



WHITEPAPER

Making the business case - Gaining decision making knowledge

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ABSTRACT

Making a business case for change is one of the most fundamental steps in any project, programme or portfolio and one not unique to any single sector or industry.

When you then also have a major transformation programme underway within an existing portfolio the business case magnitude is immediately multiplied ten-fold. So as a result how do you then manage and progress multiple but bespoke cases in their own right in terms of having the right decision making knowledge in relation to the whole programme as well as collectively aligned across the overall portfolio?

This paper gives a brief insight in to a real scenario when the UK's largest Police service in early 2017 was embarking on a second phase of its transformation programme with circa 90 different projects across 12 programmes. Based on both volume and complexity of business cases the UK's largest Police service Finance Headquarters (HQ) identified the immediate need for business case justification support via modelling, analytics and accountancy in commissioning RINA for support.

The paper reveals in the form of summary sections the background and some of the unique problems encountered, the solutions given and benefits realised. It also where possible draws parallels where solutions could be used in other sectors.





INTRODUCTION

It is usually a very long, windy and sometimes rocky path that takes you from the very small beginnings of questioning what to do next faced with the need to realise savings whilst keeping the organisation going as a business? The endless discussions of the why's, how's, where's, whose and maybes have taken their toll but finally you are there, the hard mile has been earned and a change programme has been identified as the solution and way forward and is now defined, agreed and commenced. This situation is not unusual across many sectors and both small to large corporations alike but then if not immediately at the onset perhaps a little way in you come to realise both the enormity and extent of what has been started. This realisation comes in the form of the size, scope and pure number of projects, their requirement to get their respective business cases through to agreement stage and all against those original timescales set at commencement. A tsunami of business cases at various stages needed yesterday. Whilst positive in one respect, they start giving a clear map to the future, where each supports growth with a request to secure funding, an ability to develop and communicate a clear course of action, a capability for management of cash flow and last but not least the outline plan for a strategic exit.

However and conversely the problem areas are now three fold, the pure volume of cases across the whole programme, the need to assess if they are conflicting programme wide and lastly how can you support each of these cases in building credible background information with full option appraisal to get to the optimum option. All perhaps with no or little decision making expertise, knowledge and people in house?

This is where the UK's largest Police service was in early 2017 with circa 90 different projects across 12 programmes all vying to progress their respective business case with a high number needing support in business case justification via modelling, analytics and accountancy. With more than 43,000 officers and staff, the UK's largest police service has 25% of the total police budget for England and Wales. As the geographical area it Police's changes and crime continues to evolve, it aims to continually transform further whilst facing financial challenge and greater public expectations of policing and key objectives. To address these objectives a transformation programme and Portfolio was been put in place.

In the first phase of transformation the UK's largest Police service delivered a lot, driving out £600m of savings without negatively impacting operational effectiveness. The second phase is where it commissioned RINA for support in gaining decision making knowledge capability that it required.

BACKGROUND

A business case by its very nature will be very unique in terms of how it address's a business problem, issue or goal and the document should mature in terms of credible support information as it moves through the stage gates of strategic outline case, outline and then full business case (and maybe some stages in between). Depending on the complexity of any case this will take time in getting from start to completion but after all it is only a single case. After phase one of the programme, phase two finance and the justification of all cases were deemed critical therefore accuracy was paramount in maintaining the operational effectiveness. So, how do you even start when there is a now a high volume of cases each at differing phases across stage gate approvals and how do you assess that there are no conflicts across the programme for example duplication or even competing areas collectively across the overall portfolio?

How do you assess the impact of business case initiatives and the impact that they will have collectively on your current infrastructure for example information technology (IT) and current supplier contracts?

How do you even approach providing robust estimates of net cashable savings, or benefits, arising from business-wide efficiency gains derived from the replacement of core IT infrastructure with a new integrated system? Plus to get indicative costs where you do get a user friendly procurement model template bespoke to the need, for the implementation of a new business-wide IT infrastructure upgrade?



The UK's largest Police service was probably not unique as a larger organisation in also having to replace no less than four core policing and three supported systems with a single integrated IT system, a very complex programme in its own right. And finally, how can you support all cases in building credible background information and any outputs are correct to the appropriate level with full option appraisal to get you to the optimum option? These were just a small selection of the problem areas faced by the UK's largest Police service Finance HQ and RINA team.



SOLUTION

RINA were commissioned to provide the decision making expertise, knowledge and people for the Police service Finance HQ and the overall investment appraisal framework support in whatever area was required be it part of the change portfolio either directly for a project or pan programme. Solutions were developed taking a bottom up approach via individual projects whilst keeping the strategic emphasis of the portfolio. This therefore ranged across a number of areas which included Strategic outline plans & cases (SOP's & SOC's); Benefit development via templates to detail level; Cost benefit analysis (CBA) including initial rough order of magnitude (ROM) and Investment appraisals (IA's).

