

## Chief Constables' Council

Please select intended audience: **Chief Constables Council**

### Title: CAV Target Operating Model Options

### Agenda Item: Session 1 - Regional

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<b>Force/Organisation:</b>	NPCC
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<b>Coordination Committee:</b>	Crime and Operations
<b>Portfolio:</b>	NPCC SOC Portfolio and Roads Policing Portfolio
<b>Attachments @ Para</b>	Appendices 1-4

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<https://www.gov.uk/government/publications/security-policy-framework/hmg-security-policy-framework#risk-management>

When completing the Chief Constables' Council submission template the below 3D model agreed at the December 23 meeting should be reviewed and the paper written against for completion and final submission to the respective Coordination Committee and then onward to the NPCC Business Support team managing Chiefs' Council via CCC [ccc@npcc.police.uk](mailto:ccc@npcc.police.uk)

Decision	Discussion	Dissemination
<ul style="list-style-type: none"> <li>• If the item is for decision, what is/are the decision(s) that are sought from council?</li> <li>• Has it been through the relevant Committee first? Is the decision appropriate for delegation?</li> <li>• Has it been through the Regional process?</li> </ul>	<ul style="list-style-type: none"> <li>• If the item is for discussion, is it for discussion with Chief Constables, all Chief Officers, Heads of Departments, a particular Committee?</li> <li>• If it is for a group other than Chief Constables, use the relevant forum. If it is for Chief Constables, be clear on the points for discussion.</li> </ul>	<ul style="list-style-type: none"> <li>• If the item is for information only, who is it for? Can it be disseminated via another route than CCC, such as ChiefsNet, email, or an All Chief Officers Day?</li> <li>• If it is purely for Chief Constables, be clear on why it needs to come to CCC for dissemination.</li> </ul>

Please indicate what the paper is requesting: **Decision**

## 1. INTRODUCTION/PURPOSE

### Purpose

A proposal was made in April 2025 by the NPCC Roads Policing Portfolio Lead to establish a dedicated portfolio and team to manage UK Policing's response to CAVs.

The decision presented in this paper to NPCC Chief's Council is to approve the preferred Target Operating Model option for this dedicated portfolio and team.

This document has been developed in consultation with stakeholders across NPCC (including Crime, Operations and DDaT), BlueLight Commercial, Department for Transport (DfT), Home Office, **\*\*S23\*\***, Sensitive Equity partners in UKIC, PDS, and ROCUs. The TOM options have previously been presented to both NPCC Crime and Operations Committees.

### Context

The Connected and Automated Vehicles (CAVs) industry is transforming at pace. The speed at which vehicle autonomy and connectivity are progressing presents a series of immediate threats to policing, particularly for frontline officers dealing with road traffic collisions and pursuits, where existing capability will erode without direct action on CAVs.

This document uses the following definitions for CAVs:

- Connected Vehicles (CVs) can communicate with the internet and other devices (phones, other vehicles, infrastructure, etc.) over a wireless network. The level of connectivity varies by vehicle and

model, however most new cars sold today have a degree of connectivity and therefore fall into this category.

- Automated Vehicles (AVs can perform all or part of driving tasks, under all or certain conditions. AVs are not currently on the road in the UK. However, this is expected to change from later in 2026.

The evolution towards CAVs presents significant opportunities for UK Law Enforcement, including:

- **\*\*S31(1)\*\***
- **\*\*S31(1)\*\***, including the safe resolution of pursuits, investigation of road traffic collisions and road-based offences
- **\*\*S31(1)\*\***
  - Prevention and detection of crime
  - Improved fleet efficiency and road safety
  - Reduced environmental impact

It also introduces new challenges, including:

- **\*\*S31(1)\*\*** There is a requirement for a more coherent approach to understanding, managing, mitigating, and counteracting these operational risks
- The above point creates a need to carry out procurement, fitting and hiring of vehicles in a more informed and agile manner
- The need for updated legislation to govern policing and the general use of new technologies
- Through this and revised training, policies and procedures, to ensure the lawful, proportionate and ethical use of advanced vehicle capabilities
  - Engaging Government on legislation and regulation
  - Engaging industry on protocols and MoUs
  - Achieving a single NPCC position on the above challenges

The need to cohere the policing and wider law enforcement approach to these challenges and opportunities has been understood for several years, but with mixed results as efforts to do so have suffered from a lack of clear ownership in policing. Automated Vehicles has been owned thematically by the NPCC Roads Policing Portfolio but the Serious & Organised Crime Portfolio (Sensitive Equities), Forensics Portfolio and Digital, Data, Analytics and Technology and others have all had a vested interest and have worked to varying degrees with Home Office Science, Homeland Security, the Office of the Police Chief Scientific Advisor, the Department for Transport, vehicle manufacturers, telecoms operators and more.

A point has now been reached whereby continuing with the current absence of a clear mandate and executive accountability is not defensible, so it is a necessity to deliver an operating model which sees the opportunities and threats presented by Connected and Automated Vehicles exploited and managed in a cohesive, efficient and agile way for policing and the public.

## 2. BACKGROUND

### Problem Statement

By the end of 2026, CVs are projected to represent nearly 100% of new vehicle registrations in the UK<sup>1</sup>. In parallel, the AV industry is projected to be valued at up to £42bn by 2035, with HMG having committed £150m to the Pathfinder Programme already<sup>2</sup>.

Today, policing's response to CAVs is spread across NPCC portfolios, including Roads, SOC, Digital Forensics and Data. UK policing's response to CAVs faces multiple challenges. These include:

- \*\*S31(1)\*\*
- \*\*S31(1)\*\*
- \*\*S31(1)\*\*
- \*\*S31(1)\*\*
- \*\*S31(1)\*\*
- Training and skills development to enable effective use of CAV information in day-to-day operations, as well as managing and using CAV Fleet vehicles.
- The ability for policing capabilities to maintain pace with the CAV industry speed of development, impacting the technology and data collection, as well as risk exposure. This includes the ability to be ready to respond to incidents related to Automated Vehicles, with trials in the UK expected as early as April 2026 enabled by the Automated Vehicles (AV) Act 2024<sup>3</sup>.

## 3. SUMMARY OF PROPOSAL/REQUEST FOR FUNDING

*This should also include which stakeholders internal/external have been consulted on and any possible impact assessment (i.e. officer / staff abstraction or local resource required) which may apply.*

### Summary of Proposal

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<sup>1</sup> [Unlocking connected cars with corporate business building | McKinsey](#)

<sup>2</sup> <https://www.gov.uk/government/news/driving-innovation-38000-jobs-on-the-horizon-as-pilots-of-self-driving-vehicles-fast-tracked> and <https://www.gov.uk/government/news/backing-british-industry-government-launches-25bn-drive35-programme-to-power-uk-auto-investment-and-jobs>

<sup>3</sup> [Driving innovation – 38,000 jobs on the horizon as pilots of self-driving vehicles fast-tracked - GOV.UK](#)

This proposal recommends a Target Operating Model (TOM) for the NPCC to set out a coherent approach to mitigate benefits and realise the opportunities relating to CAVs.

