifesto commitment in 2016[13] to allow the Chief Constable to decide how many officers and staff, in what combination, are required to deliver the most effective service. The now balanced budget for 2021/22 supports the maintenance of 17234 officer FTE and gives Police Scotland a platform to focus more effectively on demand management and capacity and productivity benefits realisation as their primary tactics moving forward to a sustainable Target Operating Model.

13. Police Scotland is implementing systems and analytical approaches to better understand its operational demands but it recognises that the quality and integrity of its data also needs to be addressed in order to ensure their evidence-led approach is sound. A number of business cases[14] have been approved to progress the improved management of data and information across the organisation.

14. The latest version of Police Scotland's Strategic Workforce Plan (January 2021)[15] shows significant resourcing gaps going forward in both officer and staff FTEs at both national and local policing levels (694 officer FTE, 671 staff FTE). These gaps have mostly been estimated based on professional judgement, with limited demand-led evidence. It is therefore essential that demand analysis and management is used more effectively to demonstrate the requirement for resources, in both planning and delivery going forward to ensure transparency and sustainability.

Research and benchmarking

15. As part of our terms of reference for this review,[16] HMICS committed to use demand analysis benchmarking to support Police Scotland's continued development of its approach and assure that best practice is being adopted. HMICS has undertaken a high level review of the most recent Force Management Statements (FMS) available from forces in England and Wales as the best available evidence of force demand information and analysis. HMICS has also engaged directly with Her Majesty's Inspectorate of Constabulary and Fire and Rescue Services (HMICFRS) to discuss their evaluation of previous iterations of the FMS process and their plans for the forthcoming annual process. Appendix 2 of this report provides further background on the FMS approach.

16. It should be noted that at this time, HMICS has no plans to introduce an FMS approach in Scotland but has clear expectations that Police Scotland should be working toward having a systematic approach to self-assessment as part of its continuous improvement and organisational learning approach. It should also have clear plans to develop its demand information and analysis to meet similar requirements to those set out in the latest FMS guidance as HMICS considers these to be core to developing a sustainable policing model.

17. In terms of research, we undertook a literature review of publically available papers to identify the latest thinking on this complex topic. A number of references are made throughout this report to more recent publications.

[12] The figure of 17,234 constituted an extra 1000 officers above the existing total legacy force establishment of 16,234 as at 31 March 2007 (SNP Manifesto 2007).
[13] SNP drops 1,000 extra police officers target as party promises to give Police Scotland 'flexibility' (holyrood.com).
[14] Business cases: Chief Data Officer Target Operating Model; Force Wide Analytics; Master Data Management; and General Data Protection Regulation (GDPR) projects.
[15] SPA Board Meeting, Police Scotland Strategic Workforce Plan, 22 January 2021 (Item 7).
[16] HMICS Assurance Review of Demand Analysis and Management - Terms of Reference, (18 December 2020).

Appropriateness

18. In this section of the review report HMICS has assessed the **appropriateness** of the approach to developing demand information, analysis and management. We aim to provide assurance that the approach is effective in terms of its basis, scope and implementation.

History

19. As noted above the FBC for the Demand, Productivity and Performance (DPP) and the Local Policing Development (LPD) projects was approved by the SPA Board in June 2018. Separate Initial Business Cases (IBC) had been developed. The two projects were expected to run in sequence with each other with the LPD project to begin work at the point of DPP closure.

20. The main driver behind the creation of the DPP project was to address the lack of a recognised formal approach for the collation, understanding and use of demand and productivity data by Police Scotland. DPP was considered a key enabler for other programmes within the transformation portfolio as well as delivery of organisational strategy.

21. The primary high level objectives for the DPP project set out in the FBC are:

    - Design, develop and implement the initial functions and provide staffing for a new Demand, Productivity and Performance function to support Police Scotland.
    - Design develop and implement an interim approach to measuring and reporting on productivity and capacity within Police Scotland aligned to the 3 Year Implementation Plan and Strategic Resourcing commitments.
    - Design, develop and implement an initial approach to predictive demand for Police Scotland including a methodology to review its accuracy and value.
    - Improve and further develop bespoke internal and external performance reporting processes in-line with strategy, by addressing data gaps and enhancing reporting content and presentation at national, functional, divisional and local levels.

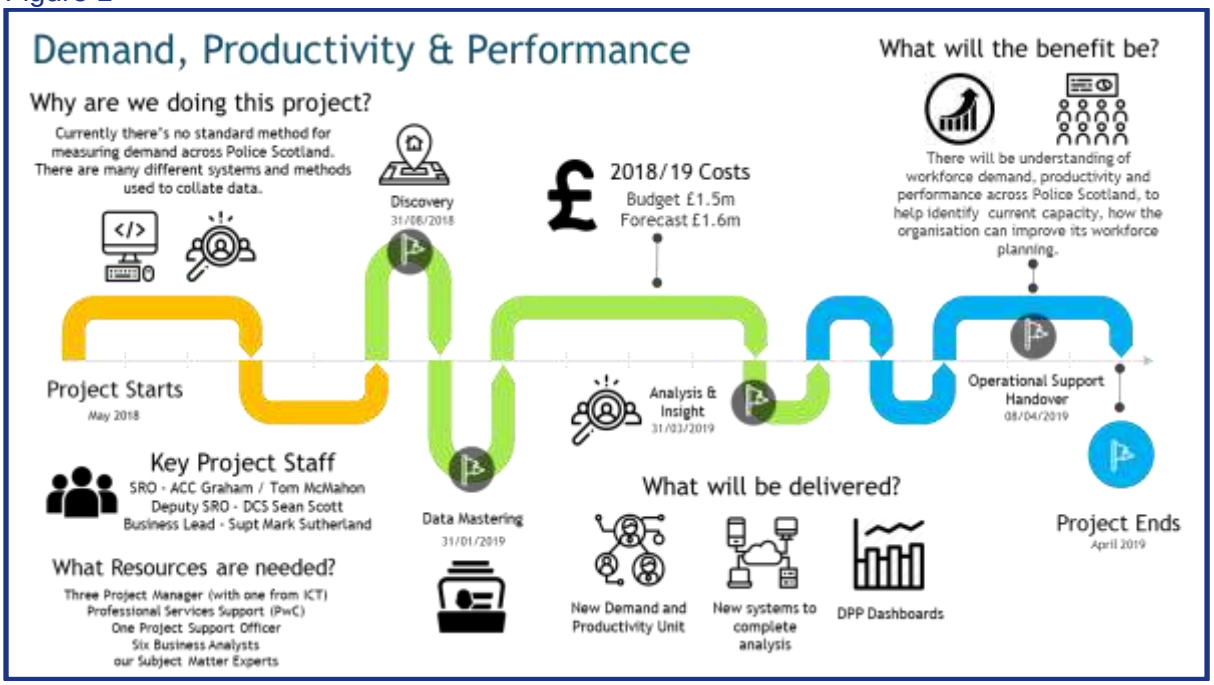
22. The FBC and subsequent evaluation and review reports however focus more on the deliverables from the project. This primarily relates to the delivery of a baseline of demand data from Police Scotland sources and the creation of capacity to support and influence business change ensuring a detailed and quality assured approach to productivity and capacity benefits realisation.

23. The project involved the procurement of professional services to support the development of this approach. HMICS considers this was appropriate as at that time there were insufficient internal specialist resources available to develop the approach, although we note that previous expenditure on external consultancy (in particular on the development of the 2026 strategy) should have provided an improved basis for this work. Appendix 1 assesses the FBC, the key objectives, deliverables and benefits and whether best value has been achieved from this investment.

24. Work on the DPP programme started in early 2018, with the main development phase taking place between August 2018 and March 2019. The programme was closed in April/May 2019.[17] Figure 1 below details the project journey prior to closure. HMICS notes that development and delivery of the overall demand approach continues.

[17] The programme was closed in April/May 2019 and an End Project report drafted in June 2019, which was approved in December 2019.

Figure 1



Source: Police Scotland - DPP End Project Report (Draft June 2019)

Awareness and understanding

25. Awareness and clear and consistent understanding of the purpose behind the development of the demand approach and how it will be used is essential to the success of the model. HMICS found that all of those we interviewed were clear on the need to have a deeper understanding of demand. However testing the understanding of the terminology and the approach adopted around demand produced inconsistent results across Police Scotland.

26. HMICS found that some considered that demand information would primarily be used to shift officer and staff resources around, others felt it would be used to engage more effectively with partners, and others saw it as key to more effective tasking and co-ordinating processes. There was also inconsistent interpretation of terms such as demand analysis, demand management, demand reduction, demand suppression, failure demand, demand drivers and being demand-led. The awareness of key products such as the demand baseline, demand dashboards and the Resource Allocation Model (RAM) was also variable.

27. HMICS found that many perceived that demand reduction or suppression equated solely to partnership working in developing longer term preventative approaches (thus negating future demand). This was associated with the role of Partnerships, Prevention and Community Wellbeing[18] in proactive cross-cutting prevention work. However we found that quantifying the resources expended in such preventative action to effect demand reduction was not well understood.

28. HMICS considers that whilst planning and preventative work conducted in partnership obviously has a strong focus on demand reduction, there are many other options available to reduce or suppress demand (including changing tactical approaches, improving internal processes and shifting demand to other agencies). The lack of awareness of the range of approaches available in this respect is of concern and indicates a lack of clarity and direction around the approach.

[18] Partnerships, Prevention and Community Wellbeing (PPCW) new national policing division established from former Community Safety division in early 2021.

29. Many of those we spoke to related demand reduction to the introduction of the Contact Assessment Model (CAM),[19] also part of the local policing programme, and the THRIVE[20] risk assessment tool, as the primary initiative in this respect. The introduction of Resolution Teams[21] was also seen as a valid example of effective demand management. HMICS endorses these views but notes that the productivity benefits from the model are yet to be fully quantified and realised[22] in order to evidence how the reduction in demand has been absorbed by previously unmet demand.

30. Whilst these interpretations may be valid in their own right, HMICS found there was confusion as to how information would be used, differing expectations in terms of analysis and support and a general lack of clarity around the further development of the approach. We also heard interchangeable use of terms such as 'demand-led', 'design-led', 'evidence-led' and 'intelligence-led'. Whilst these terms are equally valid, HMICS is clear that demand analysis is an enabler to informing planning and management processes and complements these other approaches. These disparity of views were more evident when comparing those of senior staff and the corporate centre, with those in front line roles.

31. Many of those we spoke to could not distinguish the difference between more traditional volumetric data (number of incidents or crimes of each type) with more complex demand information (combining this with resource utilisation data). This may reflect more fundamental force-wide issues with data literacy[23] and understanding of the different analytical products available. Our analysis of Force Management Statements from forces in England and Wales demonstrated a deeper understanding that recorded incidents and crimes are not the only indicators of demand and that wider knowledge is required.

32. HMICS found that trust in demand information was also variable. Many still viewed the approach as immature or a work in progress and saw the need to rely on other more traditional analytical products. The understanding of balancing demand information, other analytical information, intelligence and professional experience/judgement in decision-making was also variable. Many were reliant on single sources of information, traditional products or felt the information did not add significant value to their decision-making (see paragraph 117).

33. HMICS considers that to fully benefit from demand analysis and management, there requires to be a fundamental culture shift from reactive to increasingly proactive decision-making and planning. The inconsistencies we identified speak to a lack of overall clarity on how the demand approach should be impacting on policing delivery and limitations on its impact to date.

[19] Contact Assessment Model (CAM) Call Handling - Every Caller is different so is our response.
[20] THRIVE (Threat, Harm, Risk, Investigation, Vulnerability and Engagement) is a risk management tool which considers six elements to assist in identifying the appropriate response grade based on the needs of the caller and the circumstances of the incident.
[21] Resolution Teams are regionally established teams of police officers and staff in C3 division dealing typically with lower level non-criminal complaints, as well as recording straightforward crimes.
[22] HMICS Assurance Validation of Police Scotland Transformation Benefits 2019/2020 (April 2021).
[23] Data literacy is the ability to interpret the data being presented, to understand what the data means, what trends it reveals, how to talk about it, and know what course of action to take. Data literacy enables an organization to use data effectively for business actions and outcomes.