For decision support, it included Programme finance & capital plans (PFP's); Tender evaluation; Validation and Verification (V&V) via bespoke modelling tools; Independent cost estimates (ICE's); Outline & final business case expertise (OBC & FBC's); Benefit analysis; Risk & Optimism Bias (value); And lastly but not leastly included, Baselining budgets and financial reporting; Portfolio cost benefit analysis tool (bespoke modelling); Business case process and programme gateway review and rectification. In summary, any area for the justification of the business case through gaining decision making knowledge. To address the problem areas posed (within the background section of this document) a number of solutions were put in place. A selection of these are described as follows. Portfolio Cost Model On arrival at the Police service, one of the very first activities undertaken by RINA was the Portfolio Cost Model. They identified the need for an overall portfolio tool which could collate the cost and benefit data from the circa 90 projects, which were spread across 12 separate programmes, into a single solution where data could be sorted and filtered on various attributes. The Finance HQ identified very early both the enormity of the task and the need for a dedicated resource with time and skills put the tool together.

RINA provided the expertise required and the tool building commenced with one of the primary aims of making it as user friendly as possible for handover and future usage. This aim was centered on practical things such as ensuring the file size remained workable and setting up links to enable the user to manipulate the data within other tools. By addressing this aim it ensured that the tool would integrate well with Police service practices and assist both with their monthly reporting of figures and the prioritisation of projects across the portfolio. On completion for the very first time one single tool with over 200 different data sources gave clear visibility across each of the programmes. The same tool could also give alignment visibility across the overall portfolio, invaluable in a transformation setting. It also included the ability to compare separate sources of data which could be utilised to view actuals vs business case vs capital plan, a key building platform for the Police business environment.



Without this tool, there would have been an ongoing struggle to unite the circa 90 separate projects together in order to achieve an overall view on the cost of the portfolio. Furthermore, you would not have been able to complete a prioritisation exercise to determine how best to split the limited budget and which projects could be delayed for another financial year. Finally, this tool also increased realisation in to how much change was not only affordable, but also achievable within a single financial year based on the resource constraints of the change team.

Whilst designed and built for the Police the same model approach could be used in any sector where there is a similar structure of multiple individual projects building to a portfolio of work. In fact, further modifications have been identified that would further enhance the usage being (a), including prerequisites to look at sequencing of the work and (b) the pilot tool required manual updating of data sources, however, if the sources were all stored in a central place and conventionally named, the model could also have the ability to read data with minimal manual changes.

Charging Model

Given the nature of the transformation almost all projects required a technology or information technology (IT) interface with the current infrastructure and the Police were no different to other industry sectors. The Portfolio Office as a result needed to fully understand the number of providers for IT support and any potential impacts on the contracts; be that fixed price implications or variable price implications. The need was therefore identified for a model which split out the fixed price and variable elements of each of the IT contracts and then to pinpoint the underlying drivers. The model also included an interface for the user to be able to increase and decrease these drivers to find out what the price implications were. Such drivers were found to have been the number of users, number of devices, number of applications etc. This task required a review of original contracts to identify the fixed/ variable split and then the build of a model with a pricing catalogue for the variable elements. As the contracts were across a number of different suppliers, each with their own constraints and clauses within the pricing structures, unique solutions were developed to ensure the pricing was consistent.

There was also a requirement to ensure the model would still function seamlessly without the data sources needing to be open; as it wasn't deemed user-friendly to have multiple workbooks open, when one would suffice. In developing the model, it gave the Police a central point to analyse the financial impact on their information technology contracts; which had previously been spread across a number of different sources, in various challenging formats. This vastly reduced the FTE (full time equivalent) effort required to establish the IT resource required across the organisation. It also provided complete visibility of the pricing structures within the contracts, and enabled full understand of future contractual impacts on their decisions, which led to more robust business cases for change within the portfolio.

This particular model was tailored very much to this specific situation however the logic of the model could be applied to industry wide. In setting up an original model that has to be bespoke to the sector, client and contracts future changes could then be instantly calculated across pricing elements.

Net Benefits Model

The initial brief was to develop a tool capable of providing robust estimates of the net cashable savings, or benefits, arising from business-wide efficiency gains derived from the replacement of core IT infrastructure with a new integrated system. By reducing the complexity of its existing IT systems (i.e. transitioning from 7 discrete databases to a single unified solution), the Police envisaged significant reductions in the amount of staff time dedicated to data entry and search requests. With the cumulative time savings converted into full-time equivalent (FTE) posts and transacted into headcount reductions, as a part of a multi-million pound cost saving exercise. Independent assessment of the clients' preliminary tool revealed a number of methodological inconsistencies, resulting in an over-inflated figure for the estimated net cashable savings.