This paper sets out four potential TOM constructs. These have been developed in significant consultation with stakeholders across law enforcement, including policing, UKIC, Home Office and DfT. NPCC Crime and Operations Committees have also been briefed as part of this engagement, with additional briefing and engagements with CC Jo Shiner, AC Louisa Rolfe and DCC Wendy Gunney.

This paper seeks approval to proceed with the preferred Option (Option 2 – Consolidated Capabilities). This seeks to build on existing NPCC governance with CAV-specific sub-portfolios grouped around Prevent, Exploit, Prepare and Protect. This option enables a single CAV Lead, reporting into both Crime and Operations Committees, to set clear strategic direction, with a consolidated set of capabilities logically divided between SOC, Roads Policing, and Fleet.

## **Funding**

There is no funding request within this paper.

Given the limited availability of investment to fund new resource, it is recommended that the required resource and proposed operating model use existing funds available.

The recommendation is for an existing Chief Officer to be identified to take on the CAV lead role as an additional responsibility. It is recommended that the CAV Lead identifies a supporting staff officer to support the governance and co-ordination activities required to undertake the role. Similarly, identified sub-portfolio leads would be required to take on these roles, in addition to existing day to day responsibilities. This means no new investment is being sought to deliver the preferred option.

Should investment be available, the estimated resource costs and supporting implementation and mobilisation activities (outlined below) is estimated to be between £350k and £600k per annum. This would enable dedicated funding for a Chief Officer CAV Lead, as well three funded supporting roles. Examples of these could be:

- Prevent Lead (responsible for roads/ operational policing capabilities)
- Data and Technology Lead (responsible for data lifecycle and governance/ digital and technology capabilities)
- Defensive Security Lead (responsible for defensive security capabilities)

### **3.1. Strategy**

The following reflect the strategic objectives of the new portfolio:

- Set a clear mandate and ownership for CAV strategic direction for policing, creating the governance and communication channels to set priorities and deconflict these (where necessary) from wider policing priorities.

- Establish consistent policy and standards to equip policing to operate effectively and respond to the risks it faces and to work closely with colleagues in policing, wider law enforcement and UKIC. This includes providing dedicated CAV specific capabilities – for example, data, digital and technology as well as Forensics.
- Ensure that officers apply an informed, victim-centred approach to any CAV-related collisions.
- Enable officers to respond with the right capabilities (including with overt and covert tactics) to CAV incidents in the Protect, Prepare, Pursue and Prevent context.
- Engage with Industry and Government on legislation, regulation and MoUs.

Adopting a coherent Policing approach to CAVs aligns with wider HMG strategies. These include:

- **2026 Roads Safety Strategy:** aligning to Themes 2 (taking advantage of technology, data and innovation) and 4 (robust enforcement to protect all road users), to scale and implement technology innovation to improve road safety.
- **Police Reform White Paper:** aligning to creation of new national policing model and technology and AI ambitions by presenting a single UK policing response and set of capabilities to CAVs, enabled by data and technology.
- **NPCC Strategic Plan:** aligning to Strategic Objectives 2 (to provide operational coordination and response to threats) and 3 (to promote the adoption of science and technology) by establishing a clear, co-ordinated national response to CAVs.
- **NPCC Problem Book 2025:** aligning to Problems 1 (how can we best improve our capture and analysis of digital evidence?) and 8 (How can policing design out the opportunities for criminal activity emerging from synthetic content, connected vehicles, and smart technologies?) by providing a response to the capture and analysis of digital evidence and the opportunity to ‘design out’ potential for criminality associated with CAVs, supported by structured engagement with the CAV Industry.
- **NPCC Fleet Strategy 2024:** aligning to key challenges related to connected and automated vehicles by directly addressing stated challenges around digitisation and the impact of automated vehicles on policing fleet.

### 3.2. Delivery Plan

The following section details outlines the steps required to move from the preferred TOM option to mobilising this over the next 12 months. The steps outlined are identifying the resource to stand-up a new CAV portfolio and the enabling support recommended to set it up for success. Please see section 3 for a summary of the investment considerations.

#### Establishing a CAV Lead

To establish a dedicated CAV lead for the preferred TOM option a new chief officer will need to be identified. Chief Officer is the appropriate level given the significance of the CAV portfolio and for parity with the leadership of other NPCC portfolios. The recommendation is for an existing chief officer to be identified to take on the CAV lead role as an additional responsibility. This is on the basis of the role

requiring this level of seniority, but supported by dedicated sub-portfolio and capability leads, as outlined in the governance structure.

### Effective Mobilisation

We recommend that the following points regarding the implementation of a new CAV operating model are considered by the CAV lead upon appointment:

- Detailed TOM design, funding approach, decision rights and governance Terms of Reference.
- Identification of required resources to deliver the change, as well as dependencies on other stakeholders.
- Formal programme setup to establish the preferred TOM Option for the next 12 months.
- Development of OpSy guidance to address key gaps in policy, and management of currently unmitigated CAV risks through existing NPCC risk management processes.

### Evolving the TOM Over Time

Whilst Option 2 is the preferred and recommended option, it is recognised that it has a level of flexibility within it, so that it can be adapted over time. With the Police Reform Whitepaper and the National Police Service (NPS), the CAV Portfolio’s structure may need to adjust to wider changes in law enforcement, as well as wider changing priorities for day-to-day policing. To manage this, it is recommended that the proposed governance structure reviews and manages this as the TOM is established and develops over time.

## 4. OPPORTUNITIES AND RISK – What are the strategic, operational and/or tactical opportunities, benefits and risks associated with the funding request and the proposed strategy/deliverables outlined above?

### 4.1. Opportunities

As detailed in the Introduction, the following CAV opportunities reflect potential focus areas for a new CAV related portfolio.

- \*\*S31(1)\*\*
- \*\*S31(1)\*\*
- \*\*S31(1)\*\*
- Prevention and detection of crime
- Improved fleet efficiency and road safety
- Reduced environmental impact

### 4.2. Benefits

The successful delivery of a CAV Portfolio is expected to deliver multiple benefits to policing. These are detailed in Figure 1 below and can be summarised as:

- Maximising opportunities - to use tactics and information in investigations and intelligence

collection and regular industry engagement and connection.

- Increasing operational effectiveness - including through the collection and exploitation of CAV information, consistent CAV-specific capabilities (particularly related to data, digital and technology).
- Reducing risks – including mitigating risks to officers dealing with CAV incidents, protection of personal and police data and reducing operational security risks.
- Non-financial efficiencies – primarily through reduced duplication of effort, consistent guidance and standards (with particular focus on better protecting victims of kidnap and serious injury).



### 4.3. Risks

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## 5. OPTIONS

This section identifies the design principles that helped inform the TOM options and details the potential TOM options available.