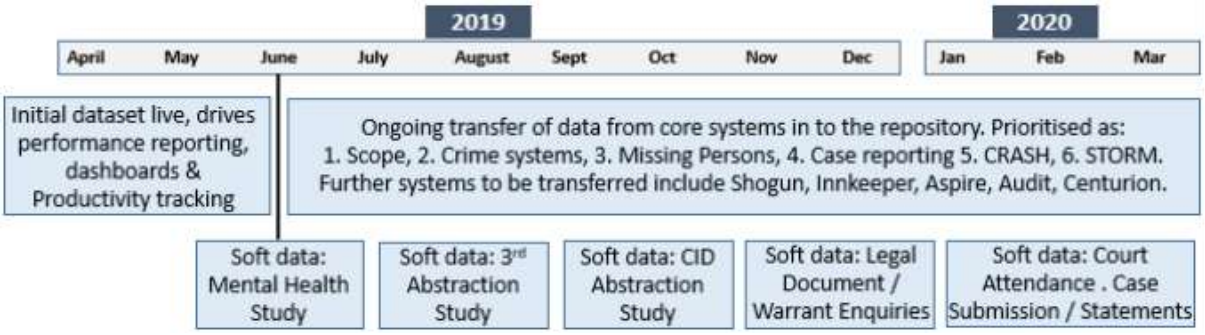
Basis of the approach

34. The provision of external professional services to support the design of the demand approach brought learning from other forces/agencies approaches as well as wide-ranging research. It also brought expertise in developing a data repository to bring together cleansed information to support improved analysis and presentation of demand information. This provided the fundamental infrastructure and capability for the demand approach to develop. The work also produced a design for the DPU and an initial plan for their work. This plan set out the following objectives:

- Continuously enhance the Source for Evidence Based Policing (SEB-P) data repository
- Establish and maintain a routine reporting schedule
- Create outputs in response to business needs
- Enable modern methods of data use in Police Scotland
- Support and advocate a culture which embeds the use of data in decision making across the organisation
- Explore ways of providing greater transparency to the public of Police Scotland's statistics and performance
- Provide the tools required by Police Scotland to evaluate performance against the Performance Framework.

35. The plan also set out a delivery roadmap with key milestones for 2019/20 for each of these objectives. For example the plan for development of the data repository:

Figure 2



Source: Police Scotland - Year 1 Plan (2019)

36. HMICS has identified that although this plan was followed to an extent after the DPU was created many of the deliverables and approaches set out were not achieved due to other priorities and constraints on resources. The plan itself is well structured and clear on how each objective will be delivered and represents good practice in service planning. HMICS could not identify any formal reporting on achievement of the objectives of this plan.

37. Currently there is no formal forward-looking plan in place for the DPU or the demand approach. HMICS found regular cycles of team and management meetings supporting the work of the DPU with clear short term objectives and informal work plans at a product/functional level. We also saw evidence of reporting to the Operational Delivery Board (ODB) to highlight continuing resource challenges for the DPU and secure investment and agreement around prioritisation of work.[24] A short demand strategy document is also in place but this is not widely shared. It sets out a number of key objectives and principles:

- Measure demand beyond simply volume
- Ensure a professional and modern approach
- Advocate and enable a data led, self-serve culture in Police Scotland
- Link demand analysis to resource
- Research and Influence through pro-active and reactive MI
- Enable key dependent workstreams i.e. Resource Allocation Model, Resource Management, Strategic Workforce Planning, Target Operating Model.

38. Four key areas of focus are set out in the strategy:

- DATA - to improve the quality, quantity, and availability of demand data to facilitate evidence based decision making.
- PRODUCTS - to develop useful, modern and interactive demand and productivity based outputs.
- SERVICE DEVELOPMENT - to proactively identify and meet organisational demand data needs and ensure demand and productivity outputs underpin key business areas.
- PEOPLE - to develop staff across Police Scotland to adapt to evidence based policing and a data led culture.

39. Whilst this strategy is useful in setting a broad direction for the DPU and a basis on which to plan, it has no formal status and has not impacted on issues relating to the prioritisation of work. HMICS found that the work of the DPU had been consistently re-prioritised to meet emergent need and the requirements of senior officers. COVID-19 had diverted the function away from most of its planned activity to supporting the development of bespoke products to meet the needs of Operation Talla. Similarly the COS programme[25] has now required a substantial commitment from the DPU to support implementation of new national systems. This continual reactive approach to their work, especially given their limited capacity, has curtailed delivery of some of the benefits set out in the original FBC.

40. HMICS considers that the relative success of the DPU and its potential to deliver further value, has led to greater expectations on a resource constrained function. This success was attributed to the ability of the DPU to differentiate its approach from that of the Analysis and Performance Unit (APU) and being perceived as more agile and responsive in developing new products for operational use. This increasing level of expectation, without the matching level of capacity, is therefore not sustainable if the benefits of the original investment are to be fully realised and meet the future needs of the organisation (see the Anticipation section of this report for further discussion on DPU capacity).

41. HMICS considers that without a formal articulation of both the strategic approach to demand and a clear plan of action in place, Police Scotland cannot effectively prioritise, manage and monitor its delivery. Similarly it cannot make a case for further investment in resources (whether this is officers, staff, technology etc) without a clearer view of what is required. Clarity around the future role of the DPU would also be derived from such a plan. We consider this role and resourcing further in the Anticipation section of this report.

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[24] Internal Police Scotland report to Operational Delivery Board (October 2020).
[25] SPA Resources Committee, Core Operational Solutions (COS) - Full Business Case, 13 November 2018 (Private Item 16.1).

Scope of the model

42. As part of the original business case for the LPD programme, it is not unexpected that much of the focus of the DPU has been on local policing. With around 70% of Police Scotland officer resource invested in this area,[26] it is clear that this has been an appropriate approach, particularly in terms of volume incidents and crime.

43. However there are acknowledged limitations with the approach, in that many other areas of policing, particularly in specialist national functions and in the corporate centre have been for the most part left unaddressed. Many of these areas remain a challenge due to:

- Variation in data availability and quality: due to legacy ICT systems or no processes for tracking and monitoring demand
- Variation in scope: varied roles and processes across similar functions
- Challenges in measuring predominantly proactive or self-directed activity or unmet demand.

44. HMICS found that some of these areas have now engaged directly with the DPU to build an effective demand baseline and measures to support their work. This is true of criminal justice and custody, specialist crime, community safety, resource deployment unit (RDU) and Contact, Command and Control (C3). The recently completed National Intelligence Review (NIR) has also used an external service provider, with input from the DPU, to assess demand on intelligence functions across Police Scotland. This methodology should assist with further building a model across specialist crime areas.

45. Establishing what is considered to be 'core' demand and what may fall into other defined categories, such as discretionary activity, is essential to determining the scope of the demand approach. Whilst this has been completed to some degree for local policing, it requires further strategic thought relating to the role and purpose of policing. The introduction of 'well-being' as part of the main purpose of policing in the 2012 Act,[27] remains open to interpretation and has meant the service has been unable to challenge or fully quantify demand shift from other agencies. This is particularly apparent in the case of mental health, which has been the subject of recent DPU work to support strategy development.

46. HMICS was unable to identify a clear and consistent definition of drivers, types and categories of demand for all functions across the force. HMICS also found that there are still many areas of internal, hidden, unknown, or unmet demand which remain a challenge to quantify and have not yet been fully identified or addressed due to lack of resources. A clearer plan to set out core demand, a prioritised approach to both divisional/departmental demand and less tangible areas and gaps is therefore required. As one of the original objectives and benefits from this programme, it is essential that this is addressed with some urgency in order to provide increased clarity and focus going forward.

47. Our analysis of Force Management Statements from forces in England and Wales demonstrated that some were able to provide a very detailed account of the types of demand, their different weights and impacts and specifically how they were mitigating hidden and unmet demand. In particular, these forces were able to better quantify under-reported demand in areas associated with vulnerability and were also able to clearly express how demand on one area of policing might impact other areas of business. HMICS considers these remain areas for further development in Police Scotland.

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[26] SPA Board, Strategic Workforce Plan, 22 January 2021 (Item 7).

[27] Police and Fire Reform (Scotland Act) 2012 s32 *'the main purpose of policing is to improve the safety and well-being of persons, localities and communities in Scotland'*.

48. HMICS also identified areas where services had not directly engaged with the DPU when gathering demand information for the purposes of conducting strategy development, organisational redesign or planning and evaluation processes. The primary reason for not doing this appeared to be lack of resources within the DPU to service these requirements and lack of awareness of the role of the DPU, its expertise and value. HMICS considers this is not acceptable, as it can lead to divergence from standards, duplication of work, poor quality of analysis and undermines the overall demand approach.

49. HMICS considers that consistency of approach and quality assurance are core to the role of the DPU, which has worked hard to develop these processes. Police Scotland needs to ensure that the validity of and confidence in demand information is maintained by providing clarity over the role, responsibilities and authority of the DPU in this respect (see the Anticipation section of this report for further consideration of the DPU role).

50. HMICS found that in the case of some data/system owners there were concerns regarding how their information was being interpreted by the DPU. We found that the DPU undertook stakeholder engagement as part of their process to incorporate any 'new' information into the data repository. However in terms of further analysis, HMICS considers that interpretation of data also requires subject matter experts to work more closely with the DPU as part of the development of analytical products. HMICS considers that a more structured engagement model should be put in place to support effective engagement and interpretation of information.

Recommendation 1

Police Scotland should develop a demand framework and delivery plan as soon as possible to include the implementation of a structured engagement model to support the effective analysis and interpretation of demand information.

Demand baseline

51. One of the key deliverables from the project is the demand baseline. This product is planned to be produced annually and maintained over the year to reflect key changes in demand (for example, updated COVID-19 response information). HMICS evaluation of the product identified a mix of incident, crime and resource information being presented in a more accessible manner than traditional strategic assessment documents, although there was a high degree of overlap. Bringing together traditional volumetric information (number of incidents, number of crimes etc.) with resourcing information, provides deeper insight into the true resource commitment to response and investigation across the country. This should allow improved analysis to allow for re-allocation of resources, re-prioritisation, tasking of intelligence products and evaluation of the effectiveness of tactical approaches.

52. However, HMICS found that the visibility of the baseline product was very limited. This was attributed to a degree of sensitivity over interpretation of the information and the need for the product to mature further. The baseline itself has limited analysis and no recommendations for further action (which would be expected in a strategic assessment). HMICS considers that improved alignment between the force strategic assessment and the demand baseline is required to ensure both consistency of approach but also to consider where demand information is currently lacking.

53. A further iteration of the baseline product is planned for July 2021, which will consider many of the issues we have highlighted. The new product will allow better connectivity to the work of ODB and Regional Boards, incorporate learning from other forces and include a risk assessment element. The utility of the baseline product is also to be extended to include an assessment of whether demand will be sustained, increased or as expected and provide suggested actions to address demand issues. Police Scotland intends that this will strengthen strategic decision-making.

54. HMICS found that failure demand on the whole is not being considered in a systematic way across the force and this is not currently considered to be core to the DPU remit (not included in the original FBC). In our Independent Assurance Review - Police Scotland Call Handling: Update Report (May 2018)[28] we recommended that:

Police Scotland, through its Demand, Productivity and Performance Programme, should develop a cohesive approach to reducing failure demand across the service and ensure that Contact, Command and Control (C3) division performance is fully reflected in the national performance framework.

55. In that report HMICS acknowledged the progress made by C3 in relation to eliminating elements of failure demand and is aware that the approach has continued to mature in that division. The recommendation was closed on the basis of that progress, however HMICS stated that it would assess whether the DPP project had developed the required approach and make recommendations if required as part of this review process. We acknowledge the challenges associated with identifying and quantifying failure demand[29] but nevertheless consider it to be core to the overall demand approach and should be aligned with the Strategy and Analysis function. HMICS found no evidence of a corporate approach to failure demand and there remain major opportunities for efficiencies to be more systematically driven out across the organisation in this respect.

Recommendation 2

Police Scotland should integrate the development of the annual demand baseline product with the force strategic assessment to ensure a more strategic focus, consistency of approach and address areas where demand information is currently lacking.

Recommendation 3

Police Scotland should develop a cohesive approach to failure demand as part of a corporate continuous improvement and organisational learning framework.

Quality approach

56. Ensuring the demand information presented is derived from the best quality data possible is core to the DPU approach as well as to overall confidence and trust in any Police Scotland analytical or statistical product. However much of this remains outwith DPU control and is a fundamental issue which Police Scotland's information management approach is attempting to address. As noted in our terms of reference, HMICS excluded the development of strategy and programmes to address information management and organisational data quality from this review.

57. HMICS has recently emphasised the need to transparently report on data quality and compliance issues, as well as caveats and assumptions, in our Crime Audit 2020 report.[30] The reliability of information used to assess risk/threat and performance must be clear to those scrutinising and making decisions in order to effectively balance such information with professional judgement.

[28] Recommendation 4, Independent Assurance Review - Police Scotland Call Handling: Update Report, (May 2018).
[29] Policing and Society: Understanding the concept of 'demand' in policing: a scoping review and resulting implications for demand management (2020) J. Laufs, K. Bowers, D.Birks and S.D.Johnson.
[30] Recommendation 1, HMICS Crime Audit 2020 (10 March 2021).

58. HMICS acknowledges the progress made by the DPU in addressing data quality issues and the refinement of their processes since risks were highlighted in the Internal Audit report in July 2020. The introduction of an Application Lifecycle Management (ALM) tool establishes a process for recording, managing, and monitoring data quality issues. HMICS considers that balancing DPU workload between developing and managing the data repository and conducting analysis work is essential to maintaining confidence and trust, whilst also providing added-value demand products.

59. HMICS examined the processes which were undertaken by the DPU, ICT and Justice Analytical Services (JAS) in assessing data in source systems, examining its integrity, identifying any data cleansing or manipulation required (an example would be eliminating duplicate records) and is satisfied these comply with good practice. The use of JAS to provide a form of external validation is to be commended.