Consequently, the Police approached RINA to provide the necessary skills and expertise to develop a tool capable of accurately modelling efficiency savings across an organisation spanning 6 business groups and circa >42,000 personnel. With this in mind, tool development focused on a robust methodology, combined with an intuitive user interface to facilitate ease of use post-handover. As part of the tool design process, it was necessary to re-examine the underlying assumptions of the original tool. This highlighted a number of flaws, including the principle that all time saved was deemed cashable, regardless of the duration of the saving (e.g. 1000s of work hours saved annually through the accumulation of sub-minute savings across a large workforce). To resolve this issue, a graduated and customisable cashable time threshold was built into the new tool, to provide a more realistic estimate of the achievable time savings.



Customisable business group profiles were also added to the model, enabling the client to specify different cashable time thresholds for staff in different branches of the organisation. In addition to this, the new tool was also designed to handle a range of other user defined benefits and dis-benefits, via categories including: GBP (£), FTEs, FTE %, Efficiency (%), Inefficiency (%) and Quantity. Through an in-built cross-referencing tool, all declared benefits and dis-benefits are referenced back to the tools' base unit of GBP (£). The ability to model a range of parameters in a single tool gave the Police greater flexibility, enabling them to more accurately model complex business-wide transformation processes, and estimate the net benefits in cash terms.

Modelled results are output through a combination of graphs and data tables, providing yearly breakdowns of the net cashable benefits, as well as the total net cashable benefits versus dis-benefits costs for each business group. The redeveloped tool offered the Police a streamlined platform to model and analyse, a range of different scenarios and outcomes using a clearly defined methodology and set of assumptions. Using a standardised methodological approach, in conjunction with master and cost data assumption lists, gives greater confidence in the modelled output, enabling key strategic decision to be made with confidence in the underlying data which in turn reinforced the decision making knowledge.

By using best-practise modelling techniques, the tool built for this client could be easily and quickly adapted for use in a range of other business sectors for similar purposes. Without the reappraisal of the original Police model assumptions, in particular, the concept of all time saved being cashable, the calculations may have significantly overestimated the amount of cashable time saved, which was to inform headcount reductions, potentially leaving them significantly understaffed. This would have negatively affected capabilities, resulting in reduced effectiveness and poorer service provision.

Pricing Template

The Police also requested a new user friendly procurement model template, for use by shortlisted suppliers to submit a fully costed procurement solution for the implementation and 10 years support of a new business-wide IT infrastructure upgrade which dovetailed with the business case stage gates. Also there was a need for providing End User training and support to the client and approved bidders, as well as data analysis of the submitted solutions to facilitate the budget holder decision making process. Building on previous work by the client a new version of the model was developed with the aim of significantly improving the End User experience, by streamlining the workflow and simplifying the user interface.

As such, significant emphasis was placed on visual signposting to guide the End User through the model, by highlighting required data table entries and restricting access to other areas, when, or where, data was not required. To ensure client satisfaction with the implemented design changes, regular consultations were held to review development progress and discuss future changes and additional functionality. To ensure the rapid turnaround of supplier bids, training and Q&A (question & answer) sessions were arranged for all of the approved suppliers in order to smooth knowledge transfer and gain feedback on the model design. Where possible, requested changes were made to simplify the End User experience, whilst maintaining the integrity and key data capture requirements of the client. A key matter raised by both the client and suppliers was the need to ensure that file size remained workable against increasing requirements for data capture.

By simplifying the workflow and removing extraneous, or redundant, functionality, it was possible to meet both parties' needs for sufficient data resolution and document portability. In addition to training, supporting documentation detailing the model workflow, as well as user interface and data capture expectations was also provided in the model. Post-development client support consisted on comprehensive data analysis of the supplier bids in order to support the clients' decision making process. To do this, analysis of previous supplier bids was conducted alongside current bids, to assess cost evolution over time. Data analysis consisted of comparative analysis of monthly and yearly spending, timings of key spending, and breakdowns of spending allocated against labour and materials for implementation and support phases. Contingency spending was also reviewed as proportion of the total project spend, as a means of assessing supplier confidence in their proposed solutions.

The solution has enabled the client to identify key differences in the proposed supplier procurement solutions, allowing them to effectively evaluate project costs against their own requirements within a considerably shorter timeframe that would have otherwise been possible using internal resources. By opting to rebuild the supplier pricing template and provide clear training and support, the Police have been able to streamline the purchasing process, tailoring the model and supplier needs. This has enabled greater transparency between the selected suppliers during the bidding process, facilitating faster bid turnaround, with fewer queries bid returns.