### **TOM Design Principles**

To inform the development of the TOM options, a set of design principles were developed collaboratively with stakeholders from NPCC, DfT and wider CAV Working Group members. The design principles outline that:

1. There should be a focus on the outcome of delivering a coherent response to CAVs across policing.
2. The design should provide a consistent and authoritative voice on CAV issues, both internally to policing and externally on behalf of policing.
3. All reasonable efforts to align with and support Police Reform and the Fix Converge Merge programme should be made in developing the TOM options.
4. It should be sufficiently agile to ensure it remains fit for purpose even as criminality, policing, regulation, and technology evolve.
5. It should reflect the constrained financial position of policing over the current spending period by aiming to embed cost efficiency and by identifying options for prioritisation.

### **CAV TOM Options**

Four potential TOM Options have been identified to deliver the CAV strategic objectives and adhere to the above design principles. These include a baseline 'Do Nothing' option.

	Option 1 <b>Do nothing – ‘business as usual’</b>	Option 2 <b>Consolidated capabilities</b>	Option 3 <b>Matrix structure</b>	Option 4 <b>Single portfolio</b>
<i>Summary</i>	A distributed operating model where capabilities are governed by 9+ existing portfolios, with an (interim) lead Chief Officer for the thematic.	Capabilities consolidated into a smaller number of new or existing portfolios. There is a CAV Lead for the thematic as a first amongst equals.	Structure defined by both functions and domains with joint responsibilities for direction, with a CAV Lead.	A new portfolio created covering all CAV-related capabilities, which operate as sub-portfolios. A CAV Lead leads the portfolio with a clear mandate across all these capabilities.
<i>Alignment of Capabilities and Roles</i>	<ul style="list-style-type: none"> <li>NPCC capabilities split across 9+ Portfolios under 5 coordination committees: <ul style="list-style-type: none"> <li>Crime (SOC, Forensics)</li> <li>Ops (Roads Policing)</li> <li>Science &amp; Innovation (AI in Policing, OPCS)</li> <li>DDaT (NTB, NDAB, PIAB)</li> <li>Finance (Fleet, Procurement &amp; Shared Services)</li> </ul> </li> <li>Single (interim) thematic lead – currently under Roads Policing Portfolio</li> </ul>	<ul style="list-style-type: none"> <li>CAV Lead continues in Ops or moves to Crime as most impacted CCs. Working group across portfolios to take joint decisions.</li> <li>Potential consolidation as follows: <ul style="list-style-type: none"> <li>Prevent risks associated with changing nature of CAV crime continue to sit under Volume Crime &amp; Roads Policing.</li> <li>Fleet takes lead responsibility for managing Protect defensive security risks, with support from Procurement, SOC, NDAO &amp; PIAB.</li> <li>New sub-portfolio under SOC takes responsibility for covert EXPLOIT risks/opportunities; new sub-portfolio under RP for overt.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>CAV Lead as Option 2 but with clear mandate to take decisions on topics related to CAVs.</li> <li>Domain leads develop key products. Domain leads for Strategy; Policy/Standards/Regulations; Defensive Security; Data Lifecycle; People &amp; Skills; Digital &amp; Tech. These leads could be temporary and time-limited; periodic; or permanent standing areas.</li> <li>Vertical leads for business areas e.g. Roads Policing; Sensitive Equities; Fleet. They advise on products and apply into their business area.</li> </ul>	<ul style="list-style-type: none"> <li>CAV Lead as Option 3</li> <li>Sub-portfolios based around Prevent, Protect, Exploit as Option 2; key difference that these are sub-ordinate to overall lead.</li> <li>Advisory support from broader NPCC but mandate and responsibility for decision-making on the topic sits within the portfolio.</li> <li>There are multiple possibilities for the structure and placement of a new portfolio. These are undergoing continued development and assessment to determine the optimal approach.</li> </ul>
<i>Advantages</i>	Retains current ownership, with no requirement for additional capacity or roles.	<ul style="list-style-type: none"> <li>✓ Provides clear strategic coherence across the model.</li> <li>✓ Retains a level of decision-making and delivery responsibility within existing portfolios.</li> <li>✓ Minimises structural change.</li> <li>• Leverages existing NPCC structures and governance.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Aligns cross-portfolio expertise to reflect the broad nature of CAV risks and opportunities.</li> <li>✓ Retains operational control within existing portfolios.</li> <li>• Ensures subject-matter experts remain responsible for delivery.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Effectively coheres a coordinated response to CAVs.</li> <li>✓ Provides the most direct input into cross-cutting decisions (e.g., policy, standards).</li> <li>• Enables more centralised coordination while still aligning with existing NPCC portfolio governance structures.</li> </ul>

<i>Disadvantages</i>	<ul style="list-style-type: none"> <li>✘ Continued duplication of activities across portfolios and forces.</li> <li>✘ Leaves a significant gap in operational security decision-making for CAVs, leaving key risks unmitigated</li> <li>✘ Very limited co-ordination of activities between portfolios</li> </ul> <p>Limited capability to maximise the CAV specific capabilities required, particularly re. data and tech.</p>	<ul style="list-style-type: none"> <li>✘ Potential for divergence on cross-cutting enablers.</li> <li>✘ Risk of duplicated activities across portfolios.</li> <li>• Success depends heavily on having an effective, well-represented CAV Working Group.</li> </ul>	<ul style="list-style-type: none"> <li>✘ Increases governance and coordination complexity.</li> <li>✘ Places a higher burden on leadership.</li> <li>✘ Introduces a risk of slower decision-making.</li> <li>• May not support the time-sensitive need for NPCC to respond dynamically to emerging CAV threats.</li> </ul>	<ul style="list-style-type: none"> <li>✘ Adds additional governance burden through sub-portfolios reporting to multiple portfolios.</li> <li>• Limits autonomy in decision-making due to increased oversight and reporting layers.</li> </ul>
<i>Summary</i>	<b>Discounted</b>	<b>Preferred</b>	<b>Discounted</b>	<b>Possible</b>

Table 2.2: Summary of Options

Each option was assessed against its alignment to critical success factors (CSFs), and ability to realise CAV benefits and ability to mitigate CAV risks. Below provides a summary of this analysis. Please note that the full analysis is detailed in the supporting documentation.

<b>Appraisal Component</b>	<b>Option 1 Do Nothing</b>	<b>Option 2 Consolidated Capabilities</b>	<b>Option 3 Matrix Structure</b>	<b>Option 4 Single Portfolio</b>
Critical Success Factors	1.6 - Very Low to Low	4.0 – High	2.2 - Low	3.6 – Med to High
Risk Assessment	1.3 - Very Low	3.8 – Med to High	2.9 – Low to Medium	3.6 – Med to High
Benefits Assessment	1.2 - Very Low	4.6 – High to Very High	3.5 – Med to High	4.5 – High to Very High
Overall Score	1.4 - Very Low	4.1 - High	2.9 – Low to Medium	3.9 – High
<b>Summary</b>	<b>Discounted</b>	<b>Preferred</b>	<b>Discounted</b>	<b>Possible</b>

Table 3 3: Summary Analysis of Options

Option 2 has been identified as the preferred TOM option, as it has scored the highest overall mean average of 4.1 (High). It is noted that Option 4 is also a strong option, with an overall mean average score of 3.9 (Medium-High). Due to their lower scores, Options 1 and 3 have been discounted.

