

Process Management and Improvement: CSI Tasking



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1. Purpose

The purpose of this document is for the Forensics21 Programme Business Change Manager to make a final report to the Forensics21 Process Management and the Improvement Project Board and Forensics21 Portfolio Board, and to present recommendations for further consideration.

2. Background to the Project

All forces should strive to enable appropriate specialised staff to attend forensically viable scenes in a timely manner and thereby maximise forensic evidence retrieval and increase the opportunities to bring offenders to justice.

As the drive to improve both public satisfaction in the police service and effective and efficient utilisation of resources continues, many forces have identified that there may be opportunities for improvement in the tasking of Crime Scene Investigators (CSIs).

Currently there are many different methods in which CSIs are tasked to attend scenes. A small number of forces have introduced dedicated tasking units, whilst others task based on historic processes. There has been no consistent evaluation of different tasking models or of the benefits and costs associated with each model, both of which could assist forces in making a decision about which tasking model best suits their needs. Following a Process Management and Improvement Project workshop held in August 2008, several forces registered an interest in the results of such a piece of work.

The aim of the project was to identify good practice process for CSI tasking, establish models for delivery of the good practice process, document the associated strengths and weaknesses of those models and make the information available to forces.

3. Methodology

A generic good practice CSI tasking process map was developed following workshops with the Business Change Team. The process map was then taken to the Business Change Group and ratified (Appendix A).

In order to research different CSI tasking models, a number of forces were identified. The forces were selected based on those that already undertake some form of centralised tasking, a number of forces that perform well and a number of forces that do not perform as well based on the information available in national data returns. The methodology for selection of forces based on performance can be found at Appendix B.

This resulted in selection of the following forces:

- Bedfordshire

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- Cheshire
- Cleveland
- Hampshire
- Leicestershire
- North Wales
- Northumbria
- Nottinghamshire
- Warwickshire
- West Yorkshire

Each force was visited and semi-structured meetings held with the scenes of crime departments to determine the strategic drivers, CSI tasking process and model used, associated policies, resourcing implications of the model used, what worked well/not so well and what information would be of interest to them on the forthcoming NPIA communities website, POLKA.

Each force process was compared against the generic good practice process to identify what process benefits were achieved. Where use of a particular model gave additional benefits, this was also identified.

Analysis of the different ways that forces undertake CSI tasking and the good practice process was conducted to generate generic models for CSI tasking that maximise benefits realisation.

4. Findings

The following is a summary of the work undertaken and the findings from the semi-structured meetings with the scenes of crime departments from the above forces.

4.1 Defining successful CSI tasking

There is consensus that successful CSI tasking involves utilising resources to the best effect in order to maximise recovery of forensically viable material from scenes as quickly as possible and provide a high quality of service to the public.

All forces were asked what they consider to be successful CSI tasking, and as outlined above, there was strong agreement of what this constituted. All forces recognised performance drivers as well as the public satisfaction agenda.

4.2 Models

Although each force undertook the detailed process of CSI tasking differently, 4 thematic models emerged. Of these, one particular model was associated with those forces that did not perform so well.

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Each force visited had a different way of undertaking CSI tasking. In all cases the CSIs were under centralised control, even though they were geographically based.

Four thematic models were identified:

1. Scientific Support Forensic Tasking Unit undertakes tasking
2. Force Communications Room tasks scenes requiring mandatory attendance
3. Force Communications Room undertakes initial research and CSIs self-task
4. CSI Supervision/Self Tasking with no additional support

The first three models have been used as a basis for the recommended CSI tasking models identified in section 5.

Of the models above, model four was used by the forces that perform less well. The absence of support from a dedicated tasking unit, the Force Communications Room or mobile technology and limited oversight of CSI activity all contribute to this style of CSI tasking being ineffective and inefficient.

Within the other three models there were variations in the CSI tasking process was undertaken. By ensuring all process steps that would deliver benefits are undertaken, CSI tasking could become more effective and efficient in the forces visited.

4.3 Factors affecting different models

Despite a number of factors that are different across forces, it is resourcing considerations and perceived costs that have been the main factor in considering the CSI tasking model utilised.