60. For much of the data extracted from source systems there is no formal data standard in place similar to the Scottish Crime Recording Standard (SCRS). This has required the DPU, working alongside the Chief Data Officer to define Standard Weights and Measures (SWM) which detail the measures and data points being used. This is now being incorporated into a corporate data catalogue which will further strengthen the integrity of the data repository. HMICS has examined the SWM to assess the metadata collected and the validity of the measures in use. The SWM is well developed and captures the expected level of detail. However conversion to the corporate data catalogue is still a work in progress.

61. HMICS notes that many of the data quality issues identified emanate from legacy force systems still in place after over eight years of Police Scotland operation. These legacy systems will be progressively replaced by new national systems.[31] HMICS identified a lack of confidence in data from these legacy systems which alongside general data quality concerns (for example around direct officer input to new systems) means that less reliance may be placed on some demand products.

62. Whilst the implementation of new quality assurance measures as part of new systems development and implementation may address some of these concerns, HMICS considers there is a requirement to consistently capture the assumptions, caveats and quality issues around demand information (source systems, data repository and measures) and ensure increased transparency around these in analytical products. Internal Audit have raised similar issues in terms of the data quality caveats associated with performance reporting, also suggesting a consistent means of documenting and communicating these.[32]

63. As noted previously HMICS considers that ensuring wider consistency of approach and quality assurance are key considerations which are core to the role of the DPU. This role encompasses the integrity of the data repository, its usage and analysis of derived information. Similarly validation of qualitative approaches to addressing data gaps (including time and motion studies, surveys etc) is required to ensure adherence to standards and avoiding replication of work across the force.

Recommendation 4

Police Scotland should further build on the approach to capturing the standards, assumptions, caveats and quality issues around demand information (both source systems and data repository) and ensure increased transparency around these in designing and delivering analytical products.

[31] National systems will be implemented to replace legacy ICT systems as part of the Core Operational Solutions (COS) programme.
[32] SPA Audit and Risk Committee, Performance Management Internal Audit Report, 5 May 2021 (Item 3a).

Leadership and governance

64. HMICS identified clear line management responsibility for the DPU through the Director of Strategy and Analysis and then to the Deputy Chief Officer (DCO). The Director has provided effective leadership, direction and support to both the APU and DPU. However HMICS could not clearly identify operational ownership for demand analysis and management. Whilst the function currently, as with the APU, sits at the corporate centre and provides products for both corporate and operational use, it is clear that the prioritisation issue noted above (at paragraph 39) exists due to a lack of clarity around operational requirements and organisational priorities. This requires operational leadership, ownership and direction from an operational viewpoint and clearer governance processes.

65. Consideration of demand products has been limited in terms of the SPA. The Resources Committee has focused its scrutiny on delivery of the project and its benefits, rather than on the use and impact of the actual product set. However the Performance Committee and the SPA Board have considered a limited number of more operational reports including a recent paper on Mental Health demand.[33] Some of those we spoke with felt that SPA focus had been on the creation of products such as the Strategic Workforce Plan (SWP),[34] rather than on the analysis and decision-making processes associated with demand information. HMICS has observed limited direct challenge or scrutiny of the public assertions of increasing demand by Police Scotland to date. However HMICS also observes that the recent scrutiny of the SWP and other papers reflects an increasing interest from the SPA in transparency of demand analysis to assure an evidence-led approach.

66. The recently created strategic decision-making forum chaired by the Chief Constable, the Demand, Design and Resources Board (DDRB), has had a few meetings to date and is still refining its terms of reference. These are likely to include identifying service improvement actions to address emerging demands, priorities and risks. Therefore it is clear that the DPU will provide products to support the decision-making role of the Board. It is however unclear what these products will look like and how the analysis will prompt processes which are reflected in workforce planning, organisational design and the delivery of the transformation portfolio.

67. As previously noted, HMICS also identified that reporting to the ODB (co-chaired by both operational Deputy Chief Constables) around prioritisation of demand work has also taken place. However, as one the main users of operational demand information, such a process is likely to skew priorities toward meeting its own tactical tasking and co-ordinating role rather than wider organisational requirements for demand products such as supporting strategy development and organisational restructuring. HMICS acknowledges that leadership and governance over the demand approach is still maturing, however further consideration is required to strengthen and clarify these roles and processes.

Recommendation 5

Police Scotland and the Scottish Police Authority should, in line with a demand framework, review the operational leadership, governance and focus of their scrutiny processes around demand analysis and management.

[33] SPA Board, Mental Health Demand, 25 November 2020 (Item 6).
[34] SPA Board, Strategic Workforce Plan, 22 January 2021 (Item 7).

Outcomes and benefits

68. HMICS has assessed the deliverables and benefits from the original DPP programme (see Appendix 1). This assessment proved challenging in terms of the original structure of the FBC. The deliverables from the original professional services contract were met, with a limited overrun of 6 weeks.

Table 1 - DPP costs

Costs	FBC estimate	Project Forecast	Actual	Variance
Staffing	£1,656,956	£1,656,956	£774,646	**£882,310**
Cap & Reform	£1,468,000	£1,500,000	£1,518,258	**-£57,658**
Project expenses	£25,000	£25,000	£7,562	**£17,438**
TOTALS	**£3,149,956**	**£3,181,956**	**£2,300,466**	**£842,090**

Source: Police Scotland - DPP End Project Report (June 2019) and Post Implementation Review (Feb 2021)

69. HMICS found that the cost of this piece of work was queried as being relatively high for the return on investment. However HMICS considers that the use of external professional services provided a degree of independent assurance and benchmarking in relation to the initial approach to demand and productivity analysis and placed the force in a solid position to move forward. External research was also conducted by the external contractor and the outputs of this and the work of the College of Policing[35] were used to inform the development work.

70. However it is clear that Police Scotland has considerably developed its capability since the initial work was undertaken. It has used demand information to support some key areas of work including strategic workforce planning, mental health analysis and revision of national tasking and co-ordinating processes (see paragraph 111). Considering the size of the investment made in developing the approach, HMICS finds that the limitations placed on DPU capacity are concerning given the function's key role in organisational development and the Joint Strategy (2020) commitment to invest in data, digital, analysis and intelligence.

71. In summary, whilst it is clear that all of the deliverables from the DPP project were produced within negotiated timescales and budget, it is much less clear as to whether the benefits have yet been fully delivered. The resourcing of the DPU remains the primary constraining factor in the further development of the approach and realisation of DPP benefits.

[35] College of Policing, From local to national: A toolkit to support the police in understanding demand (Final Version 1) 2015.

Alignment

72. In this section of the review report HMICS has assessed the **alignment** of the demand approach with the overall strategic framework and governance: including links with the Strategic Workforce Plan, Target Operating Model, Data Management Strategy and the transformation portfolio.

Strategic Planning

73. Understanding demand for services is a key tenet of strategic planning. Analysis and management of demand information enables better understanding of the environment in which an organisation operates, and its capability to sustain that operating model. It enables an organisation to confirm previous assumptions whilst supporting the identification of new and emerging trends. A developed knowledge and mature understanding of demand information is key to inform the development of strategic priorities and outcomes; and to measure performance against planned activity to demonstrate success and identify areas where improvement is required.

74. The Joint Strategy for Policing (2020) makes aspirational references to better understanding performance and demand in the context of 'relentless increases in demand'. The strategy also makes reference to demand as something to be better understood and managed. HMICS considers this high-level aspiration characterises a level of maturity in understanding demand management as a strategic concept. However statements for example, that the type of demand has shifted, the demand profile has changed or that there is an increasing complexity of demand, whilst having some validity are not as insightful or evidence-based as they should be. We consider this demonstrates that greater organisational understanding and confidence in demand information is still required.

75. The Draft Police Scotland Annual Police Plan 2021-22, presented to the SPA Board on 24th March 2021[36] contains implicit and explicit references to demand, with multiple references to data, demand, insight, evidence bases and enhanced analysis, across the five strategic outcomes set out in the plan. However the plan has limited reference to how demand reduction or management approaches will be systematically deployed. We were told that both the Joint Strategy and the Annual Plan had benefitted from a degree of mapping of the demand baseline to objectives, outcomes and actions.

76. The plan includes an action to 'enhance insights of non-crime incidents to help develop demand reduction strategies' the responsibility for which sits with the APU and DPU. HMICS found no evidence of a specific plan for this action to date, however we were told that the development of STORM[37] incident dashboards would address any requirements. 'Resources and demand' is also specified in the plan as an organisational priority with no further detail provided. Again HMICS were told that a lack of DPU resources had limited progress.

[36] SPA Board, Draft Annual Police Plan 2021/22, 24 March 2021 (Item 10).
[37] STORM - Police Scotland Command and Control ICT system used in service centres, control rooms and operational policing for incident management.

Other strategies

77. HMICS found that development of Police Scotland operational strategies, such as the recently approved Cyber Strategy,[38] did not fully make use of the expertise or analytical products from the DPU. Whilst we found that the DPU is not strategically disengaged, neither is it appropriately strategically aligned, receiving as it does, its majority reactive tasking direct from ODB or senior officers. These requirements have, in the main, some strategic alignment with outputs commonly used to support decision making and the drafting of papers and proposals such as the previously mentioned Mental Health Demand paper to the SPA Board in November 2020.

78. HMICS found that demand analysis is not yet meaningfully used or considered in the development of the financial strategy or financial planning. Police Scotland does plan to consider whether demand information is suitably complete and robust to be included as part of budgetary assumptions in the forthcoming development of a new financial plan. The ICT, Estates and Fleet strategies reference demand as part of their drivers for change,[39] design principles[40] and values,[41] but have no explicit operational assumptions detailed within their forward planning. There is therefore limited evidence that demand analysis is utilised systematically in the determination of investment decisions at present.

79. HMICS considers there is limited evidence that the work of the DPU is systematically used to inform the development of key strategies across the organisation. In the absence of a demand framework or plan, it is not clear how demand information will be consistently utilised in the development of strategies in future. We found no evidence of formally established processes in place to feed demand analysis into these strategies and the strategy development process. HMICS considers there is an apparent lack of recognition that demand analysis should be used more effectively to develop evidence-led policing strategies.

80. That the DPU is not as strategically aligned and engaged as it could be, is often a matter of omission rather than commission. We found evidence that its capacity to respond, or more accurately its lack of capacity to respond, leads to future contact and requests perhaps not being made, as they may have been, if earlier engagements had been more successful.

81. Whilst our review focussed on the role demand analysis should play in strategy development, HMICS also found some evidence of a lack of consistent involvement of a traditional human resource organisational design function[42] in the process. There were also views that follow-up support to implement strategy delivery plans would be beneficial. These issues are not within the scope of this review but should be considered further by Police Scotland.

Strategic alignment

82. HMICS identified DPU engagement processes with, for example, Strategic Workforce Planning and Target Operating Model (TOM) development. However these were largely based on professional relationship-building and not on formal or mature processes to support effective governance.

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[38] SPA Board, Police Scotland Cyber Strategy, 30 September 2020 (Item 6). The Cyber Strategy Implementation Plan 2021/22 will develop demand analysis in its first year.

[39] SPA Board, DDICT Strategy - Outline Business Case 27 September 2018 (Item 8(2)).

[40] Police Scotland, Estate Strategy 2019: '*We will prioritise local solutions that are demand-led, collaborative, modernising and commercially innovative... Provides a smaller, more efficient local operation driving improved responsiveness to community demand, accessible public interface and fit for purpose facilities.'*

[41] SPA Board, Fleet Strategy (Item 6) 27 November 2019: '*Being flexible and adaptable, aligning to our strategic direction and meeting future demands on policing... Telematics will enable demand to be more fully understood and allow us to allocate vehicles to the areas with the most critical need'*.

[42] Organisational design function - typically a function or team within a human resources department which supports the development of structures and staffing models associated with establishing new models of operation. This is most often aligned to transformation or re-structuring programmes.

83. Demand analysis was consistently described to us as a maturing discipline. We heard many references to 'emerging', 'developing' or 'maturing' capabilities being cited when describing Police Scotland's approach to demand analysis and management. HMICS would caution that these references need to be more than just aspirational statements or used to validate a lack of progress. HMICS has found there is no current robust plan or timeline in place for identifying organisational requirements, and creating and embedding these maturing capabilities, in the right order and in the right places. The SPA should seek further assurance in this respect.

84. HMICS found it is not yet clear how existing or developing governance arrangements within Police Scotland will oversee the approach to demand analysis and management nor how Police Scotland intend to direct the development and utility of DPU outputs and products. HMICS acknowledges that terms of reference for the DDRB and the Organisational Design and Delivery Group (ODDG)[43] are still under development as are their associated processes and products. Therefore evidence is lacking to demonstrate how demand information is used to drive or inform discussion or decision-making within these emerging governance forums.

85. As we have previously noted, there is some evidence to suggest that new tasking and co-ordinating structures at local, regional and national levels are more effectively utilising DPU products in decision making, though use is not yet universal nor consistent, with some divisions using the DPU products significantly more than others. This inconsistency demonstrates that the DPU are valued by those who know about them and what they produce, but divisions have differing experiences and therefore differing expectations.