Option 2 is selected over Option 4 due to both the higher score and the following reasons:

- It provides a single point of accountability and mandate.
- Option 2 has stronger alignment to both Crime and Operations committees, with a lead reporting to both as opposed to a portfolio under a single committee in Option 4. A benefit of this construct is to effectively communicate tasking from and across both committees.
- Option 2 retains a greater level of decision-making and delivery responsibility within existing portfolios whilst obtaining strategic coherence under the CAV lead.
- Roles in Option 2 have greater alignment to existing portfolios so can better utilise existing staff and stakeholder relationships in current roles.

### **TOM Options Summary**

This section outlines what each TOM option would look like, building on the high-level descriptions above.

## Option 1 – Do Nothing – DISCOUNTED

Option 1 is the current way of working. This consists of an Interim Thematic Lead and a spread of capabilities across 9+ portfolios and 5 Coordination Committees. This model does not support the NPCC to effectively respond to CAV technologies, both in mitigating risks and exploiting opportunities.

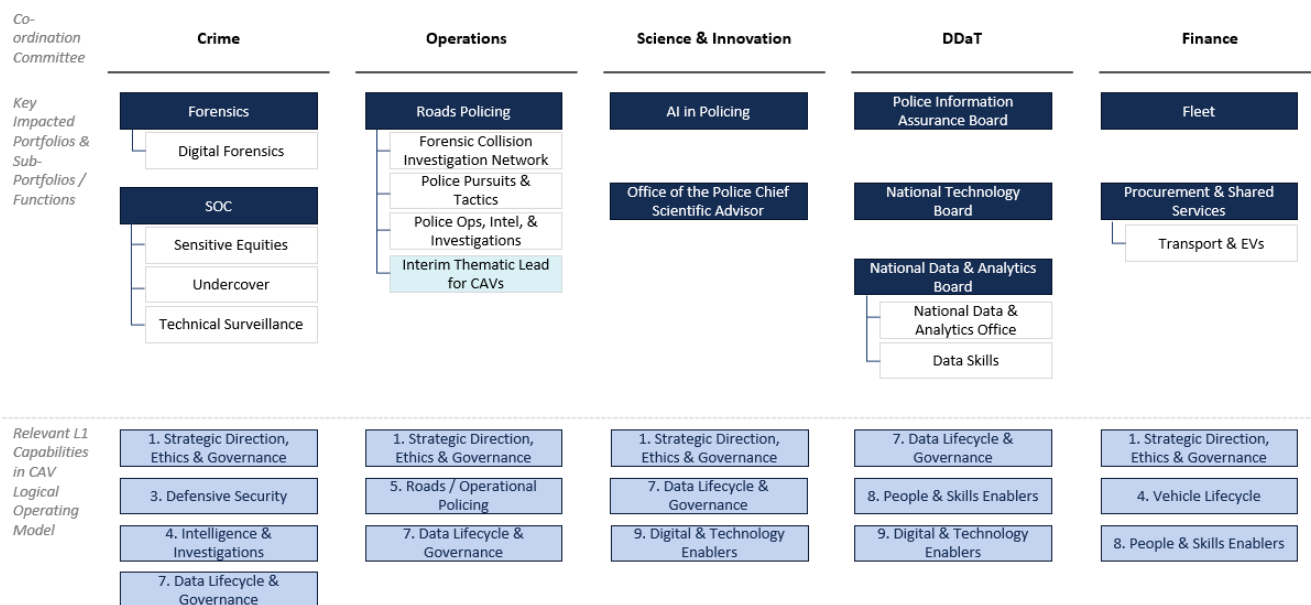


Figure 2: Option 1 - Do Nothing

## Option 2 – Consolidated Capabilities – PREFERRED

Option 2 consolidates CAV capabilities into a smaller number of existing portfolios in the NPCC governance construct. These CAV-specific sub-portfolios are grouped around Prevent, Exploit, Prepare and Protect. This option enables a single CAV Lead to set clear strategic direction, with a consolidated set of capabilities (in sub-portfolios) empowered to tackle current risks and exploit opportunities.

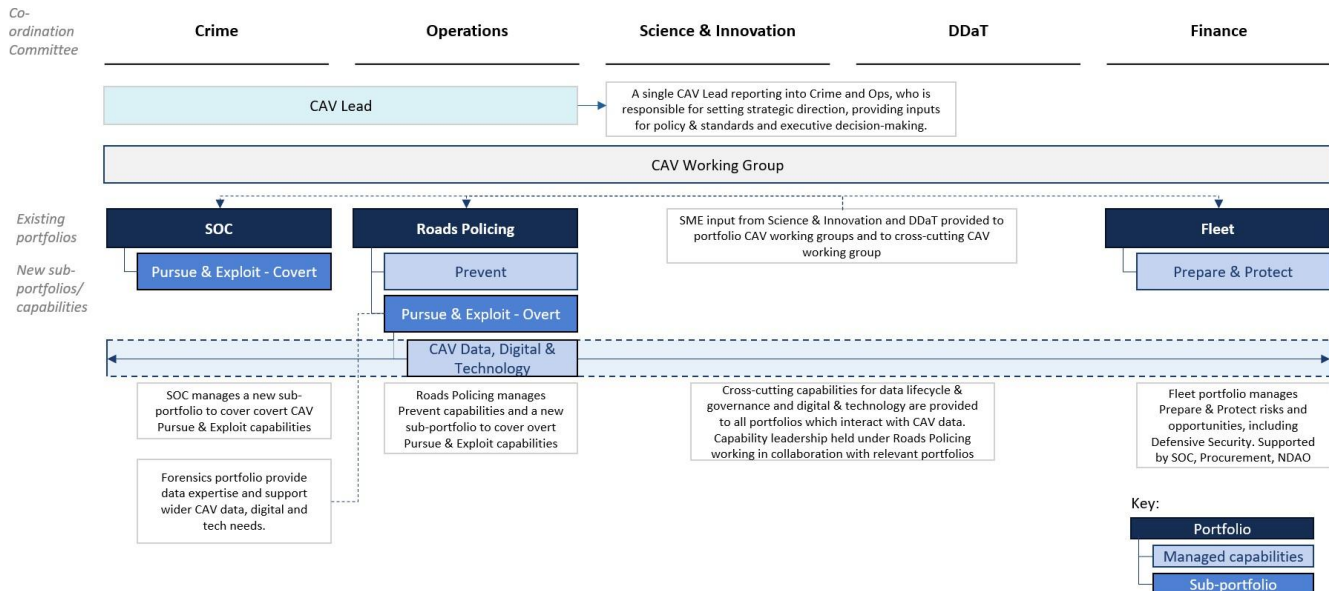


Figure 2: Option 2 - Consolidated Capabilities

Each sub-portfolio and capability has an allocated lead, with additional roles for a defensive security lead and a data and technology lead. There are three CAV working groups under SOC, Roads Policing, and Fleet portfolios to build and coordinate CAV capabilities in each business portfolio. An overarching CAV Working Group is chaired by the CAV Lead and representatives from the portfolios to enable cross-cutting decision making. The CAV Lead reports into the Crime and Operations Coordination Committees, and by exception to DDaT.