There are a variety of factors that will affect which scenes are attended, including force strategic drivers, geographical area, demographic make-up, resource availability, funding and operational issues and priorities.

Upon embarking on the work, it was anticipated that these factors would provide differentiation in the models delivering CSI tasking.

However, the choice of CSI tasking model appeared to be independent of the majority of the aforementioned factors with no clear correlation between those factors and the model used.

The factors that did appear to influence their choice of model were resourcing considerations and costs compared with perceived benefits.

4.4 Data

There is no consistency in the data recorded and reviewed by forces in relation to CSI tasking.

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As part of the research, forces were asked if they recorded data that would support understanding where parts of the process are potentially wasteful or inefficient and could be improved. This revealed that the data collected by forces varies widely, with data that would assist in making decisions regarding CSI tasking not always recorded or analysed.

4.5 Benefits

Forces did not generally baseline their position prior to implementing changes to their CSI tasking structure so benefits have not been measured.

Benefits identified and measured from work undertaken by Cleveland have been used as a basis for determining theoretical benefits for forces.

The visits were generally received very positively by the forces, who were keen to discuss what they currently did and identify what benefits were being achieved and where they could improve.

Realising these benefits can be tied to specific steps in the tasking process and based on good practice process, the following benefits were identified:

1. Increased CSI safety;
2. Increased evidentially viable yield from scenes;
3. Reduced number of non-productive journeys; and
4. Improved public satisfaction at being kept informed of forensic activity.

Further benefits associated with specific models used to undertake the process have also been identified, namely:

5. Improved CSI resource utilisation as a result of unbiased workload allocation; and
6. Reduced time taken to get to scenes due to strategic overview of demand and ability to respond

Through comparing the processes and models against good practice, benefits that should be realised have been identified for each of the forces.

However, as information has not been baselined in the majority of cases, evidencing realisation of these benefits will be difficult.

4.6 Resource and cost information

Limited cost information is available from forces regarding the tasking models that are used. As a result the recommended models focus on resource implications rather than absolute costs.

Forces were asked to identify the costs of operating the CSI tasking model that they use. Where possible this information was identified in terms of costs, but

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often it was more appropriate to identify resource implications or the costs were borne by other departments (such as IT) and thus were not known. The resourcing implications for each force have been indicated.

Similarly to benefits, the actual costs of implementing a revised CSI tasking model were not captured by forces at the time, thus the cost of implementing the recommended models is not identified, although the resourcing implications of running the models are provided.

5. Recommended CSI Tasking Models

Following analysis of the ways in which CSI tasking is currently undertaken and the generic good practice process, 3 models have been identified that enable delivery of all process benefits, although it should be noted that the degree and likelihood of delivery differs in the models. These are described in detail below.

5.1 Model 1 - Centralised Forensic Tasking Unit

Process

A diagram of this process is at Appendix C.

The Force Communications Room:

- Takes incoming calls, performs initial screening and provides basic scene preservation advice. All tasks that may require forensic attendance are then passed to the centralised forensic tasking unit during core hours.

The Centralised Forensic Tasking Unit:

- Starts operation prior to the CSIs coming onto shift, generally by about an hour. During this time tasks are identified, researched and prioritised and this then continues during the day as new crimes / incidents are reported.
- Is responsible for contacting the victims, providing further scene preservation advice if required and keeping the victim informed of what is happening in relation to forensic activity.
- Checking availability of the scene, making appointments for CSI attendance.
- Undertakes research undertaken by the unit allows for any potential hazard or warnings relevant to the address or individual to be passed to the CSI prior to attendance.
- Screens out scenes that do not fall within a mandatory attendance policy and have no forensic potential. This is relayed to the victim immediately and ensures that the customer focused approach is maintained by the timely delivery of knowledgeable advice and management of expectation is ensured.

The CSI:

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- Is tasked with one or two scenes to attend upon commencing their shift. Once a scene has been attended, the CSI updates the tasking unit and is provided with the next task(s).
- Leave a card saying the CSI attended if the scene is unavailable, asking the victim to make contact with the tasking unit to arrange another time.