86. HMICS found that some divisions were comfortable adopting the DPU outputs and using these with other tactical, performance and resource products to create a better understanding of risk/threat locally. However, other divisions lacked insight, capability or motivation and are not so able to derive as much benefit from the DPU outputs. HMICS considers that developing a product and making it available is only part of the process. Enabling and encouraging senior management teams to use the product to generate the intended outcome is equally important, since as is evident, under-utilised products are of limited organisational value and limit the benefits delivered. HMICS considers that regional Assistant Chief Constables (ACCs) can better support the take-up of these demand products as part of their leadership role.

Recommendation 6

Police Scotland should further strengthen its approach to strategy development to include consistent involvement of demand analysis and organisational design elements.

Data strategy

87. Values and ethics in data management and demand analysis are a force-wide consideration and the Chief Data Officer (CDO) is working to ensure that these areas, especially ethics, are appropriately considered and boundaried, however there is no formal shared vision. HMICS recognises that the CDO and the DPU work well together with a common purpose, however a shared force-wide vision of how the demand approach forms part of this work needs to be formalised.

[43] Organisational Design and Delivery Group (ODDG) - At the time of our inspection the ODDG had not yet met and terms of reference were still in development. The group is chaired by the Deputy Chief Constable (People and Professionalism).

Target operating model

88. In assessing whether there is effective linkage between changing demands and how this informs and drives organisational design, HMICS found some lack of clarity in the organisation regarding the purpose of the Target Operating Model and whether this had been fully constructed as yet. Most felt that an 'as is' model had been built but there was significant work still to be undertaken to define a truly future 'to be' model. HMICS did however see clear evidence of ongoing development of models and capability maps at varying levels in the organisation.

89. It is currently proposed that the DDRB will agree and oversee the delivery of the Target Operating Model. This group is envisaged to effectively make the linkages between demand analysis, Strategic Workforce Planning, tasking and co-ordination processes and the TOM. DDRB must therefore have clear governance and decision-making processes to support this alignment. Similarly it must be clear on the levels of service to be delivered in order to meet demand (see paragraph 130) and the relative performance of the force in this respect. This requires effective linkage to the work of the Strategic Operational Performance Board (SOPB).

90. Whilst the design function and the DPU have regular engagement and work closely together, HMICS found no clear indication of how demand information or analysis products are being meaningfully used in the development or revision of the TOM as yet. There was however a clear expectation that making this linkage would be part of the role of DDRB.

Strategic workforce planning

91. HMICS found that the DPU and SWP teams have regular positive engagement and DPU staff have validated data used by the SWP team. There is evidence that DPU products were used by most divisions in the development of their local workforce plans and it is anticipated that the DPU demand data will be used by divisions in their quarterly reporting to the SPA on workforce plan implementation.

92. HMICS identified that demand information and analysis is not yet used in any systematic way to inform or support decision making concerning overall officer or staff numbers, recruitment intakes or strategic changes in skills mix. There is limited evidence that demand analysis is being used to calculate demand and capacity imbalance at an organisational level.

93. Allowing the DPU to access Scope[44] (personnel) data through the SEB-P data repository is essential to more effectively support demand analysis and therefore linkages between operational and resourcing information. HMICS found there has been limited progress in this area to date with some reluctance to provide database access. Whilst HMICS has commented previously in our workforce assurance process on issues with the quality of data within SCOPE, it remains the primary live data source and we consider requires to be part of the repository.

94. HMICS was unable to evidence clearly established organisational design functionality within current People and Development structures (see paragraph 81). HMICS considers that such a function with appropriate expertise and systematic structures to support implementation of organisational change is essential to the effectiveness of implementing workforce planning and must be informed by demand analysis. HMICS identified a number of restructuring projects ongoing within Police Scotland, either planned or ongoing at the time of our inspection, and remains concerned regarding the potential for non-adherence to an overall target operating model.

[44] SCOPE - Police Scotland in-house developed personnel system.

95. Our analysis of Force Management Statements from forces in England and Wales demonstrated that most were able to fully describe their workforce, assets and infrastructure and how transformation proposals and partner collaboration would influence these over the next four years. In particular some were able to accurately describe the gap between demand and resourcing and how this would be addressed. HMICS considers that the SWP begins to address some of this requirement, but that further development is required.

96. HMICS therefore recommends that further development of the strategic workforce planning process is required to more effectively set out how it will continue to be informed by demand analysis, respond to changing requirements and provide more detail on how the gap between demand and resourcing will be addressed.

Recommendation 7

Police Scotland should set out a transparent process for the provision of organisational design support including how demand analysis is used to inform decision making concerning officer and staff numbers and calculate the demand and capacity imbalance at an organisational level.

Performance framework

97. In 2018[45] HMICS recommended that the SPA should clearly set out its expectations of public performance reporting for Police Scotland and that Police Scotland should review their approach to the development of a new performance framework and consider the development of clearly defined outcomes with associated qualitative and quantitative performance measures. There has since been good progress with both recommendations being fully discharged.

98. A Performance Reporting Framework[46] was presented to the SPA Board on 28 March 2019 and was recognised as being a positive improvement over previous iterations. The initial work on the framework was undertaken as part of the DPP project and augmented by professional support. It contains a number of explicit references to demand. A revised framework for 2020/21[47] has since been adopted and is designed to assess the delivery of outcomes in the Joint Strategy (2020) and the Annual Police Plan. The framework includes key performance questions:

- To what extent is Police Scotland's local prevention approach reducing harm and demand?
- How well is Police Scotland identifying, meeting and adapting to demands on policing?

99. The latest performance report to the SPA in March 2021[48] provides high level narrative on changes to demand and consistently uses demand-related terminology. It also provides examples of demand reduction approaches for example, Operation PARROR, a three month taskforce (September - December 2020) established to help mitigate the growing threat of online Child Sexual Abuse and Exploitation (CSAE) helping to reduce demand on local policing divisions. Similarly the report details the impact of long-term growth of sexual crime. Demand increase is attributed to the complexity and length of such investigations, however only volumetric information on the numbers of crime are presented. This exemplifies the consistent use of volumetric information to quantify service demand and demonstrates that further work is required to better integrate demand information and analysis into national performance reporting.

[45] Recommendations 11 and 12, HMICS Thematic Review of Police Scotland's approach to the development and operational delivery of the Annual Police Plan (2018-19) (December 2018).
[46] SPA Board, Police Scotland Performance Reporting Framework, 28 March 2019 (Item 7).
[47] SPA Board, Performance Framework 2020/21, 30 June 2020 (Item 6b).
[48] SPA Board, Police Performance Report Q3 2020, 24 March 2021 - (item 12).

100. Divisional commanders we spoke to saw the value of demand information and analysis primarily in terms of supporting local partnership discussion and planning rather than formal reporting. Selective feedback from a number of local authorities demonstrated positive engagement through community planning processes, however the lack of formal feedback on the demand impact of CAM locally, workforce plans and abstraction rates, exemplifies that further work is required to better integrate demand information and analysis into local performance reporting.

101. HMICS found that existing reporting to local authority committees[49] still focused on performance with very little demand information or analysis included. Reporting was more likely to focus on the local police plan or community planning priorities and was subject to the requirements of each committee.

Recommendation 8

Police Scotland should further develop its performance reporting framework to better integrate demand information and analysis and provide improved transparency at local level.

DPU planning

102. We note at paragraph 37 that HMICS found no current formal Police Scotland strategy or framework in place relating to the analysis or management of demand; no such draft framework is under development and we could not identify future plans to develop such a framework. There is no policy or Standard Operating Procedure in place and, aside from the original 'primary high level objectives' detailed in the FBC for the DPP (see paragraph 21), there are no formally agreed outcomes for the work of the DPU itself.

103. HMICS was informed that a plan is now in development with a number of tasks already allocated. However in the absence of a formal strategy or framework and appropriate governance and support, it remains unclear how DPU work will be meaningfully guided. Alignment with the overall Police Scotland strategic delivery and planning framework is essential if the DPU is to successfully support operational priorities.

104. Although there is content available on the force Intranet, the DPU does not have a Service Catalogue to better inform stakeholders and customers of its purpose and capabilities or to demonstrate strategic alignment. Stakeholders have no refined concept of the extent and complexity of the work required to provide answers to the questions they ask of DPU. There is no outline delivery schedule that may enable customers to better manage their own expectations. Essentially HMICS found that for many it remained unclear what the DPU can do, and how it could or should contribute or be used by the force.

105. Stakeholders are not critical of DPU and understand that they are resource constrained, but we found this tended to result in the development of local solutions, which may not always fit well with the planned, if undocumented, future demand architecture and landscape. Indeed, this could in itself be described as additional failure demand, and becomes a distraction with the DPU being then required to support and develop local iterations, that themselves have managed to gain purchase and momentum because they are resourced and supported at divisional level. Capacity and appetite at local level could perhaps be better channelled to develop consultative force-wide solutions, avoiding regression to a more territorial legacy approach.

[49] Each local authority will have a committee which is designated to exert governance over their police and fire services as set out in the 2012 Act.

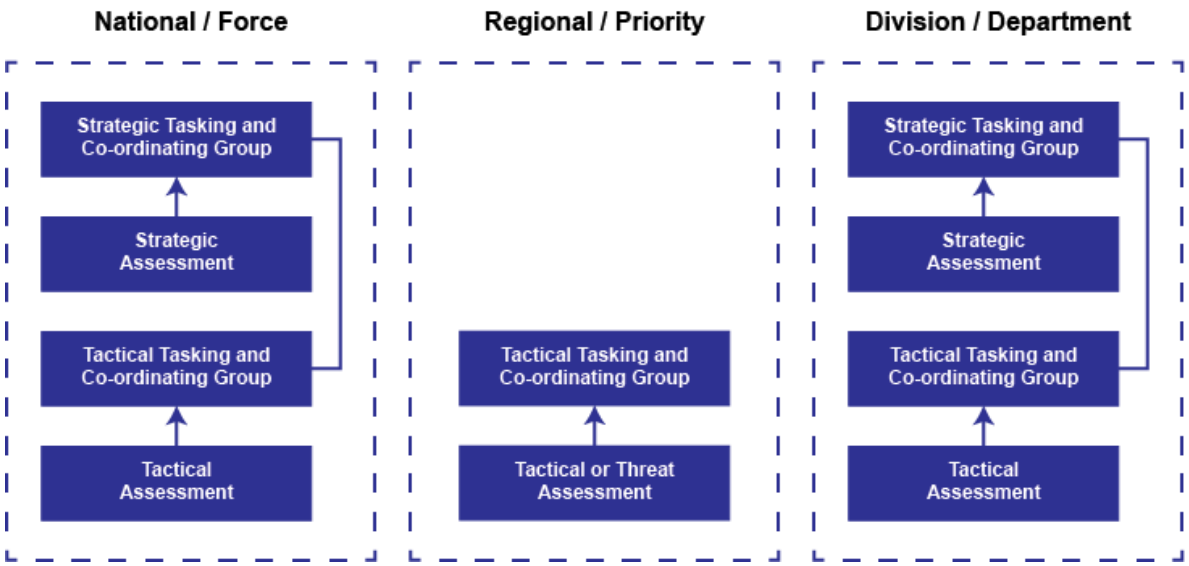
Application

106. In this section of our review report HMICS has assessed the application of DPU products and management of demand in Police Scotland i.e. how demand information is used to support business-as-usual tasking and co-ordination and resource planning. We aim to provide assurance that the approach is effective in terms of its application at tactical and operational levels within the force. In 2018 HMICS found that Police Scotland had an inconsistent approach to strategic assessment and tasking and co-ordination[50] across the force and associated recommendations were made for improvement.

Tasking and co-ordination

107. The tasking and co-ordinating process is a pivotal part of policing delivery. The process provides managers with a decision making mechanism based on a full understanding of the problems faced. This enables managers to prioritise the deployment of resources at their disposal to best effect and therefore to manage demand. Typically these processes will take place at force and divisional levels, but can be deployed in principle at any level where it is deemed appropriate (see Figure 3 sourced from our 2018 report). HMICS has seen clear evidence in the restructuring of national tasking and co-ordinating processes and the introduction of regional tasking, to suggest that the demand approach has directly influenced and supported these improved processes.

Figure 3 - Strategic and tactical tasking and co-ordination levels



108. A revised terms of reference for the Operational Delivery Board (ODB)[51] was approved in October 2020. The forum is now co-chaired by both operational Deputy Chief Constables with all ACCs as core members. The main changes to the terms of reference have been to move the frequency of meetings from monthly to quarterly and increase focus on trend analysis and emerging threats, whilst still maintaining focus on strategic objectives. The tactical assessment analytical product now used is more focused and includes demand analysis. The ODB makes decisions on short term (3 - 6 months) resource allocation to meet operational demand. It now also considers all matters escalated from Regional Delivery Boards.

[50] HMICS, Thematic Review of Police Scotland's approach to the development and operational delivery of the Annual Police Plan (2018-19) (December 2018).
[51] Operational Delivery Board (ODB) - force national Tactical Tasking and Co-ordinating forum - formerly the Force Tasking and Delivery Board.

109. Importantly the ODB remit now explicitly includes ensuring that approved resource requests which become long term are redirected to the Corporate Finance and People Board (CFPB)[52] for consideration. Any approved resourcing requests will be monitored and where required will be subject to additional scrutiny (results analysis) to ensure operational value is achieved.