In this model:

- The CAV Lead leads on strategic direction, ethics & governance, while also driving work on policy, standards & regulation.
- A new sub-portfolio under SOC is responsible for covert data acquisition and intelligence as part of a remit for covert Pursue & Exploit capabilities.
- A new sub-portfolio under Roads Policing leads on roads/ operational policing; people and skills considerations; and investigations, data lifecycle and digital and technology capabilities (supported by SOC and DDaT). This reflects the broad remit of Roads Policing for Prevent and overt Pursue & Exploit capabilities.
- Fleet continues to lead on Prepare & Protect capabilities, comprising of responsibilities for vehicle lifecycle capabilities, and defensive security (with support of OpSy/ TOPSy from SOC).

The roles / responsibilities in this option are outlined below.

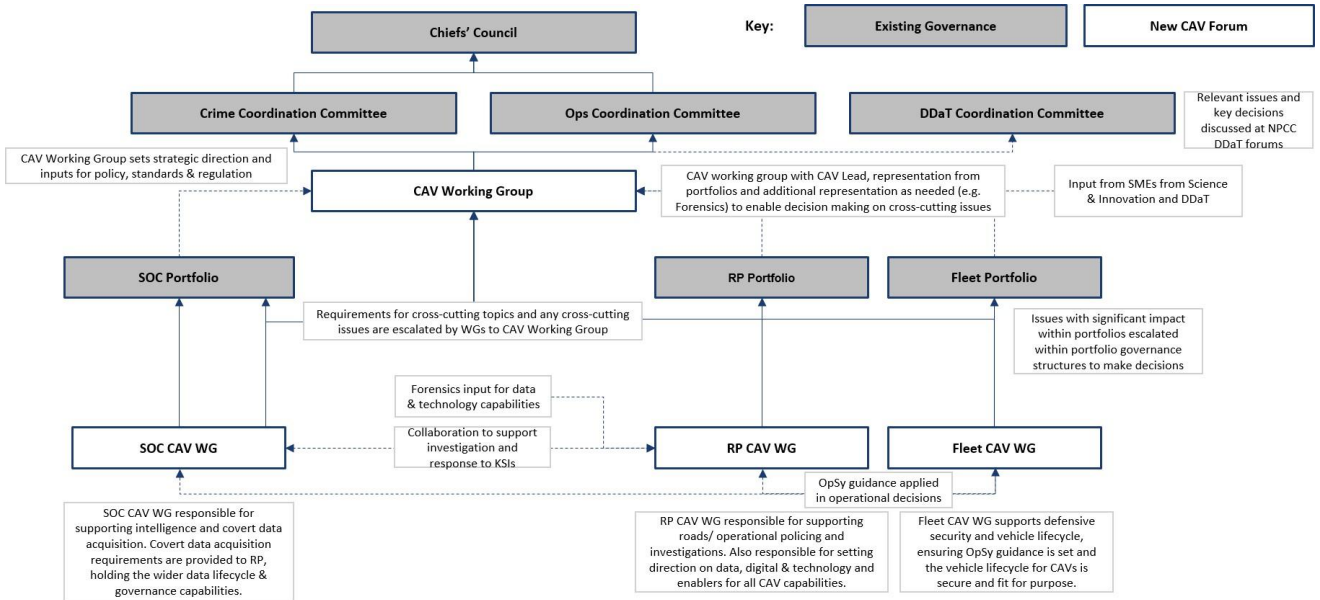


Figure 4: Option 2 - Consolidated Capabilities: Governance and Roles

### Option 3 – Matrix Structure – DISCOUNTED

In this structure business areas (verticals) are responsible for advising on products and applying guidance on their respective areas, while cross-cutting domains (horizontal) work across business areas to apply strategic CAV decisions consistently. This is depicted below.

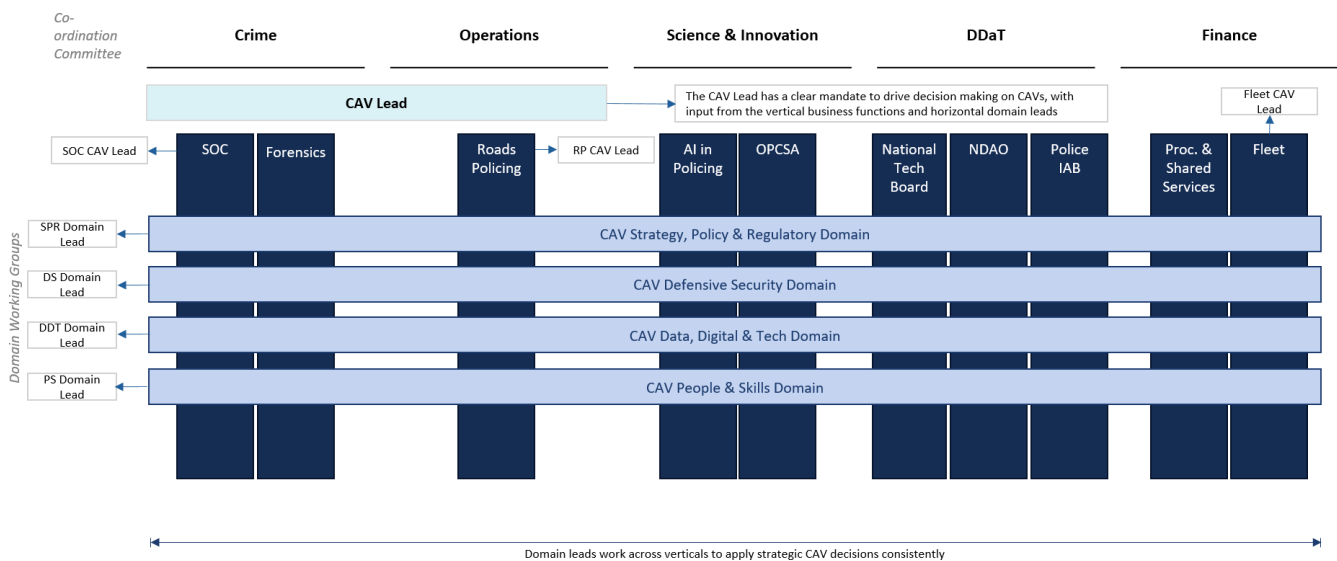


Figure 5: Option 3 - Matrix Structure

In this model:

- The CAV Lead leads on strategic direction, ethics and governance, whilst retaining ultimate accountability for CAVs.
- The Strategy, Policy and Regulatory domain supports the CAV Lead in their strategic work and drives the policy, standards & regulation capability.



As with Option 2, there are sub-portfolios under SOC, Roads Policing and Fleet portfolios. Each sub-portfolio is responsible for implementing change across their relevant capabilities, whilst reporting into the CAV Portfolio, which has responsibility for setting direction and coordinating policy, standards and regulation.