Out of core hours the Force Communications Room identifies jobs that require attendance and these will either be placed on a log for the tasking unit to deal with when they start operation or if appropriate, will be tasked directly to an on-call CSI.

Variation

This model can also operate where the tasking unit does not commence until CSIs begin their shift. Whilst the majority of benefits are still realised, the task prioritisation immediately upon the CSIs commencing their shift is not achieved.

Resourcing Implications

This model requires experienced staff available to operate the tasking unit and the provision of facilities from which they can operate. The number of staff required will depend upon the volume of activity and other work that may be absorbed into the unit (e.g. deployment of FMEs). As a guide, 4-5 staff are considered sufficient to run the tasking unit for smaller forces (e.g. Bedfordshire or Cleveland) and 10-11 to run the tasking unit of large forces (e.g. Hampshire or West Yorkshire).

CSIs must be centrally accountable so that they can be deployed across BCU boundaries.

Basic crime scene forensics awareness training also needs to be provided to the Force Communications Room staff.

Strengths

- Allows for the effective strategic deployment of CSIs due to the tasking unit having a complete overview of demand/resource availability across the whole force area.
- Ensures greater consistency in the research that is undertaken and information available to the CSI prior to scene attendance.
- Ensures a strong focus on keeping the victim informed of what is happening.
- Due to prioritisation, CSI activity is directed to those scenes where their skills are best utilised to maximise forensic evidence recovery and intelligence.
- There is an overview of where CSIs are deployed, supporting staff safety.

Weaknesses

- If sufficient tasking resources are not made available to the tasking unit throughout the time CSIs are deployed, the benefits will be significantly reduced.

Benefits realisable

1. Increased CSI safety
2. Increased evidentially viable yield from scenes
3. Reduced number of non-productive journeys
4. Improved public satisfaction at being kept informed of forensic activity
5. Improved CSI resource utilisation as a result of unbiased workload allocation
6. Reduced time taken to get to scenes due to strategic overview of demand and ability to respond

5.2 Model 2 – Force Communications Room prioritise jobs and task mandatory attendance

Process

For a diagram of the process see Appendix D.

The Force Communications Room:

- Takes the incoming calls and screens them to establish whether the scene requires CSI attendance according to force policy and / or whether there is forensic potential.
- Provide victims with basic scene preservation advice and inform them of CSI attendance.
- Research scenes that are either mandatory or have forensic potential to identify any warning markers.
- Prioritise the jobs based on the information available and directly task CSIs to mandatory scenes, providing available information to the CSI. Other scenes that have forensic potential are placed on a CSI log.

The CSI:

- Having either been tasked or identified a task from the log, research the crime/incident to obtain more information.
- Makes contact with the victim to establish scene viability, provide further preservation advice if required.

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- Determines scene availability and make an appointment to attend the scene where appropriate or inform the victim of the reasons for non-attendance.
- Having established scene availability, travels to the scene.

Resourcing Implications

Force Communications Room staff must have good scene forensics awareness training and access to both decision support tools (such as flow charts) and scene preservation advice.

CSIs need to be provided with mobile technology enabling access to the key force systems so that the appropriate research on the incident / crime and scene can be conducted. Without this, CSIs are either unable to undertake the necessary research or need to return to base to undertake the research, both of which significantly reduce benefits achievable with this model.

CSIs must be centrally accountable so that they can be deployed across BCU boundaries.

Strengths

- Supports good practice process and realisation of benefits without dedicating resources to a tasking unit.
- CSIs are tasked in an unbiased fashion where scene attendance is mandatory and there is some prioritisation of tasks.

Weaknesses

- Researching the scene and checking scene availability is dependent upon the individual CSIs undertaking these tasks which, if not undertaken, affect the level of benefits achieved. Keeping the victim informed also relies on the CSI taking the time to do that.
- The model relies on the Force Communications Room having the time to undertake the initial checks on the scene and passing this information to the CSIs.
- For non-mandatory scene attendance, the system is open to CSIs selecting jobs they like the look of rather than those that should be prioritised.
- There is limited overview of demand versus resources so staff are not deployed as effectively. Allocating a Supervisor to undertake an overview of resourcing could improve this and deliver an additional benefit.
- Changes in screening policy as a result of T&CG have to be communicated to the Force Communications Room and all CSIs in order to inform which tasks should be prioritised.