110. The Organisational Design and Delivery Group (ODDG),[53] which will report to DDRB, will provide an executive forum to consider requests to increase establishment, either temporarily or permanently, that will have a force-level budget implication. HMICS considers that these processes need to be better defined in order to maintain the integrity of the policing model.

111. In July 2020 the move to a quarterly ODB and the introduction of a formal Regional Delivery Board (RDB) structure was approved. Work is ongoing to deliver a new Regional Tasking Model, under which regional ACCs meet monthly with relevant stakeholders within their regions to monitor performance, demand and resourcing, identify areas of concern, discuss threats, and escalate issues where necessary. RDBs are held monthly in each region supported by new regional tactical assessment analytical products. These changes are reflective of action taken in response to our Annual Police Plan report of 2018[54] and improved demand analysis.

112. This effectively has formally introduced an additional regional tier to the tasking and delivery model in order to deal with issues at the appropriate level and only escalate if they represent a problem that is best dealt with at force level. The forum introduces a hybrid process which includes performance, resource co-ordination, cross-divisional support, and tasking of products and responses where necessary. This allows for increased consistency of tactical assessments and better reflects regional and local priorities. However HMICS notes that both levels of operational tasking may generate further demand on the APU, DPU and intelligence analysts to produce further bespoke or 'deep dive' analytical products and redesign of dashboard products. This was not part of the original scope of the DPU function and will impact on any planned work. As previously stated a robust prioritisation process for such work will be required as will consideration of the future capacity of the DPU.

113. HMICS found that clear processes which link tasking and co-ordinating to resource and workforce planning are not yet explicit. How the revised tasking and co-ordinating processes will impact on further demand for APU and DPU analytical products also remains unclear. However we recognise that the revised focus on more effective demand management is clear. HMICS is supportive of these changes in governance approach and will consider how to monitor their effectiveness in our scrutiny planning process.

114. HMICS considered the impact of demand products in a number of local policing divisions. We observed that significant progress has been achieved in G division in the development of improved analytical products which use demand, intelligence, performance and productivity/resource information to better support area and sub-divisional tasking and co-ordinating. Although not fully implemented across the division, HMICS considers this provides evidence of 'bottom-up' development of the revised tasking approach to complement the new regional and national arrangements. We are aware that other divisions are also following a similar approach and consider that it is essential that some degree of consistency (not requiring mandatory compliance) is applied across all divisions to eliminate unnecessary replication of development effort.

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[52] Corporate Finance and People Board (CFPB) Internal governance forum considering resource issues.
[53] See footnote 43 (ODDG).
[54] Recommendation 5, HMICS Thematic Review of Police Scotland's approach to the development and operational delivery of the Annual Police Plan (2018-19) (December 2018).

Use and utility of DPU products

115. As well as developing and maintaining the annual demand baseline product, the DPU has developed, with the support of ICT, interactive dashboards[55] which are essentially reporting tools which use the latest data[56] to present demand information in varying formats and detail to support divisional decision-making processes.

116. As previously noted (at paragraph 52) HMICS found that awareness of the demand baseline product was limited across the force. Whilst acknowledging some of the reasons for this, HMICS has found similar awareness and visibility issues with dashboard products developed for use in local policing divisions.

117. HMICS found that G division is now making effective use of dashboard products. And similarly it was reported that E and U divisions are also making progress. This is to be expected as these divisional commanders have experience of the DPP project and working with the DPU and therefore a high degree of awareness of the benefits to be derived operationally. However elsewhere we found limited awareness. This appeared to be related to a number of key issues:

- Lack of communication, awareness-raising and promotion of the dashboards
- Lack of follow-up support in the use of the dashboards
- Tendency to rely on traditional APU analytical products or tools
- Perception of limited analysis ('does not give me answers')
- Lack of understanding that demand information requires to be viewed alongside performance, intelligence and productivity/resourcing analytical products as well as traditional tactical threat assessments
- Awareness of DPU resource constraints and assuming they will not be able to assist - not engaging further to feed back or explore additional needs.

118. This has led to some limitations on the use of the dashboards, restricted communication and use of the dashboard beyond a select few in divisions, and some local solutions being developed and not shared. HMICS is therefore clear that in order to reap the full benefits of the dashboards further work is required to embed their use.

119. HMICS found that there is differential understanding that demand information is intended to be an enabler. For some of those we spoke to it was unclear why dashboard products did not provide 'answers', indicating a lack of understanding and awareness that the information should combine with other analytical products and professional judgement to support decision-making.

120. HMICS considers there is a real risk of silo'd approaches to local implementation and usage of demand dashboards and information. Whilst wishing to promote local delegated authority and local plan priorities, HMICS remains concerned that divisions are not fully embracing these new tools and not seeking advice or assurance from the DPU prior to undertaking further demand-related analysis work. As noted at paragraph 86, HMICS considers that regional ACCs can better support the take-up of these demand products as part of their leadership role.

Recommendation 9

Police Scotland should further promote demand products, including direct input and support to divisional management teams, regarding their use and benefits, as well as setting out the role, responsibilities and authority of the Demand and Productivity Unit and Analysis and Performance Unit in providing support and guidance.

[55] Dashboards developed using PowerBI software tool.
[56] Latest data in SEB-P repository is downloaded every 24 hours.

Recommendation 10

Police Scotland should ensure consistency and compatibility (not requiring mandatory compliance) in revised tasking and co-ordinating processes and the associated use of demand products across all local policing divisions.

121. The selection of PowerBI as the dashboard platform was highlighted as a key decision in the development of the demand approach. However as with all technology deployment, HMICS is clear there requires to be clear objectives and outcomes for functionality and implementation. With acknowledged limitations on DPU resources, there has been no formal training to divisional staff in PowerBI itself (although training in dashboard use was provided) or a cultural change effort to effectively implement and support the solution. This may account for the attachment which some divisions evidenced to the BIT Tool and SCOMIS.[57]

Deployment and delivery

Table 2 - Police planning and delivery steps

Step	Process Description
Strategic analysis	Identification of the current to long term issues, internally and externally, facing the force or division, identifying options for prioritisation.
Priority and objective setting	Engagement and governance process to agree objectives and priorities.
Planning	Developing and agreeing plans within a defined cycle.
Tactical analysis	Assessment using demand, statistical and performance information with supporting risk, response and results analysis focused at a tactical level.
Tasking and co-ordinating	Takes place at force and divisional level, and at strategic and tactical levels. Decision-making mechanism based on a full understanding of the problems faced enabling prioritisation of resource deployment.
Assessing delivery	Outcomes and impact assessed through a comprehensive performance management, evidence-based research and evaluation approach.

Source: HMICS APP Report 2018

122. At local divisional level, HMICS found that G division was able to clearly set out the decision-making processes and options for addressing risk/threat which are identified through consideration of demand, intelligence and other analytical products. These basically fall into a number of generic actions associated with risk/threat mitigation which support decisions on the need for prevention, intelligence, enforcement and reassurance actions:

- Change/adapt tactics
- Allocate resourcing
- Task additional products (analytical and/or intelligence)
- Escalate (beyond local capability)
- Evaluate (review results)

[57] The BIT Tool (database query tool) and SCOMIS (data repository) were developed to bring together force legacy systems after the creation of Police Scotland. These will be replaced by PowerBI dashboards and SEB-P.

123. This mirrors the potential secondary assessment set out in proposals for the latest baseline product which is designed to offer suggested action to address demands identified:

Figure 4 - Draft five 'T' model for demand response

Source: Police Scotland Demand Baseline - Refresh and Assessment Model Concept - report to ODB 27/4/21

124. HMICS identified a number of such delivery and resourcing decisions (at national and local levels) which were subject to robust results analysis to assess outcomes. This established whether changes to tactics or resourcing required to become permanent or further actions were required. We found this was mirrored in monitoring by the SWP function to assess whether resourcing decisions made nationally required further review. However we found that the results analysis process is less systematic in tasking and co-ordinating. Similarly there was limited effort to establish whether tactical resource decisions were cost-effective. This requires further consideration at all levels of the organisation to ensure that evaluation of impact on demand is considered.

125. Whilst these decisions are made at every level of the organisation on a day to day basis, HMICS found that demand products had provided new dimensions of information compared to traditional volumetric products. However there remained further degrees of demand complexity which divisions were keen to explore in order to better refine their decision-making.

126. The DPU are responding to this requirement with early consideration of a Crime Demand Index (CDI) to better assess complexity and response to certain incident/crime types. This should further improve understanding and evidence the complexities of crime demand, supporting workforce planning, resource management and organisational design. This is particularly relevant to assessing the time to undertake wide-ranging incident enquiries or investigation of complex crime. The Crime Harm Index (CHI) for England and Wales[58] is an approach for measuring the harm caused by crime through the lens of sentencing.

127. Our analysis of Force Management Statements from forces in England and Wales demonstrated that some were using the CHI, the ONS Crime Severity Score,[59] THRIVE, THRIVE+, MORiLE[60] and a number of other variants to better assess risk/harm in the management of demand.

[58] The Cambridge Crime Harm Index considers the measurement of how harmful different crimes are in proportion to others. The approach adds a larger weight to more harmful crimes (e.g. homicide, rape and grievous bodily harm with intent), distinguishing them from less harmful types of crime (e.g. minor thefts, criminal damage and common assault). Practically, adoption of a harm index can allow targeting of the highest-harm places, the most harmful offenders, the most harmed victims, and can assist in identifying victim-offenders. (Sherman, Neyroud and Neyroud, 2016).
[59] Office of National Statistics Crime Severity Score (2016).
[60] MORiLE - Home Office Management of Risk in Law Enforcement (January 2018).

128. HMICS also identified that there is a lack of clarity as to *'what demand is being measured against'*. Essentially this requires a response to the question *'how do we know we are meeting demand effectively?'* and relates to alignment to performance or quality standards. Meeting demand requires an organisation to assess whether the level of service provided meets a pre-defined or agreed standard or public confidence/satisfaction measure. If this is not part of the analytical picture, then demand can potentially be met in all cases but with poor service levels.

129. In our Independent Assurance Review - Police Scotland Call Handling: Update Report (May 2018)[61] we recommended that:

Police Scotland, through its Local Approaches to Policing programme, should develop a public contact strategy, which sets out a multi-channel approach to engagement and service provision and includes publication and monitoring of standards of service.[62]

130. Police Scotland has since developed its Public Contact and Engagement Strategy 2020[63] which commits itself to embedding consistent service standards which are clear and well-publicised. HMICS acknowledges that such standards exist in a number of areas of policing delivery but do not cover every area. We highlighted this again in our recent Crime Audit 2020[64] (March 2021). Such standards are essential in the development of both the Target Operating Model and the assessment of whether demand is being effectively met. HMICS also notes that with the introduction of additional channels of engagement through this strategy, it is likely that demand may increase for services.

Local workforce planning

131. HMICS found that at the specification of the SWP team, demand dashboards had been provided to divisions to inform the development of local workforce plans. However we were told that this information was found to be limited and extensive work was required by most divisions to develop their plans further. In terms of moving forward with local workforce plans (governed through local People Boards) there was a lack of clarity in divisions around how demand information would influence these.

132. HMICS identified that proposals to push as many requests for additional resources as possible back to budget holders to manage within their budget were to be implemented. This is based on the premise that in-year changes to resource levels and therefore budget should be avoided as much as possible and responsibility to deliver within existing resource levels should lie with the budget holder. This places a requirement on local and regional tasking and co-ordinating processes to more effectively link to workforce planning.

Resource Allocation Model

133. The primary high level objectives for the LPD project set out in the joint FBC in 2018 were to develop a fuller understanding of the current and predicted policing demand across Scotland, in order to review the current resource deployment model. It also set out to report and make recommendations on whether or not there was a need to realign resources and supporting structures to ensure service delivery meets the demand and needs of communities now, and in the future.

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[61] HMICS, Independent Assurance Review - Police Scotland Call Handling: Update Report, (May 2018).
[62] HMICS originally made a similar recommendation in 2008 to legacy forces which was re-stated as Recommendation 6, Independent Assurance Review Police Scotland - Call Handling: Final Report (November 2015).
[63] Police Scotland Public Engagement Strategy 2020 - Making our services more accessible, relevant and responsive to a changing Scotland, (May 2020).
[64] HMICS, Crime Audit 2020 (10 March 2021).

134. The key deliverables associated were to complete a review of local policing resources to ensure resources are aligned with demand and assess service response, support and deployment to achieve effective local policing service delivery and meet strategic objectives. The FBC did not include implementation of any particular model or prioritisation approach. The Resource Allocation Model (RAM), as it was initially known, was developed to fulfil these aims and objectives.

135. Development of the original RAM as part of the LPD project began in May 2019. Having developed in parallel with the demand approach, this initial iteration of the product was handed over to the DPU for further work and assurance in early 2020. The initial iteration of the RAM product produced a reasonably sound model presenting a number of operational scenarios. This initial model provided a simple table which gave a recommended proportion of local policing resources to each territorial division based on demand. The model also allowed for a discretionary resource allocation to each division, above that required to meet core demand, which could be varied based on the organisations prevailing priorities.