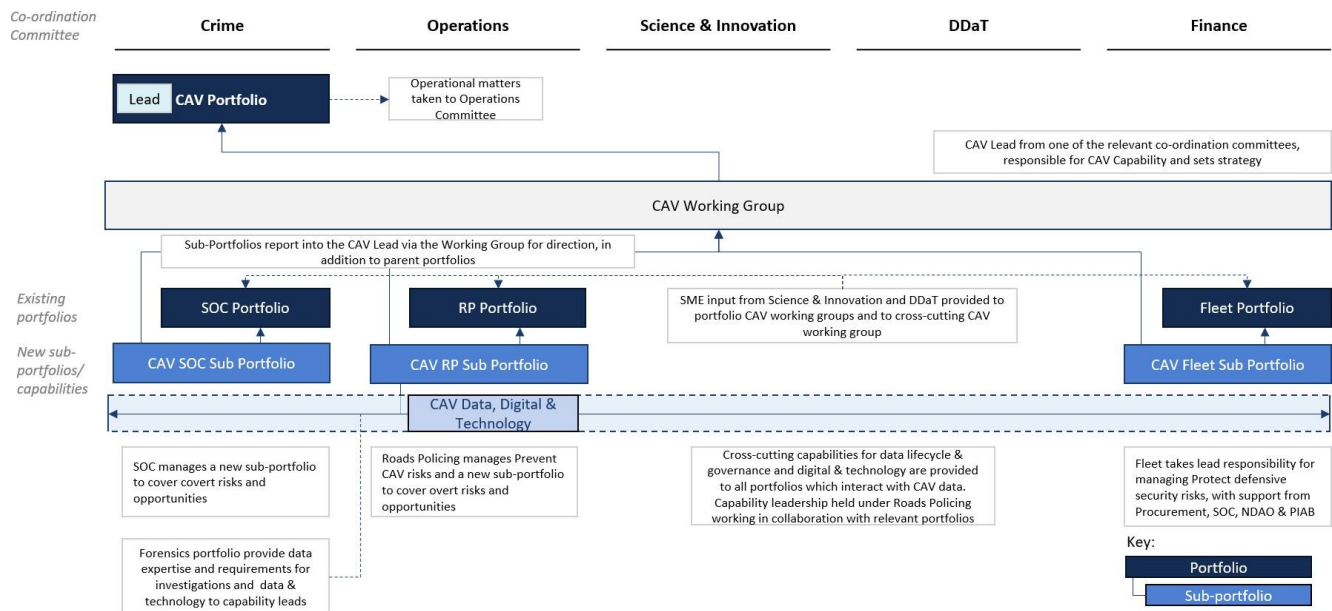


Figure 7: Option 4a: Single Portfolio - Crime Coordination Committee

In this model, the distribution of capabilities is similar to Option 2. The key differences are:

- The capabilities are managed by CAV sub-portfolios with dual reporting lines into parent portfolios (SOC, Roads Policing, and Fleet) and the new CAV portfolio. This has the effect of greater centralisation of decision-making powers on CAVs, rather than Option 2 where the CAV Lead plays a largely co-ordinating role.
- The CAV Working Group consists of sub-portfolio leadership and representation from the CAV portfolio.
- Any issues with significant impact are escalated to a CAV Portfolio Committee with where relevant Portfolio Leads are also in attendance.

The below governance structure depicts this.

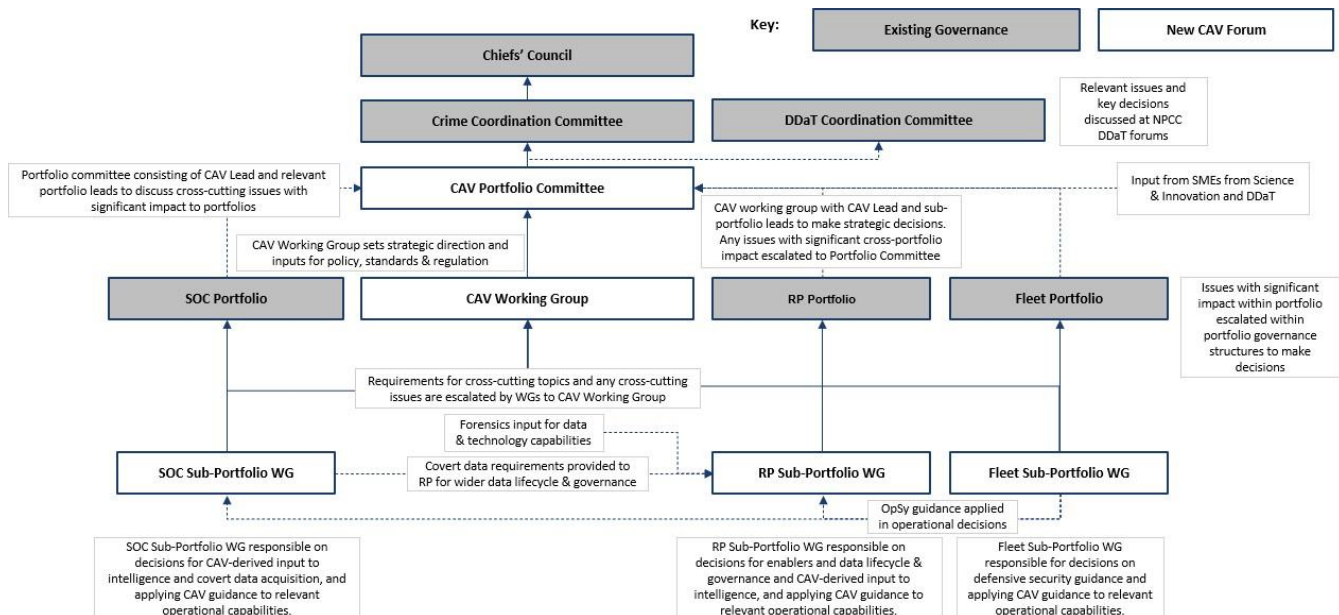


Figure 3: Option 4a Single Portfolio - Governance & Roles

### Option 4b – CAV Lead sits under Operations Coordination Committee

Option 4b is identical to Option 4a, except that the portfolio resides under the Operations Coordination Committee instead of the Crime Coordination Committee.