Benefits realisable

1. Increased CSI safety

2. Increased evidentially viable yield from scenes
3. Reduced number of non-productive journeys
4. Improved public satisfaction at being kept informed of forensic activity (may be reduced compared to other models)
6. Reduced time taken to get to scenes due to strategic overview of demand and ability to respond (if Supervisor role allocated)

5.3 Model 3 - CSIs self-task with Force Communications Room staff providing support

Process

For a diagram of the process see Appendix E.

The Force Communications Room:

- Takes the incoming calls and screens them to establish whether the scene requires CSI attendance according to force policy and / or whether there is forensic potential.
- Provide victims with basic scene preservation advice and inform them of CSI attendance.
- Research scenes that are either mandatory or have forensic potential to identify any warning markers.
- Place the information on the CSI log.

The CSI:

- Identifies scenes to attend from the CSI log and researches the crime/incident to obtain more information.
- Contact with the victim to establish scene viability, provide further preservation advice if required.
- Determines scene availability and make an appointment to attend the scene where appropriate or inform the victim of the reasons for non-attendance.
- Having established scene availability, travels to the scene.

Resourcing Implications

Force Communications Room staff must have good scene forensics awareness training and access to both decision support tools (such as flow charts) and scene preservation advice.

CSIs need to be provided with mobile technology enabling access to the key force systems so that the appropriate research on the incident / crime and scene can be conducted. Without this, CSIs are either unable to undertake the

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necessary research or need to return to base to undertake the research, both of which significantly reduce benefits achievable with this model.

To overcome the weaknesses of this model may require a high level of CSI supervision.

Strengths

- Supports good practice process and realisation of benefits without dedicating resources to a tasking unit.

Weaknesses

- There is no prioritisation of tasks so CSI activity may not be used to greatest effect.
- Researching the scene and checking scene availability is dependent upon the individual CSIs undertaking these tasks which, if not undertaken, affect the level of benefits achieved. Keeping the victim informed also relies on the CSI taking the time to do that.
- The model relies on the Force Communications Room having the time to undertake the initial checks on the scene and passing this information to the CSIs.
- The system is open to CSIs selecting jobs they like the look of rather than those that should be prioritised. This also means that there is no tracking of where CSIs are which could impact on the safety of the CSI
- There is no strategic overview of demand and resource availability so staff are not deployed as effectively. Allocating a Supervisor to undertake an overview of demand and resourcing could improve this and deliver an additional benefit.
- Changes in screening policy as a result of T&CG have to be communicated to the Force Communications Room staff and all CSIs in order to inform which tasks should be prioritised.

Benefits realisable

1. Increased CSI safety (may be reduced compared to other models)
2. Increased evidentially viable yield from scenes (may be reduced compared to other models)
3. Reduced number of non-productive journeys
4. Improved public satisfaction at being kept informed of forensic activity (may be reduced compared to other models)
6. Reduced time taken to get to scenes due to strategic overview of demand and ability to respond (if Supervisor role allocated)

6. Conclusions

From the research and analysis undertaken in this piece of work, it is clear that good practice CSI Tasking processes should be utilised by all forces as it delivers against the performance, efficiency and citizen focussed agendas. The models identified to deliver this can be employed by any force, regardless of their geography, demography and operational needs.

Good practice CSI Tasking process and associated benefits can be delivered without the need for a centralised forensic tasking unit through the active engagement of the centralised communications centre and provision of mobile technology for CSIs. However, models that do not involve a centralised tasking unit have weaknesses that reduce the likelihood of full benefits realisation and may require additional supervision of staff to ensure success.