136. However it was acknowledged that key data requirements required significant further work.[65] The need for an updated approach reflected the further development of the demand methodology and the availability of new national systems and data sets to strengthen the model. HMICS found that there was a clear expectation that the RAM needed to better align with SWP work and should not be seen as a one-off product (being used as a planning tool to support organisational design).

137. At the point of our inspection fieldwork the RAM product had been renamed to the Resource Advisory Model. This reflected a shift in thinking around the purpose of the RAM. During our inspection thinking became further advanced in terms of the development of the RAM as a tool which could better inform decision-making around resource allocation and reflect mutiple scenario models, including variation of service levels, which might change such allocation. The tool was re-named again to the Demand Profiling Tool (DPT).

138. HMICS considers this evolution of purpose has been very positive and is more aligned to our expectation of a dynamic system of resource deployment reflective of demand and need, which effectively informs workforce planning and organisational design. The simplistic view of a product which allows a shift of resources across divisions on a regular basis would not allow for this more dynamic approach. However HMICS does acknowledge that a shift in resources for some divisions (E, L, Q and J) is a requirement well reflected in the strategic workforce plan.

139. HMICS does consider that there is still a risk that a reactive approach may be taken to any product/tool of this type without establishing the systems and processes which complement it. This is particularly pertinent to decision-making processes in the DDRB and its sub-groups.

[65] Police Scotland, Local Policing Programme - RAM (internal report) November 2019: *'Limitations within the methodology, mostly around data availability and reliability; and limitations within Local Policing which would prevent the most effective deployment of resources, even if the RAM was implemented'.*

Anticipation

140. In this section of the review report HMICS has assessed the approach to anticipation of future demand. We aim to provide assurance that Police Scotland is effectively forecasting demand, with transparency around assumptions and the basis for its model, and using this information to inform medium to longer term planning. We have also considered the role, capacity and capability of the DPU itself in meeting the needs of the organisation moving forward.

Forecasting

141. HMICS acknowledges that traditionally legacy forces, and now local divisions, have worked with local authorities, health boards and other local partners to share information to "map" and forecast community needs, using existing data sets on home ownership, employment rates, academic attainment, social demographics, health indicators etc. as part of the community planning process. This typically has allowed longer term strategies and plans to be developed through a deeper shared understanding of the communities being served. Such an approach to forecasting has relied on traditional techniques including environmental analysis, research, performance and statistical analysis and scenario planning. The inclusion of demand analysis allows the approach to be further strengthened and more fundamentally should increase the sophistication of organisational resource planning.

142. The original joint FBC for the DPP project set out a high-level objective to 'design, develop and implement an initial approach to predictive demand for Police Scotland including a methodology to review its accuracy and value'. The FBC does not specify what is meant by predictive analysis and forecasting, although it uses the terms interchangeably and together as 'predictive forecasting'.

143. References are made throughout the FBC to developing analytical services to support predictive policing, and the provision of better insights; the use of predictive algorithms to drive decision making and planning; predictive analysis reporting; development of predictive forecasting models and to operationalise predictive policing.

144. HMICS found that this objective has not been delivered, although we were told that this element of the overall approach had been deferred due to a number of factors including DPU resource availability, adverse reporting of various predictive models and tools being deployed in England and Wales,[66] and concerns regarding the efficacy of longer term forecasting of demand.

145. Our research has highlighted wider concerns relating to the use of artificial intelligence and machine-learning algorithms to make demand predictions in policing and how these may introduce bias.[67] However HMICS considers that clarifying the difference between what is termed as 'predictive analysis' and use of the term 'demand forecasting' will provide assurance that the primary focus for Police Scotland should be on strengthening the strategic planning approach.

[66] Crime prediction software 'adopted by 14 UK police forces' BBC News website (4 February 2019).
[67] Centre for Data Ethics and Innovation, Review into bias in algorithmic decision-making (November 2020).
Royal United Services Institute for Defence and Security Studies, Briefing Paper Data Analytics and Algorithmic Bias in Policing *A. Babuta and M. Oswald* (2019).

146. HMICS found that there was a reluctance to consider demand analysis as a forecasting tool for a number of reasons:

- Concern that forecasting will be subject to literal interpretation which would be maintained as potential targets by some stakeholders (forcing constant justification of any changes)
- Varied interpretation of forecasts
- Data gaps and quality issues would limit accuracy
- Potential interference or challenge to professional judgement
- Lack of understanding and trust in a data science approach and 'experimental' statistics[68]
- General risk aversion to moving away from a short-term reactive model of policing.

147. Demand analysis and management was routinely described to us as 'complex and difficult' and there was some reluctance to invest further financially and commit culturally to master this discipline as an organisation. HMICS found there is not universal belief that the outcomes of the work will lead to improved planning, or improved outcomes, rather there is some sense that it will result in a 'performance management culture' or that learned experience and seniority would somehow be devalued. In particular forecasting of demand is not seen as a priority for improvement.

148. HMICS acknowledges that the DPU has maintained an ambition to implement some form of demand forecasting but has been constrained by resources and re-prioritisation. In its original year 1 plan (see paragraph 34) the DPU aimed to develop data scientist capability in order to produce a predictive analysis and forecasting model. Training on time series forecasting for data scientists is now planned to support this work as well as increased use of statistical modelling and horizon scanning.

Benchmarking forecast approaches

149. As a point of reference for the presentation and forecasting of demand information, the HMICFRS qualitative analysis of Force Management Statements (FMS)[69] in 2020 provides a useful indicator of the experience amongst other UK forces, albeit that HMICS could not identify any specific good practice examples of demand analysis and management at cross-force level.

150. FMSs primarily require forces to set out the demand expected over coming years, an assessment of the resources they have to meet that demand, and the decisions being taken given the budget expected. Forces are required to establish the gap between current demand and the demand they expect in the next four years. A force's forecast of demand is integral to setting out the rationale for strategic, tactical and resourcing decisions taken. Some key observations from the HMICFRS analysis are pertinent to the current position of Police Scotland in terms of forecasting:

- There were few attempts to forecast and assess future needs - forces stated that it was difficult to forecast future changes, or estimated that demand in a specific area would increase without explaining or quantifying that view.
- Most forces were better at describing current demand than at analysing or assessing how that demand would change over time in different demand areas.
- Some forces asserted they would meet future demand, but other information provided did not suggest that the force could be confident in reaching this conclusion.
- Although most forces could highlight the challenges they faced and the actions being taken, they could not identify the future demand that the force did not expect to meet.
- There was considerable variation in the approaches used to forecast demand, and varying confidence in the precision and reliability of the forecasts.

[68] ONS, Guide to Experimental Statistics
[69] HMICFRS, Observations on the second force management statement submissions (January 2020).

151. HMICS considers that whilst Police Scotland have progressed well in developing their demand approach in some respects compared to other forces which rely on purely volumetric information, they are no further forward in terms of forecasting demand. This impacts directly on strategic planning as without a clear understanding of future demand, the force cannot have a full picture of the state of the workforce and other assets to meet those demands and plan accordingly. Overall, in comparison with other UK forces, we have assessed that Police Scotland has some way to go in terms of fully understanding and articulating its demand.

152. HMICS is aware that proposals to better develop the identification of emerging longer term trends are under development. A recent internal paper to ODB set out a process to consider future and emerging trends in more depth, and to extend the planning horizon to 2030-2040, including the development of outline future scenarios. This should enable future development of strategic direction, financial plans and transformation proposals and will require a mature demand forecasting approach. In particular HMICS considers that the development of short, medium and longer term scenario planning is essential moving forward.

153. The HMICS Thematic Inspection of the SPA (2019)[70] noted that the Board is responsible for ensuring that systems are in place to enable early notification to be provided to the Scottish Government about emerging issues which will impact on the operation or reputation of policing. Our subsequent recommendation was that both the SPA and Police Scotland should develop a forward planning system of proactive risk awareness and post-implementation scrutiny for policing policy changes which are likely to have an impact on public confidence. We would therefore suggest that demand forecasting as well as the longer term planning proposals are required elements of such an approach.

154. HMICS considers that to achieve improved medium and long term cyclical planning, there exists a need for improved analysis of demand information, combining demand forecasting and statistical trend analysis, appropriate governance of assumptions and well developed ethical controls.

Recommendation 11

The Scottish Police Authority and Police Scotland should commit to further development of the demand forecasting approach to support medium to longer term planning and decision-making.

155. HMICS recognises that forecasting the future is challenging, especially where underlying data may have gaps and quality issues. As noted previously, this is why it is important to explain the assumptions which are made about future demand. HMICFRS in its FMS analysis has noted some presentational points which we think are worth considering in the development of the forecasting approach:

- Indicating confidence intervals for forecasts was particularly helpful, as they indicate the degree of uncertainty.
- Many of the stronger responses presented their conclusions in graphical format, indicating the expected demand alongside upper and lower confidence intervals to demonstrate the degree of risk involved in their forecast.
- In future FMS iterations, forces will be encouraged to more effectively use statistical forecasts alongside demand analysis, preferably including confidence intervals or best and worst-case scenarios.
- Environmental scanning techniques can identify future scenarios where little or no data exists. Similarly, drawing on the experience of subject matter experts can help to assess future demand when demand and statistical data is lacking.

[70] Recommendation 12, HMICS, Thematic Inspection of the SPA (September 2019).

Demand and productivity unit

156. HMICS found Police Scotland has a clear appetite for better management and analysis of demand information and there is a general agreement that development of this capability is the right thing to do. However the DPU continues to operate within a Minimum Viable Structure (MVS) and has multiple specialist staff, many of whom are key single person dependencies, with some employed on temporary contracts without sustainable funding arrangements.

157. The DPU has demonstrated that it has the capability to deliver sophisticated analysis and tools that are of real benefit to the organisation. However the value added by the DPU is limited by its capacity to deliver rather than its capability and by the lack of a framework or plan that is informed by the strategic needs and tactical requirements of Police Scotland. The absence of such a plan, and the capacity to deliver it, leaves the DPU vulnerable to sporadic, uncoordinated tasking that can lead to an unhelpful juggling of priorities and tasks. This environment also adversely affects the ability of DPU to better engage with and serve the needs of stakeholders and customers across divisions. This then supports the self-sustaining loop of a lack of universal take-up and limited utilisation of DPU products.

158. The Analysis and Demand Transformation Initial Business Case presented to the Change Board on 2nd March 2021[71] provides a rationale for change and a recommended option for implementation of a new combined structure for the APU and DPU. However, the approach is guided by and focuses on the imperative to revise the organisational structure, roles, responsibilities and reporting lines whilst also making the case for supplementary funding, rather than to meet the specific demand analysis needs of Police Scotland.

159. HMICS considers this approach is to be expected given our own previous recommendation to urgently review the APU structure in 2018[72] and due to a lack of clarity regarding what Police Scotland and the SPA expect in terms of a future capability with regard to the analysis and management of demand.

160. The original Full Business Case approved in February 2018 detailed the aspirations at a point in time, based upon what was known and understood at that time. However since then, the Data Drives Digital programme and the associated business cases to develop the Target Operating Model for the Chief Data Office, Master Data Management, Force Wide Analytics Platform and General Data Protection Regulation (GDPR) compliance have established a different landscape of data management, data quality and data accessibility. Similarly, the COS programme has implemented a number of new national systems, with further systems still to be introduced, which significantly changes the legacy systems landscape.

161. HMICS found there was strong support for the DPU function and what it has achieved, however many were still unaware of their work or the added value that their products could provide. The role of the function had become entangled with that of APU, with many perceiving it as a 'business as usual' analysis function or associating it with legacy issues with the APU. HMICS identified there were a number of aspects to DPU work:

- Maintenance and development of dashboard/reporting products
- Maintenance, development and extension of SEB-P data repository, data catalogue etc.
- Quality and consistency of demand approach across Police Scotland
- Contribution to strategy development and delivery and structural reviews
- Developmental data science programme.

[71] Police Scotland Change Board, Analysis & Demand Transformation Initial Business Case, (2 March 2021) (internal document).
[72] Recommendation 8, HMICS, Thematic Review of Police Scotland's approach to the development and operational delivery of the Annual Police Plan (2018-19) (December 2018).

162. HMICS is clear that the DPU is an enabling function, currently operating without the required capacity to meet the aspirations of the force. These aspirations need to be made more explicit (see Recommendation 1 of this report) in order to properly specify the expected role of the DPU and design the capacity to deliver. However HMICS does consider that such a role should also include:

- National demand advice (on methodology and standards) and consultancy
- Quality assurance and compliance (demand-related data gathering and analysis)
- Refresh of the annual baseline (linked to strategic assessment process)
- Technical capability to develop cutting edge agile solutions in partnership with ICT.

163. This role does not necessarily align with the proposals set out in the Initial Business Case for APU/DPU transformation and therefore Police Scotland should consider further options for the DPU structure and level of resourcing as part of FBC development. This should set out a case for further development of the DPU function, investment in technology and training to ensure its future sustainability. HMICS also considers that further work is required to:

- Ensure that the DPU maintain a quality and consistency input into organisational restructures and strategy development
- Continue ongoing investment in training and continuous professional development (CPD) for all DPU staff, address single person dependencies and temporary contracts
- Better understand the role of data scientist and career and development pathway
- Review the constraints placed on DPU development by ICT prioritisation and resource availability
- Consider how analyst resource in divisions can better promote demand products and support demand analysis locally.