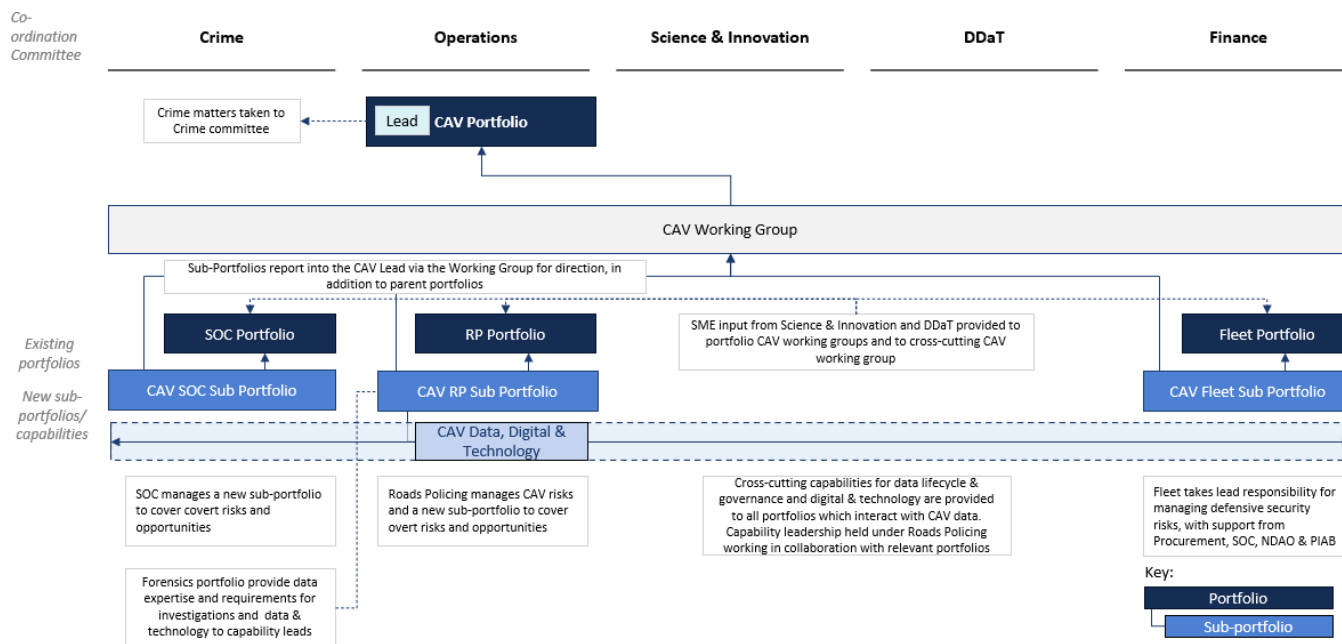


Figure 9: Option 4b: Single Portfolio - Operations Coordination Committee

## 6. CONCLUSION (including DECISIONS REQUIRED)

This document has set out four options for a new operating model for CAVs. The preferred option, Option 2 – Consolidated Capabilities, has been selected based on a structured assessment of each options ability to mitigate risks, realise benefits and align to critical success factors.

This option enables a single CAV Lead, reporting into both Crime and Operations Committees, to set clear strategic direction, with a consolidated set of capabilities logically divided between SOC, Roads Policing, and Fleet.

This option seeks no funding to implement. It is recommended that the CAV Lead is a Chief Officer to provide parity with leadership across other NPCC portfolios and that this is undertaken as an additional responsibility, with support from a staff officer and the portfolio leads.

## 7. Decision

7.1 Decision to proceed on Option 2 as NPCCs CAV operating model and agreement to proceed with next steps as outlined in section 3.2.

<b>Name:</b>	Paul Wells and Steve Barry
<b>Title:</b>	CAV Target Operating Model Options
<b>Committee:</b>	Crime and Operations
<b>Lead Area:</b>	NPCC SOC and Roads Policing Portfolios

## Appendices

### Appendix 1 – Critical Success Factors

#### Critical Success Factors

The following Critical Success Factors (CSFs) outline what must be true to enable a TOM for CAVs.

<b>ID</b>	<b>Critical Success Factor</b>	<b>Description</b>
<b>1</b>	<b>Strategic Fit</b>	How far the option meets the strategic objectives outlined.
<b>2</b>	<b>Operational Effect</b>	How well the option can support the needs of officers and staff across UK policing in responding to CAV incidents, building CAV specific capabilities and increasing policing's operational effect.
<b>3</b>	<b>Potential flexibility</b>	The ability of the option to be flexible over time, responding dynamically to shifting priorities (strategic and operational), as well as developments in technology.
<b>4</b>	<b>Potential affordability</b>	How well the option maximises existing investment available in the required timeline, limiting the need for additional funding in the near and longer-term given the wider efficiency challenges to policing funding.
<b>5</b>	<b>Potential achievability</b>	How likely the option is to be delivered, given the resource, capacity and skills required to establish a TOM.

Table 4: Critical Success Factors

### Appendix 2 – Options Assessment

#### Alignment to Critical Success Factors Assessment

The table depicts the evaluations of the Options against the Critical Success Factors (CSFs). A score of Very Low (1) to Very High (5) has been applied.

The analysis shows that:

- Option 2 and Option 4 equally score highest, both showing high alignment with the CSFs. Option 2 is more achievable due to its fit with existing governance and the absence of a need for a new portfolio. Option 2 offers greater flexibility, with a greater ability to respond to change due to the alignment with existing portfolios.

- Option 3 scores low due to governance complexity that hinders decision-making and the delivery of CAV ambitions.
- Option 1 has a very low score due to an inability to drive change.

ID	Critical Success Factor	Option 1	Option 2	Option 3	Option 4
		Do Nothing	Consolidated Capabilities	Matrix Structure	Single Portfolio
1	Strategic Fit	1 - Very Low	4 - High	2 - Low	4 - High
2	Operational Effect	2 - Low	4 - High	3 - Medium	4 - High
3	Potential flexibility	1 - Very Low	4 - High	2 - Low	3 - Medium
4	Potential affordability	2 - Low	4 - High	2 - Low	4 - High
5	Potential achievability	2 - Low	4 - High	2 - Low	3 - Medium
Average Score		1.6 – Very Low to Low	4 – High	2.2 - Low	3.6 – Med to High

Table 5: Options Evaluation against CSFs

Key:	Definition
1	Very low level of alignment
2	Low level of alignment
3	Medium level of alignment
4	High level of alignment
5	Very high level of alignment

## Risks Assessment

This section summarises the level of risk associated with each option, based on the high-level analysis of the risks being realised. A scale of Very Low to Very High has been used to evaluate each option against the risks, with ‘very low’ meaning a low likelihood and impact of the risk being realised. Similarly, ‘very high’ meaning there is a significant likelihood of the risk becoming an issue and with a significant impact to policing.

The analysis shows that:

- Option 2 scores slightly higher than Option 4, as the delegation of some decision-making power to portfolios is likely to better meet requirements for CAV knowledge and skills.
- Option 3 is able to mitigate risks to a certain extent, however the governance complexity is a limiting factor.
- Option 1 leaves CAVs risks largely unmitigated.





Table 6 4: Risks Assessment

Key:	Definition
1	Very low/ no ability to mitigate risk
2	Low ability to mitigate risk
3	Medium ability to mitigate risk
4	High ability to mitigate risk
5	Very high ability to mitigate risk

### Benefits Assessment

Each of the 4 TOM options has been assessed against each of the benefits identified. The assessment shows that options 2 and 4 provide the highest potential to realise the benefits identified.

The analysis shows that:

- Option 2 scores highest, slightly ahead of Option 4. It performs better on performance improvement due to capability ownership remaining within operational portfolios, strengthening the ability to drive outcomes. Option 4 scores higher on reducing reputational risk due to centralisation better supporting consistent ethical standards.
- Option 1 scores very low, with no ability to deliver the expected benefits.
- Option 3 delivers medium benefits, however its more complex governance structure reduces operational efficiency.