CSI tasking units, if appropriately staffed, will deliver the benefits more consistently than the other models and also provide additional benefits, particularly in relation to strategic overview, resource utilisation and timeliness of scene attendance. The resourcing implications of a centralised tasking will initially increase the funding requirements of crime scene departments, although over time efficiency saving may reduce the cost implication and other non-cashable benefits may also make this investment worth while.

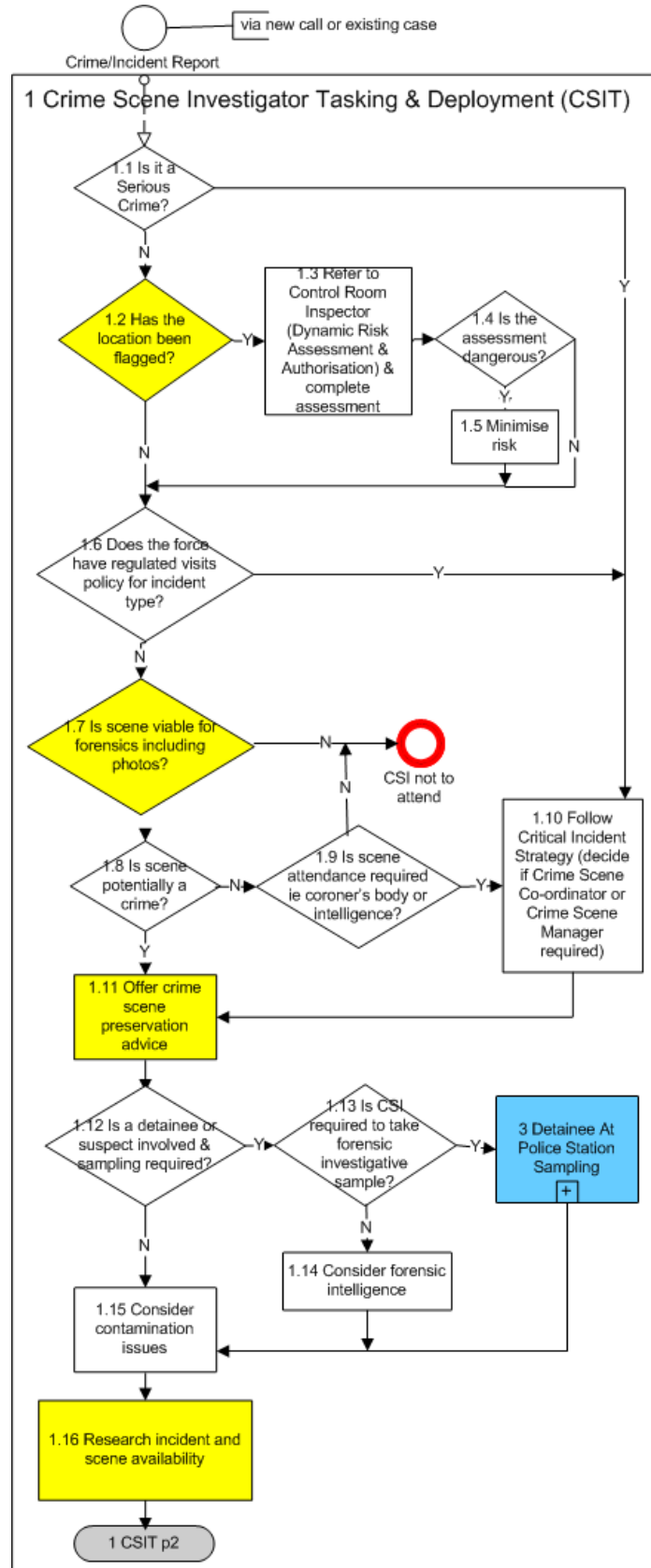
With some minor changes many forces could probably align their existing CSI tasking processes to one of the generic good practice models identified in section 5 and thus improve their CSIT tasking activity to deliver more benefits.