Recommendation 12

Police Scotland, in its development of the Full Business Case for the Analysis and Performance Unit re-design needs to include proposals for further development of the demand approach and the Demand and Productivity Unit itself.

164. In summary, HMICS is clear that Police Scotland requires to further invest in its demand capability and capacity as a matter of priority to properly secure the benefits set out in the original full business case and to further develop the approach.

Conclusions

165. The intended outcomes from this review and its publication were to:

- Provide assurance that demand products and information are being used effectively at operational and strategic level within Police Scotland to support policing delivery
- Provide assurance that the measures and baselines being used to assess and forecast demand are suitable in terms of professional practice
- Use demand analysis benchmarking to support Police Scotland's continued development of its approach and assure that best practice is being adopted
- Ensure that suitable capacity is in place to support a sustainable demand management function.

166. Drawing on the latest research and development of demand modelling across the UK and in other jurisdictions, as well as expert advice and independent professional judgement, HMICS has drawn a number conclusions regarding the four key aspects set out in our terms of reference.

167. We concur with the expressed view of the Chief Constable there has been significant development of the Police Scotland approach to demand analysis over the past few years. The force has come a long way toward a more sophisticated approach to analysing and managing its demand. This approach has been developed without the need for a mandated Force Management Statement (FMS) approach similar to that adopted by HMICFRS in England and Wales. However HMICS is clear that Police Scotland should be able to meet the same information requirements as set out in the latest FMS guidance if it is to truly demonstrate an effective understanding of demand.

168. Our analysis shows overall, in comparison with other UK forces, that Police Scotland has progressed well in developing a more sophisticated demand approach compared to other forces which rely on purely volumetric information. However it still has some way to go in terms of fully understanding and articulating the demand on its services. This is particularly true in respect of the forecasting of demand.

169. HMICS has validated that the original DPP project met all its deliverables. However assessing the value for money of this initial investment is challenging given the considerable movement in the approach which has developed over the past two years. HMICS has also assessed that the technical approaches being used to define and develop demand measures and baselines are appropriate and continue to mature. The DPU is to be commended in terms of both its professionalism and productivity in this respect given the constraints on its operating model.

170. HMICS found that although there is evidence of demand products and information being used effectively at operational and strategic level within Police Scotland, this is still inconsistent and not yet fully embedded as an approach across the organisation.

171. We have therefore identified a number of areas for further development of the approach which would place Police Scotland in a stronger position moving forward. This will strengthen the evidence-led approach to all areas of strategic, tactical and operational planning. In particular this will include financial, workforce, assets and policing response and will ensure that the force will be ready for future fiscal and operational risks and challenges.

172. This report is one of a number of assurance reviews planned to support the delivery of a sustainable policing model in Scotland post-reform and post-COVID-19. HMICS remains committed to the provision of independent audit, assurance and inspection toward this goal and improving policing service delivery to the public. Further assurance reviews will consider the delivery of the Strategic Workforce Plan and performance accountability around outcomes over the next 12-24 months.

Appendix 1 - Full Business Case

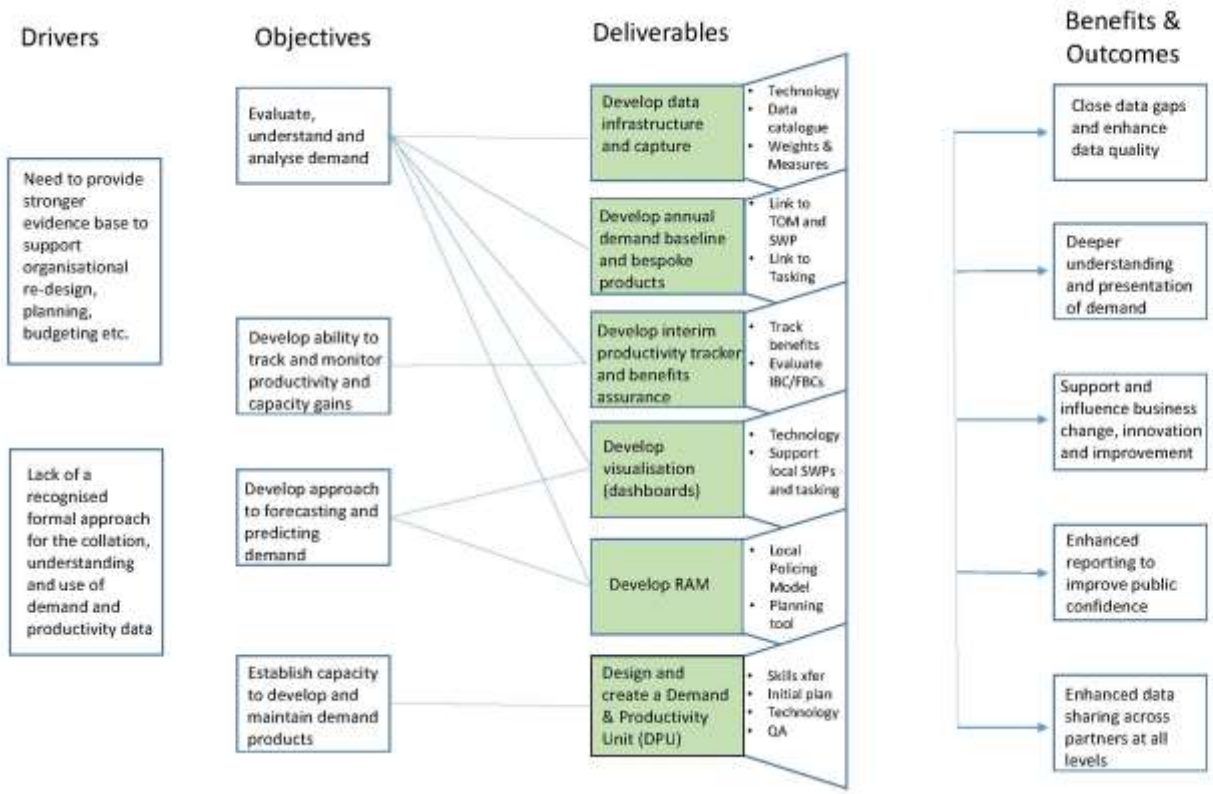
Assessment of Full Business Case - delivery of Objectives, Outputs and Benefits

Background

1. HMICS has considered the Initial Business Case, Full Business Case, End Project Report and Post Implementation Review Report as well as the evidence gathered during our review process to independently assess the outcomes from the original Demand, Productivity and Performance project. This should address the residual action from the SPA Resources Committee[73] to provide assurance in this respect. Any areas which HMICS deems as still relevant and outstanding will be encompassed within our review recommendations.

2. The FBC and subsequent evaluation and review reports focus more on the deliverables from the project rather than its benefits and outcomes. Our assessment has proved challenging in terms of the original structure of the FBC and we have therefore chosen to base this on an analysis of the FBC represented as:

Figure 1 - FBC analysis



3. As noted in our main review report HMICS considers the procurement of external professional services was appropriate as at the time of inception as there were insufficient internal specialist resources available to develop the approach. HMICS also considers that the use of external professional services provided a degree of independent assurance and benchmarking (expertise from developing other forces/agencies approaches) and research in relation to the initial approach to demand and productivity analysis and placed the force in a solid position to move forward.

[73] SPA Resources Committee, Private Items Action Log (Action RES-P-20201112-003 - DPP Evaluation Report).

4. It also brought expertise in developing a data repository to bring together cleansed information to support improved analysis and presentation of demand information. This has provided the fundamental infrastructure and capability for the demand approach to develop. However it must be acknowledged that the DPU has significantly developed the demand approach since completion of the original project.

Assessment of deliverables

5. HMICS has evaluated the deliverables from the original FBC and can validate that all were delivered as planned to suitable levels of quality.

Table 1 - FBC deliverables

Deliverable	Findings	Assessment
Develop data infrastructure and capture	The SEB-P data repository was developed and implemented as part of initial project delivery.	Delivery validated. The DPU has subsequently made significant progress in developing the data repository and associated 'take-on' and quality assurance processes.
Develop annual demand baseline and bespoke products	The initial baseline was developed for 2019/20 and a further iteration developed for 2020/21.	Delivery validated. Baseline for 2021/22 now in development.
Develop interim productivity tracker and benefits assurance	Tracker was implemented and continued to report for around 18 months.	Delivery validated. Benefits assurance now sits within the role of the Portfolio Management Office (PMO).
Develop visualisation (dashboards)	Dashboards have been deployed to local policing divisions and in other key functions e.g. missing persons.	Delivery validated. Further work is requiring on embedding and supporting dashboard use.
Develop RAM	The initial iteration of the RAM was completed to plan in September 2019.	Delivery validated. The DPU, having taken over responsibility for the product has made significant enhancements and further developed the product to become a more effective decision-making and planning tool.
Design and create a Demand & Productivity Unit (DPU)	The DPU was implemented and has been operating for almost 2 years, but has been consistently under-resourced compared to original specification whilst its remit has expanded.	Delivery validated. However sustainability of the current model requires to be addressed.

Assessment of benefits

Table 2 - FBC benefits

Benefit	Findings	Assessment
Close data gaps and enhance data quality	The DPU has developed a number of methodologies to address data gaps and has continued to develop the SEB-P repository. The work of the CDO has begun to address data quality.	Partial delivery. There is no short-term solution to data quality and gaps. However the implementation of new national systems and the Data Drives Digital programme will ultimately support delivery of benefits.
Deeper understanding and presentation of demand	As noted in our review, demand analysis and products have provided Police Scotland with improved insight into their effectiveness and efficiency in a number of key areas.	Partial delivery. Further work is required to develop the approach and promote products. The approach to forecasting is under-developed.
Support and influence business change, innovation and improvement	As noted in our review, there is no doubt that demand analysis and products have supported change in a number of key areas, however this remains limited and not systematic or culturally embedded.	Partial delivery. There is a lack of systematic approaches to areas such as failure demand, continuous improvement and governance and process linkages.
Enhanced reporting to improve public confidence	Whilst performance reporting continues to be strengthened, HMICS found limited evidence at national level and no evidence at local level of demand information and analysis being used to promote public confidence or satisfaction.	Partial delivery. Further work is required to enhance performance reporting and transparency of demand information and analysis.
Enhanced data sharing across partners at all levels	Some evidence of data sharing at national level (mental health) and at local level (community planning) was evidenced during our review. However there was limited sharing of demand information.	Partial delivery. The approach to data sharing across partners remains challenging in terms of development of information, reciprocal arrangements and risk aversion relating to GDPR.

Assessment of value

6. The deliverables from the original professional services contract were met, with a limited overrun of 6 weeks. HMICS acknowledges that the cost of this piece of work was queried by some as being relatively high for the return on investment, but considers that value was achieved.

Table 3 - DPP costs

Costs	FBC estimate	Project Forecast	Actual	Variance
Staffing	£1,656,956	£1,656,956	£774,646	**£882,310**
Cap & Reform	£1,468,000	£1,500,000	£1,518,258	**-£57,658**
Project expenses	£25,000	£25,000	£7,562	**£17,438**
TOTALS	**£3,149,956**	**£3,181,956**	**£2,300,466**	**£842,090**

Source: Police Scotland - DPP End Project Report (June 2019) and Post Implementation Review (Feb 2021)

- Overall the project was delivered below FBC original budget estimate.
- The project was under resourced throughout its lifecycle. On average the project ran with less than 70% of the required staff numbers. This resulted in an underspend on staffing costs.
- The majority of the reform spend was on professional services. The exception was the purchase of software products. The variance cost against forecast was for additional hardware and licences (**£57,658**).
- Professional services during the 6 week extension cost an additional **£28,350**.
- Funds were allocated for professional services to assist with the development of the RAM which amounted to **£85,132.**
- Expenses were paid for training and miscellaneous items. The funds were also used to cover the costs of travel and accommodations for stakeholder engagement roadshows. The majority of the allocated expense budget was not used.
- Police Scotland decided not to pursue (a) potential additional work to implement the RAM or (b) a future data analysis solution at that time.

Table 4 - DPU operating costs

Costs	FBC estimate	Full structure	Variance from FBC	MVS	Variance from FBC	Variance from full
DPU	£331,280	£485,822	**+£154,542**	£368,407	**+£37,127**	**-£117,415**

- The DPU structure was approved at Police Scotland Change Board in February 2019. Due to financial challenges a minimum viable structure was agreed.
- Figures in Table 4 include on-costs.
- Both the full DPU structure and MVS exceed original FBC estimates.
- There is a shortfall of £117,415 between MVS and the full structure which has not yet been addressed.

7. Table 3 shows a significant underspend on the projected spend with budget being deployed elsewhere in the transformation portfolio at that time. Assessing the value for money of this initial investment is challenging given the considerable movement in the approach which developed during project delivery and over the past two years. However an assessment of overall objectives provides that the majority of the initially approved objectives have been achieved.

