



Putting demand management at the centre of resource planning

In 2004, eager to exploit the benefits of variable shift patterns outlined in the Home Office review of that year, the Metropolitan Police Service (MPS) established a dedicated demand management function. Here we explore how the UK's biggest police force continues on its journey towards evidence based demand-led policing, highlighting the role of demand management software in overcoming initial pitfalls and outlining some of the financial benefits achieved so far.

When the Home Office advocated the adoption of variable shift patterns in 2004, the MPS was already a convert although it would be fair to say most of the patterns had not been designed on the back of any scientific approach. During the same year, a force-wide review with external consultants concluded that the MPS could benefit from demand led resource planning and, heeding their advice, the MPS created the post of a demand management consultant within the HR department. Tim Bamforth-White, the application manager on the organisation's resource management system (CARM), was selected for this role as part of a wider remit as a Policy Manager covering aspects of Police Terms & Conditions and Working Time. From the start, he recognised the extent of the challenge he faced: "With approximately 50,000 employees, the MPS is the biggest police force in the country, maintaining over 4500 different shift patterns across 80 BCUs. Furthermore, these 80 BCUs include several specialist and support units, many of which have different ways of measuring the demand placed upon them. The challenge was and is enormous."

Facing significant issues

Tim initially assessed demand management capability across the 32 BCUs, which have officer response duties. The issues facing him were significant. Quickly it became very obvious that there was no standardisation of working patterns across the force, with each BCU working independently. Indeed, as is common for many forces, some patterns seemed to have evolved over time in response to employee working preferences with little regard for the needs of the force. To complicate the situation further, many units were still operating rigid eight or twelve hour shifts that, again, took no account of the organisation's needs and certainly did not reflect demand. These inefficiencies were exaggerated further by a lack of demand management knowledge and basic understanding of Police Regulations. With no resource planning training at sergeant or



Inspecting rank level, basic errors were being made at a tactical level; training days were not being planned into shift schedules, therefore incurring overtime costs or a high proportion of re-rostered days, and there was a tendency among some managers to grant annual leave without first examining the resource implications. As a result, force-wide the organisation was needlessly accruing high overtime costs and significantly increasing the duty planning workload. As there was very little demand analysis in place within teams, these inefficiencies were left unchecked.

Embarking on a major programme of change

One of his first changes was the centralisation of the duty planning support function, combining the eighty-plus CARM databases that were dotted around the organisation into one manageable ORACLE database. Simplicity and structure, both in terms of use and support, were the aims.

Tim was clear about what needed to be done: “We recognised that, if we were to be successful, we needed to put a structure in place which would ease the move towards demand-led planning and provide the organisation with greater visibility in understanding what resources were on duty and equally importantly, what skills those resources had. We also understood that BCU commanders needed education and support if they were to be convinced of the benefits of change.”

Introducing a project management approach to demand-led planning

The team examined examples of best practice in resource planning already operational within other UK forces and took on board the recommendations from the Home Office review. Building upon this experience, they created the ‘MPS Shift Pattern Review Toolkit’. Designed as a step-by-step guide, the toolkit adopted a project management approach to shift pattern review, design, implementation and evaluation. Using the toolkit, each BCU command team is able to consider all aspects of resource planning, from the consideration of basic patrol planning principles e.g. safety levels and crewing policy, to guidance on shift implementation and evaluation.

A fundamental component of the approach is an understanding of statutory requirements, notably, the Working Time Directive (WTD) and Police Regulations. To facilitate this, the training programme at Hendon was restructured to incorporate specific modules based on level and complexity of use and familiarisation with regulatory considerations, and with the full support of the Police Federation it also became a feature on Supervisor training courses. It was envisaged that



by learning about the regulatory framework, understanding of and adherence to statutory issues would become second nature for duty planners and resource managers.

Overcoming barriers to change

The toolkit was made available to the force in 2005 but initial take up was disappointingly slow. It quickly became apparent that there was a reluctance to embark on the change that adoption of such an approach entailed. The first issue was one of perception. Perhaps somewhat typically, each BCU considered itself to be unique, with a set of demand requirements that could not be met by a 'fit all' toolkit. Certainly, there are huge differences in the policing needs of BCUs. Southwark, for example, faces significant challenges resulting from the diversity of its population; more than 150 languages are spoken in this one borough. However, despite their different characteristics, with the notable exception of Westminster, which as the seat of government and with the West End experiences more unusual policing issues, the demand profiles of response policing across the London boroughs are very similar. Indeed, the different London BCUs face the same peaks and troughs in demand that reflect working and social patterns across the UK. As forces like North Wales and Merseyside Police have shown so well, variable shift patterns can be used to harness these profiles and produce significant efficiency savings that more than outweigh the difficulties caused by change.

The reluctance to adopt new shift patterns was widespread but it was the inability to convince BCU commanders of the benefits of the approach that was the biggest hindrance to the project. Tim: "The adoption of demand-led resource planning requires stakeholder support and certainly in the early days this was not forthcoming. There was a 'if it's not broke don't fix it' approach to resource planning and, without stringent performance management indices to link high overtime costs and low officer availability to resource planning, there was no impetus for change."