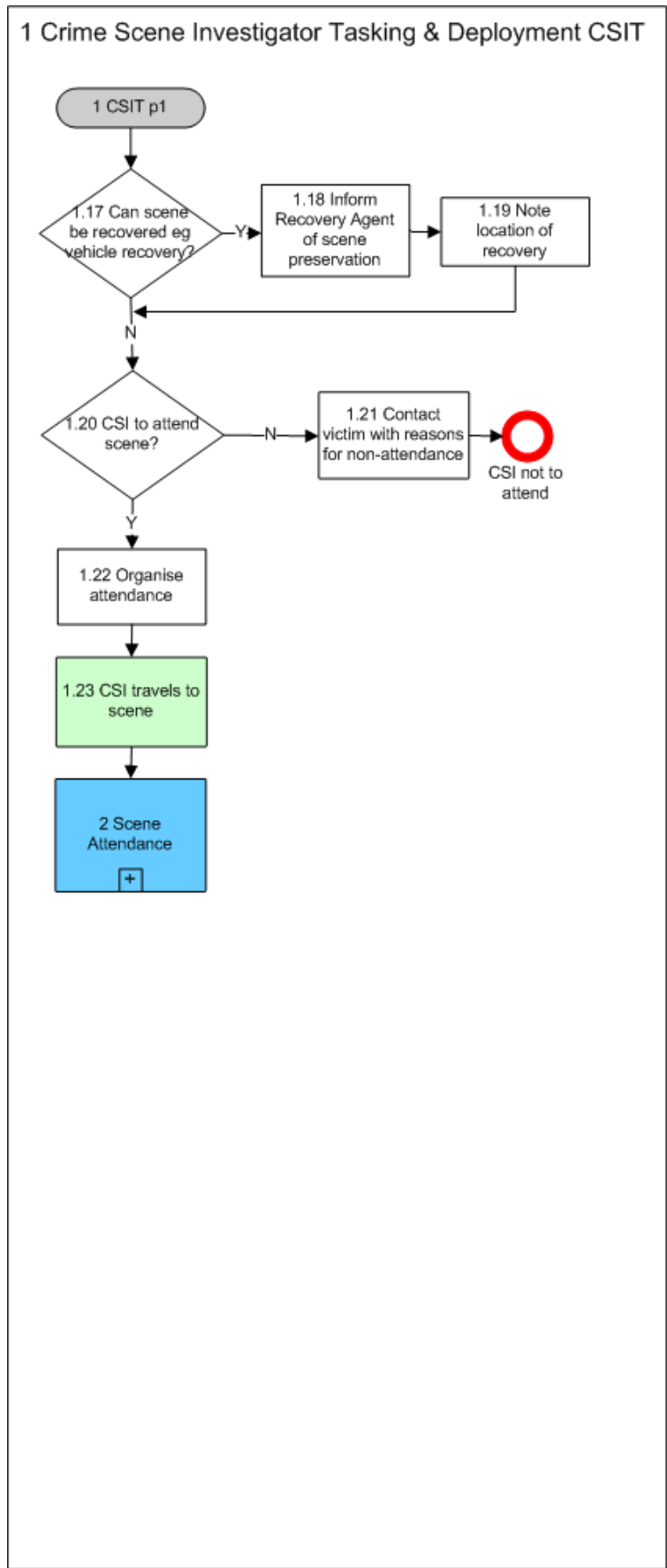
7. Recommendations

The following recommendations are made:

1. That the information is published on the Knowledge Bank and made available to all forces
2. All forces are informed of the availability of the information and advised to review their CSI tasking against the models identified in section 5 to identify any quick wins
3. Forces are advised to baseline their current position prior to making any changes so that benefits from changes can subsequently be evidenced
4. Forensics21 works with any force that is going to undertake a major change to their CSI tasking model to gain evidence to support the recommended models and improve the resourcing and cost information available to forces.

APPENDIX A: CSI Tasking good practice process map





APPENDIX B: Selection of forces

The selection of forces for reasons of performance was based upon national data returns. The most up to date information was that for Burglary Dwelling and Theft of motor vehicle Without Consent for the period of October 2007 to September 2008.