Verification & Validation

In order to certify that the outputs of all models created are correct to the appropriate level, verification and validation (V&V) whereby an independent party who has not been involved in the model build undertakes a check of both the methodology and assumptions used. The primary purpose of this process is to ensure that the model and its outputs are fit for purpose; as a result, the degree to which V&V is required and the level of scrutiny applied are directly linked to the end purpose. For example, if the output is intended as an early indication/ rough order of magnitude (ROM) then an internal cursory check by a team member and agreement of assumptions with an SME (subject matter expert) is sufficient.

If however, the output is intended to drive a significant decision as was the majority of business cases then a far more in depth V&V was required by a third party entirely unrelated to the model build and assumption making process which in the case were RINA personnel not linked directly to the HQ activity.

The two elements of the process; verification and validation ensure methodology and assumptions independently. Verification is designed to highlight any actual functional errors within the model but can also highlight potential for error should the model change slightly or be extended. It will also assess the methodology used and its appropriateness for the purpose i.e. include assessments on the application or lack thereof of uncertainty.

Validation is designed to assess the readiness of assumptions for their intended purpose. By using Data readiness level (DRL) against each assumption in order to achieve an overall assessment of the state of the output, where the lowest scores are applied to estimates with no evidence of source or method and the highest scores are applied to actual contracted values. The overall score which is deemed acceptable is also dependent upon the purpose of the output i.e. for a ROM, a lower DRL is acceptable whereas for a final business case approval, a higher DRL would be required. In some cases, it would also be appropriate to ask for a totally independent party to produce an independent estimate for comparison.

This V&V process has potential applications across all sectors against any analytics service to ensure that the methodology is fit for its intended purpose. However even the best modellers with the best intentions make mistakes. Without V&V these mistakes are propagated into the final model and when then used for decision making can provide false expectations and have serious repercussions. By carrying out appropriate levels of V&V, we are mitigating this risk and providing additional confidence to decision makers that the evidence in front of them is a true representation.

IPS (Integrated Policing Solution)

In having to move from the four core policing and three supported systems to a single integrated IT system the Police had previously undertaken a tendering exercise for the application, which resulted in the down-selection to three remaining bidders. RINA provided SME's for the VfM (value for money) decision making, both in support of the down selection of the preferred bidder, framing the VfM decision in the FBC and financial control of programme costs during the assessment phase. The solution and main focus of these SMEs was carrying out 'Treasury Green Book' compliant investment appraisals. The solution also required expert financial modelers who were adept in mapping costs and benefits into a compliant model that was V&V and could in turn inform the VfM decision.

To progress this a robust Budgeting & Forecasting tool that was able to analyse and pinpoint those areas that caused budgetary pressure. However the key to the solution was the ability to communicate the financial position to the senior stakeholders where the ability to present those VfM concerns were key to the Programme progressing to the next stage of the life cycle. In making the Treasury Green Book Compliant financial models the main focus there was a need for complete transparency around costs and that all financial models need to stand up to scrutiny through the V&V process and ultimately VfM decisions were informed through by robust decision making outputs.

Other activity areas included Risk Analysis, Monte Carlo Simulation, Optimism Bias and Sensitivity Analysis which all provided a new layer around governance and providence of data. The VfM decision at OBC stage was predicated on the basis that the programme delivered a number of financial benefits that could be harvested through Police Officer efficiency savings. By delivering the robust benefits delivery tool, it more accurately reflected those financial benefits that should be captured in the Investment Appraisal and Affordability models and inform the VfM decision.

This took into consideration inputs and concerns from Senior Police Commanders and the result of this analysis meant that very early on, decision makers understood the importance of the non-financial benefits that could be further articulated in the FBC and by default getting key stakeholder buy in sooner than later.

CONCLUSION

It is noted that this paper has given but a very brief insight in to this real scenario but expectantly giving the reader a feel of business cases and their need for answers to the questions posed. The summary sections aimed to give the background and some of the unique problems encountered, the solutions given and benefits realised and also where possible drew parallels where solutions could be used cross sector. In reality the teams faced an ever expanding workload with RINA providing a wide ranging and variety of skill sets that covered both financial accounting, modelling, analysis and the wider project, programme & portfolio management, benefits, risk and overall support. As a result the suite of business case process documents were able to transition through the programme gateways quicker or areas for rectification clearly recognised with the necessary support available. This all contributed working in partnership to develop the Police's internal capability further and giving a lasting legacy.



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