State of the art working pattern design software

A key milestone in the continued development of the toolkit was the inclusion of specialist software to measure demand and create appropriate demand based shift patterns. Early in 2007, the Home Office invested in the leading work planning software XIMES from Process Evolution, a business improvement organisation well known for its work within the emergency services sector. In an effort to convince organisations of the benefits of demand-led resourcing, this licence was made available to all English and Welsh forces. Recognising its potential, MPS leapt upon this opportunity.



Tim again: “It was crucial that we were able not only to provide a demand management framework but also the tools required to deliver the solutions and engage with stakeholders. We had complete confidence that XIMES was the tool that would enable us to do this.”

Slowly proving the benefits

Initially, Tim used XIMES to redesign shift patterns within the force’s press bureau, a small and discreet project to pilot the benefits of the software. The bureau’s eight full time staff were working a ‘hybrid’ four week shift rota with four part time staff equating to an additional two FTEs. However, staffing abstractions were not properly accounted for and, consequently, overtime on either extended shifts or at weekends, was high and non-sustainable with resource gaps appearing on unpopular shifts, such as Saturday Lates. Using XIMES Tim showed how, by employing two additional FTEs, the bureau could meet all its demand without incurring overtime. This would be achieved by adopting staggered shift starts (with built-in shift relief factors to account for known abstractions). Even allowing for the two new FTE appointments, this demonstrated potential savings of £35k per annum.

Similar savings were demonstrable at the Air Support Unit (ASU) where the introduction of variable shifts using XIMES showed efficiency savings of up to £50k a year were possible. The ASU had a 24/7 rostering requirement which was being met by six Police Staff Controllers working twelve hour shifts (two Days, two Nights, followed by four Rest Days). Each flight requires three officers - a Pilot, Controller and Observer. The rigid twelve-hour shift approach was leaving the team short of staff and, as a result, it was common for the Observer to assume the Controller role, with the Observer’s shift covered by overtime or flight capability being withdrawn or reduced. In the previous twelve months, 116 shifts were ‘lost’ to sickness, training days and other abstractions, resulting in 47 overtime shifts and 69 shifts being covered by Police Officer Air Observers. In short, the inability to cover abstraction resulted in 20% of all shifts being covered by someone other than the person posted!

Tim is convinced that the MPS can make this kind of saving on a much larger scale: “By matching resource availability to demand for just one team of six officers, we were able to demonstrate significant efficiency savings – and that’s without considering the efficiency savings made in terms of reductions in the duty manager’s workload. Just imagine the savings MPS could make if the toolkit is embraced force-wide.”



The tide is turning

Tim believes the tide is now turning. The decision to formally educate duty management and planning officers about statutory requirements is paying off; duty managers and planners feel more comfortable with the statutory element of roster scheduling and the force is benefiting from fewer resource planning mistakes and hence, improved efficiency. Those BCUs who have already adopted the Toolkit can clearly see the benefits; the evidence-based approach of the toolkit enables them to objectively justify their pattern of work and also provides a benchmark for continuous review.

And the message about matching resources to demand is slowly being absorbed across the force. The majority of the 32 response BCUs are now moving to variable shifts, with only a handful maintaining fixed shift patterns. Ealing BCU is currently undergoing a shift review. It approached Tim so that it may benefit from the toolkit approach and the capability of XIMES and move from their existing pattern to a more demand led variable pattern. Ealing will also be one of the first to benefit from a new tool within the MPS Shift Pattern Toolkit, Process Evolution's new Response Profiler software. Response Profiler, the sister product to XIMES, enables organisations to determine the optimal level of response resources to meet demand, expressed as daily and weekly requirements. The resulting demand and resource profiles are then fed into XIMES to produce appropriate shift patterns and rotas.

A new function to reap the benefits of variable shifts

Understandably, the MPS is keen to fully reap the benefits of variable shift planning and has recently created a new function, the Patrol OCU, to achieve that. This Patrol OCU will examine how well BCUs respond to demands placed upon them by Londoners. A key part of its remit will be to focus on how shift patterns and supervision contribute to their ability to meet the demand. It will also look at compliance with Working Time Regulations and the management of cancelled rest days, which currently constitute a huge challenge for MPS.

Despite himself moving on to become the Director of HR's staff officer, Tim will retain an active interest and overall corporate responsibility for resource management projects, but welcomes the creation of the Patrol OCU: "It was always going to be challenge to move BCUs away from their predilection for fixed shift patterns but slowly we have moved to a more variable model that is bringing small but significant benefits. With the Patrol OCU's help, and those of other key



stakeholders, notably the Central Team responsible for CARM, plus national recognition from the NPIA who have endorsed the toolkit as good practice, I hope that very soon the MPS and indeed other Forces will be able to reap the enormous benefits offered by a truly optimised demand management approach to response policing.”

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