Table 5 - FBC objectives

High level objective	Assessment
Design, develop and implement the initial functions and provide staffing for a new Demand, Productivity and Performance function to support Police Scotland.	Achieved
Design develop and implement an interim approach to measuring and reporting on productivity and capacity within Police Scotland aligned to the 3 Year Implementation Plan and Strategic Resourcing commitments.	Achieved
Design, develop and implement an initial approach to predictive demand for Police Scotland including a methodology to review its accuracy and value.	Not achieved
Improve and further develop bespoke internal and external performance reporting processes in-line with strategy, by addressing data gaps and enhancing reporting content and presentation at national, functional, divisional and local levels.	Partially achieved

8. Our review recommendations will address the outstanding areas in the objectives, deliverables and benefits which we have highlighted above. However clarifying the definition and profiling of benefits would further improve assessment in the future.

Conclusion

9. HMICS has assessed the deliverables, benefits and value derived from the original DPP programme. Whilst it is clear that all of deliverables from the DPP project were produced within negotiated timescales and budget, it is much less clear as to whether the benefits have yet been fully delivered. The assessment of these benefits has been limited to date and requires to be re-assessed as part of further business case development and subsequent PMO assurance processes.

Appendix 2 - Force Management Statements

1. Her Majesty's Chief Inspector of Constabulary (for England and Wales) first wrote to forces regarding the introduction of Force Management Statements in July 2015.

2. A force management statement (FMS) is a self-assessment which chief constables in England and Wales prepare and provide to HMICFRS each year. The approach was piloted in 2016 and then formally mandated in 2017 through a change to existing legislation.[74]

3. HMICFRS has consulted on the proposed design of the FMS, and published templates and guidance in 2018[75] and 2019.[76] FMS was deferred in 2020 due to the COVID-19 pandemic,[77] but guidance on FMS (version 4) is planned for publication in July 2021.

4. HMICFRS has set out a number of benefits of the FMS approach:

- The greatest value of force management statements is in determining how well each force **understands its demand and assets** and how it is **planning to meet future demand**, including by enhancing and replacing those assets with assets fit for the demand which they will have to face in years to come. It is inevitable that gaps will be revealed, but that is information which it is essential for the force and others to have, so that they may be remedied as far as possible with the resources allocated.

- Force management statements aim to simplify, strengthen and streamline the information which forces are asked to provide to HMICFRS. They allow HMICFRS to make decisions regarding a force's principal risk areas, and so design inspection fieldwork and analysis to focus on them. This will mean more focussed inspection fieldwork, and less of it.

- They also provide local policing bodies - police and crime commissioners and their London equivalents in England and Wales - with valuable information, to enable them to assess the forces for which they are responsible and the extent to which the objectives of their police and crime plans will be successfully attained, and at what cost. In these and other respects, local accountability of forces is enhanced and made more effective.

- Force management statements should not increase the data demand on forces which are already well-managed. They should reduce those demands, in some cases considerably. This is because they will require the production of information - in a common, standard format - which should already be possessed by every well managed force. They require nothing which a chief constable should not already know, and which they undoubtedly need to know.

[74] Policing and Crime Act 2017 Part 2, Chapter 6, paragraph 6a.
[75] HMICFRS, Force management statement templates and guidance (justiceinspectorates.gov.uk) (March 2018).
[76] HMICFRS, Force management statement templates and guidance - FMS 2 (May 2019).
[77] HMICFRS, Force management statement templates and guidance - FMS 3 (December 2019).

5. The basic requirements of an FMS have not changed substantially and fall into the following four steps:

- Step 1: Establish the difference between current demand and the demand that the force expect in the foreseeable future (at least the next four years).
- Step 2: Establish the current status of the workforce and other assets: their performance, condition, capacity, capability, serviceability, wellbeing and security of supply.
- Step 3: Explain what the force will do to make sure the workforce and other assets can meet the demand anticipated. Describe the expected effect of the planned changes and how this will be monitored.
- Step 4: Estimate the extent of future demand that the force expects to be met having made the changes and efficiencies in step 3. The force should state any demand that is expected to be **unmet** and what the consequences of not meeting it are expected to be.

6. These steps are applied to the majority of sections in part 2 of the FMS. The format of the FMS has also remained relatively consistent and consists of two parts with 12 sections:

- **Part 1: Summary**

This is a short summary of the principal issues highlighted in each of the sections of the FMS. A declaration to be signed by chief constable (or equivalent) confirming that the information in the statement is complete and accurate in all material respects is also required.

- **Part 2: Section 1: Finance**

This section is about the force's current financial position, the projected changes in income and expenditure, any financial gaps to fund the changes proposed in the FMS and how it is proposed to fill them. A medium-term financial plan should address the majority of information required.

- **Section 2: Wellbeing**

This section is about the force's overall approach to the wellbeing of the people who work in it. It should detail how well the force understands wellbeing and tracks progress in this area and provide an overall assessment of the force's wellbeing, and how it is expected to change.

- **Section 3a: Responding to the public - requests for service**

This section is about how the force deals with those who request a service from the police, especially those that require emergency or urgent responses.

- **Section 3b: Responding to the public - incident response**

This section is about how the force responds to incidents, including where they do not deploy a resource.

- **Section 4: Prevention and deterrence (neighbourhood policing)**

This section is about the force's prevention, deterrence and community-based activities to reduce demand and make the community more confident in the police. It should describe the force's activities at a community or neighbourhood level. This section should include an assessment of demand associated with alcohol and the evening and night-time economy.

- **Section 5: Investigations**

This section is about investigations and the demand arising from crime. It includes digital/online crime investigation, intelligence, custody, forensic services and the criminal justice function. Information on demand from volume crime which is not included elsewhere in the FMS should be included.

- **Section 6: Protecting vulnerable people**

This section is about how the force identifies and safeguards vulnerable people and investigates offences against them. This does not include the demand met as an initial response in section 2.

- **Section 7: Managing offenders**

This section is about the demand that arises from managing people who have been convicted of offences and/or who present a risk to others. This includes registered sex offenders, repeat offenders and anyone else the force is managing because of its own assessment and analysis.

- **Section 8: Managing serious and organised crime**

Serious and organised crime (SOC) breaks down at a national level into: prosperity (for example, cyber or economic crime); commodity (for example, drugs or firearms); and vulnerability (for example, child sexual exploitation, immigration crime or human trafficking). Reference to National Strategic Assessment and the force Strategic Intelligence/Threat Assessments to consider the force's capacity and capability against those threats should be included.

- **Section 9: Major events**

This section covers public order, civil emergencies, terrorism, armed policing and roads policing.

- **Section 10: Knowledge management and ICT**

This section is about how the force's intelligence, information and ICT assets make it more efficient and effective, now and in the future. It includes how useful, accurate, timely and secure data and information are and the systems and processes used to obtain, store, process, analyse and use information in the force. It should also include information on ineffective or inefficient ICT, the effect on the public response or the force's performance, and plans to improve the force's ICT.

- **Section 11: Force-wide functions**

This section is about the functions of the force not covered in other sections. This section should include, but not be confined to: HR functions; learning and development functions; and professional standards functions.

- **Section 12: Collaboration**

This is an additional section included after the first iteration of FMS at the request of some forces. Some collaborations may generate their own demand, or have resources allocated to making the collaboration work. This section is for the force to use, if required, to set out the demand and resource that comes with working in partnership or collaboration.

7. The completion of the FMS remains a contentious issue between forces in England and Wales and HMICFRS, although some view it as an opportunity for transparency over their demand for services and the challenges which they face. An HMICFRS FMS working group continues to meet involving a number of forces (with Police Scotland as an observer) to further develop the approach.

8. At this time, HMICS has no plans to introduce an FMS approach for Police Scotland but has clear expectations that Police Scotland should be working toward having a systematic approach to self-assessment as part of its continuous improvement and organisational learning approach. It should also have clear plans to develop its demand information and analysis to meet similar requirements to those set out in the latest FMS guidance as HMICS considers these to be core to developing a sustainable policing model.

Appendix 3 - Glossary

ACC	Police Scotland Assistant Chief Constable
ALM	Application Lifecycle Management
APU	Police Scotland Analysis and Performance Unit
Local committees	Each local authority has a Committee, which is designated to exert governance over local delivery of police and fire services as set out in the Police and Fire Reform (Scotland) Act 2012.
BIT Tool	Database query tool
C3	Police Scotland Contact, Command and Control Division. The majority of public contact with Police Scotland is by telephone through police Contact, Command and Control centres.
CAM	Contact Assessment Model - Police Scotland model for assessing calls to its 101 and 999 service that enables specially trained police officers and staff to make an enhanced assessment of threat, harm, risk and vulnerability.
CDI	Crime Demand Index (Police Scotland)
CDO	Police Scotland Chief Data Officer. Establishing the CDO Target Operating Model is one of four initiatives that constitute the Police Scotland Data Drives Digital programme.
CFPB	Police Scotland Corporate Finance and People Board
CHI	Crime Harm Index
COP26	26th United Nations Climate Change Conference of the Parties to be hosted by Glasgow in November 2021
COS	Core Operational Solutions programme
CPD	Continuing Professional Development
CSAE	Child Sexual Abuse and Exploitation
DCO	Police Scotland Deputy Chief Officer
DDICT	Digital, Data and ICT Strategy
DDRB	Police Scotland Demand, Design and Resource Board
Demand Baseline	DPU product setting out progress in data development and baseline information on demand analysis activity, used at multiple Police Scotland governance forums to inform discussion and decision making.
DPP Project	Demand, Productivity and Performance Project
DPT	Police Scotland Demand Profiling Tool
DPU	Police Scotland Demand and Productivity Unit
E Division	Police Scotland Edinburgh Division
Failure demand	A systems concept used in service organisations first discovered and articulated by Professor John Seddon as 'demand caused by a failure to do something or do something right for the customer'.
FBC	Full Business Case
FMS	A Force Management Statement is a mandated self-assessment, which chief constables in England and Wales prepare and provide to HMICFRS each year.
FTE	Full Time Equivalent refers to the unit of measurement equivalent to an individual worker
Force Wide Analytics Platform	One of four initiatives that constitute the Police Scotland Data Drives Digital programme, facilitating rapid delivery of data to enable additional business insight and will be the platform for developing future data analytics.

G Division	Police Scotland Greater Glasgow Division
GDPR	General Data Protection Regulation. One of four initiatives that constitute the Police Scotland Data Drives Digital programme.
HMICS	Her Majesty's Inspectorate of Constabulary in Scotland
HMICFRS	Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services (England and Wales)
IBC	Initial Business Case
ICT	Information and Communications Technology
J Division	Police Scotland The Lothians and Scottish Borders Division
JAS	Scottish Government Justice Analytical Services - provide statistical information and support relating to police and community safety, court affairs and offenders, prisons and matters relating to civil and international law.
L Division	Police Scotland Argyll & West Dunbartonshire Division
LPD	Local Policing Development Project
Master Data Management	One of four programmes that constitute the Police Scotland Data Drives Digital programme. Master Data Management seeks to establish a single record for nominal and locations linked to all operational data.
MI	Management Information
MVS	Minimum Viable Structure - the absolute minimum number of personnel and resources required to enable operation.
NIR	National Intelligence Review
NPCC	National Police Chiefs' Council
ODDG	Police Scotland Organisational Design and Delivery Group
ODB	Police Scotland Operational Delivery Board (National tasking group)
Operation Talla	The code name for the UK national police operation to address the requirements of the COVID-19 pandemic.
PMO	Portfolio Management Office. An organisation PMO supports the definition and delivery of a portfolio of change across the organisation.
Power BI	A Microsoft business analytics service which aims to provide interactive visualisations and business intelligence capabilities with an interface simple enough for end users to create their own reports and dashboards.
PPCW	Partnerships, Prevention and Community Wellbeing - the new national policing division established in Police Scotland from the former Community Safety Division in 2021.
PS	Police Scotland
Q Division	Police Scotland Lanarkshire Division
RAM	Resource Allocation Model. A methodology for determining where resources should be allocated within an organization**.**
RDB	Police Scotland Regional Delivery Board
RDU	Resource Deployment Unit
SCOMIS	Scottish Operational and Management Information System - legacy data repository
SCOPE	System for Coordination of Personnel and Establishment - Police Scotland in-house developed personnel management system
SCRS	Scottish Crime Recording Standard
SEB-P	Source for Evidence Based Policing - data repository

Service Catalogue	A service catalogue is a comprehensive list of services that an organisation or department offers to its employees or customers.
SPA	Scottish Police Authority
STORM	System for Tasking and Operational Resource Management - Police Scotland Command and Control ICT system used in service centres, control rooms and operational policing for incident management.
SWM	Standard Weights and Measures approach details the data points and measurements in use to ensure consistency of calculation, enabling meaningful comparison and transparency of reporting.
SWP	Strategic Workforce Planning - the process that proactively anticipates current and future workforce demand and supply in alignment with strategic business needs.
THRIVE	Threat, Harm, Risk, Investigation, Vulnerability and Engagement is a risk management tool that considers six elements to assist in identifying the appropriate response grade based on the needs of the caller and the circumstances of the incident.
TOM	Target Operating Model - The primary purpose of a Target Operating Model is to enable the application of the Police Scotland strategy and vision to its business and operations. It is a high-level representation of how Police Scotland can be best organised to more efficiently and effectively deliver and execute on their strategy.
U Division	Police Scotland Ayrshire Division