ID	Benefit	Description	Option 1 Do Nothing	Option 2 Consolidated Capabilities	Option 3 Matrix Structure	Option 4 Single Portfolio
1	Reduced Reputational Risk	Clear adherence to ethical approaches when dealing with CAV technology improves public trust.	2 - Low	4 - High	3 - Medium	5 – Very High
2	Reduced Reputational Risk	A single, coordinated voice ensures that industry standards are shaped by policing requirements, providing sufficient data	1 - Very Low	5 - Very High	4 - High	5 – Very High

		governance and privacy protections to safeguard data associated with government vehicles.				
3	Reduced Risk to Officer Safety	A single, coordinated voice ensures that policing requirements for AVs to recognize <b>**S31(1)**</b> .	1 - Very Low	5 – Very High	4 – High	5 - Very High
4	Reduced Risk to Officer Safety	Once secure data acquisition procedures are established as a result of engagement with industry, officers are no longer placed at risk to covertly acquire data, improving officer safety.	1– Very Low	4 - High	3 - Medium	4 - High
5	Reduced Operational Risk	OpSy guidance is implemented consistently across forces. Risks associated with data, cyber, and physical security are mitigated for operational capabilities.	2 - Low	5 - Very High	4 - High	5 - Very High
6	Reduced Operational Risk	Existing tactics and capabilities that are at risk of degradation due to evolving technologies (e.g. AVs) are updated to ensure effective operations can continue.	1 - Very Low	5 - Very High	3 - Medium	4 - High
7	Improved Performance	Processes to acquire CAV data (e.g. sensor data, control inputs, navigation	1 - Very Low	4 - High	3 - Medium	4 - High

		data, and diagnostics) from industry are implemented, enhancing intelligence, investigations, and digital forensics to improve performance.				
8	Improved Performance	An increased ability to and keep pace with CAV technology developments enables new opportunities to leverage CAV data, continuously innovate exploit emerging tactics, and improve performance.	1 - Very Low	5 - Very High	3 - Medium	4 - High
9	Improved Performance	New operational policies and tactics are implemented following review. Performance improvements via e.g. reduction in response times and leveraging opportunities such as remote intervention.	1 - Very Low	5 - Very High	5 - Very High	5 - Very High
10	Improved Operational Efficiency	OpSy guidance, set once nationally, reduces effort required at regional and local levels.	1 - Very Low	4 - High	3 - Medium	4 - High
Average			1.2 – Very Low	4.6 – High to Very High	3.5 – Med to High	4.5 – High to Very High

Table 7 5: Benefits Assessment

Key:	Definition
1	No ability to realise benefit
2	Minimal ability realise benefit
3	Medium ability to realise benefit
4	High ability to realise benefit
5	Very high ability to realise benefit



### Appendix 3 – Current NPCC Portfolio CAV Landscape

The current NPCC governance for CAVs is spread across circa ten different portfolios under five of the NPCC Coordination Committees, with an Interim Thematic Lead for CAVs from Roads Policing. The Thematic Lead chairs a Connected Vehicles Steering Group formed of wider UKLE stakeholders that has existed since 2023, albeit intermittently. The current NPCC governance construct inhibits the Thematic Lead to set strategic priorities or wider dedicated capacity to tackle the range of CAV risks and opportunities presented. As a result, there are multiple owners of overlapping capabilities, gaps in each CAV capability with the absence of clear owners, which presents additional risks of managing priorities and threats across the NPCC committees.

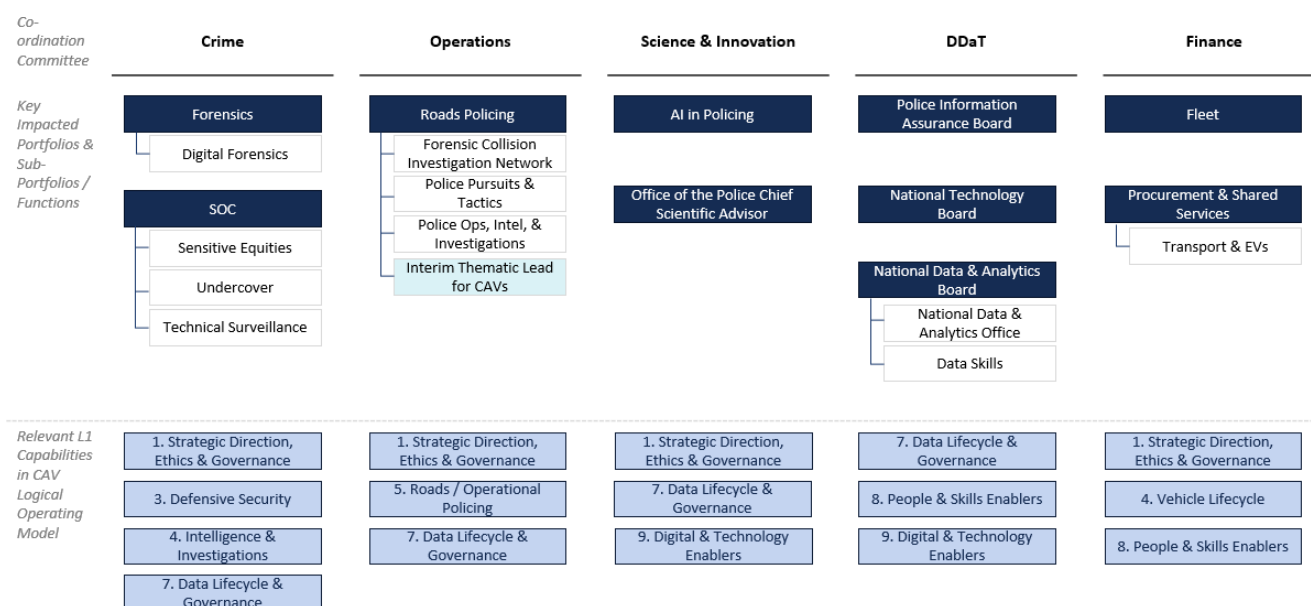


Figure 10 4: Current NPCC Portfolio CAV Landscape

### Appendix 4 – Role Funding Costs

To determine approximate ranges of costs to fund roles for options 2 and 4, indicative roles for the options have been considered. Funded roles have been used alongside NPCC people cost data to determine high-level cost ranges for these options.

For Option 2, it is proposed that the chief officer CAV Lead would take on the role in addition to their existing responsibilities and may use existing funding for a staffing officer. It is suggested that funded roles may include a CAV Data & Tech Lead (overseeing data lifecycle and governance/ digital and technology capabilities), a CAV Prevent Lead (responsible for roads/ operational policing capabilities) and a CAV Defensive Security Lead (responsible for defensive security capabilities).

Approximate costs are shown in the table below:

Roles	Annual Cost Range
CAV Data & Tech Lead	£120k - £145k
CAV Prevent Lead	£120k - £145k
CAV Defensive Security Lead	£120k - £145k
Total Cost	£360k - £440k

*Table 8 6: Approximate Role Costs*