The following data was available:

- Attendance rate
- Yield (for Fingerprints and DNA)
- Matches (for Fingerprints and DNA)
- Detections (for Fingerprints and DNA)

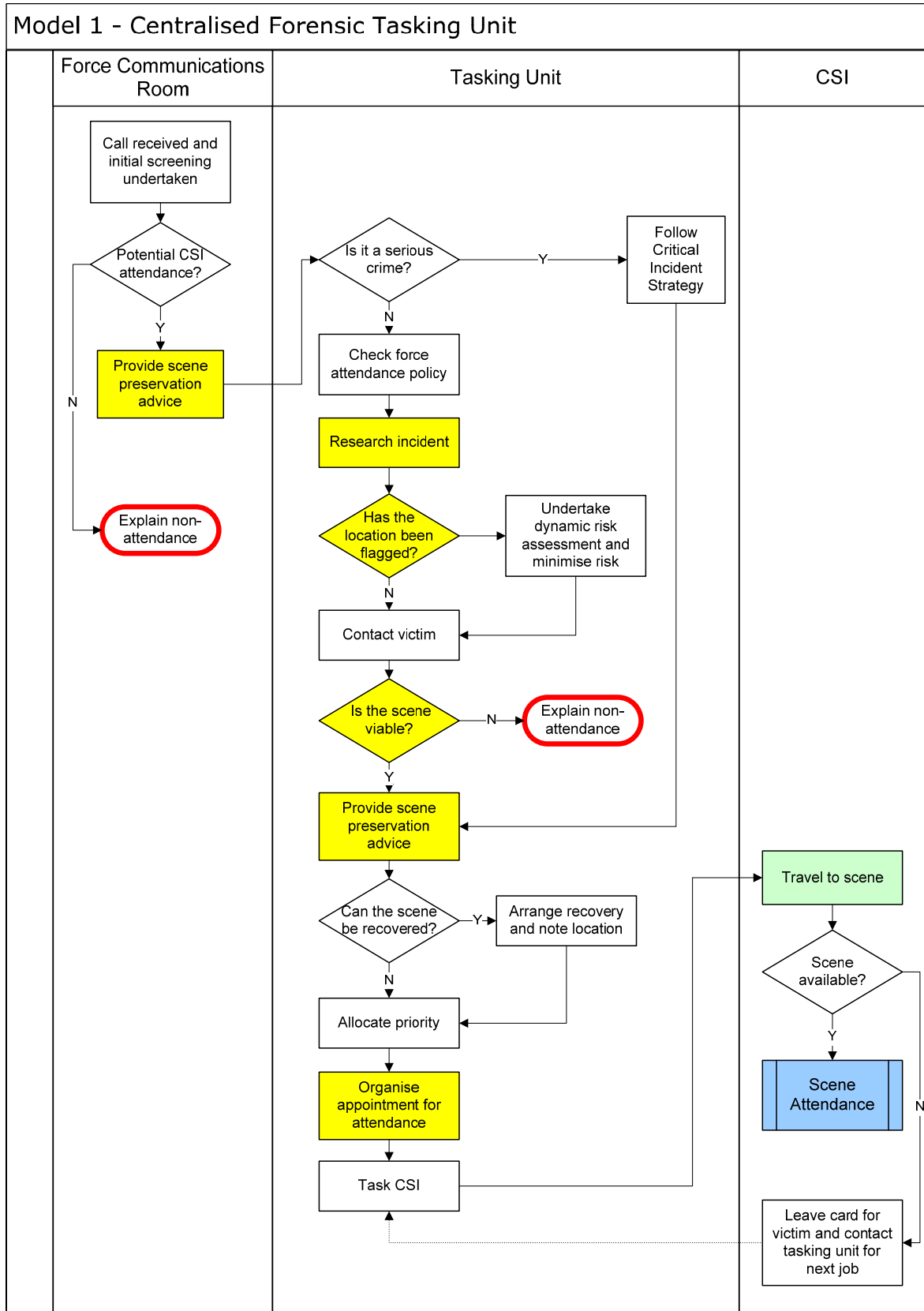
Attendance rate was not used as a metric for the following reasons:

- Several forces had an attendance rate of over 100%, calling the validity of the data into question
- Attendance rate is affected by force policy

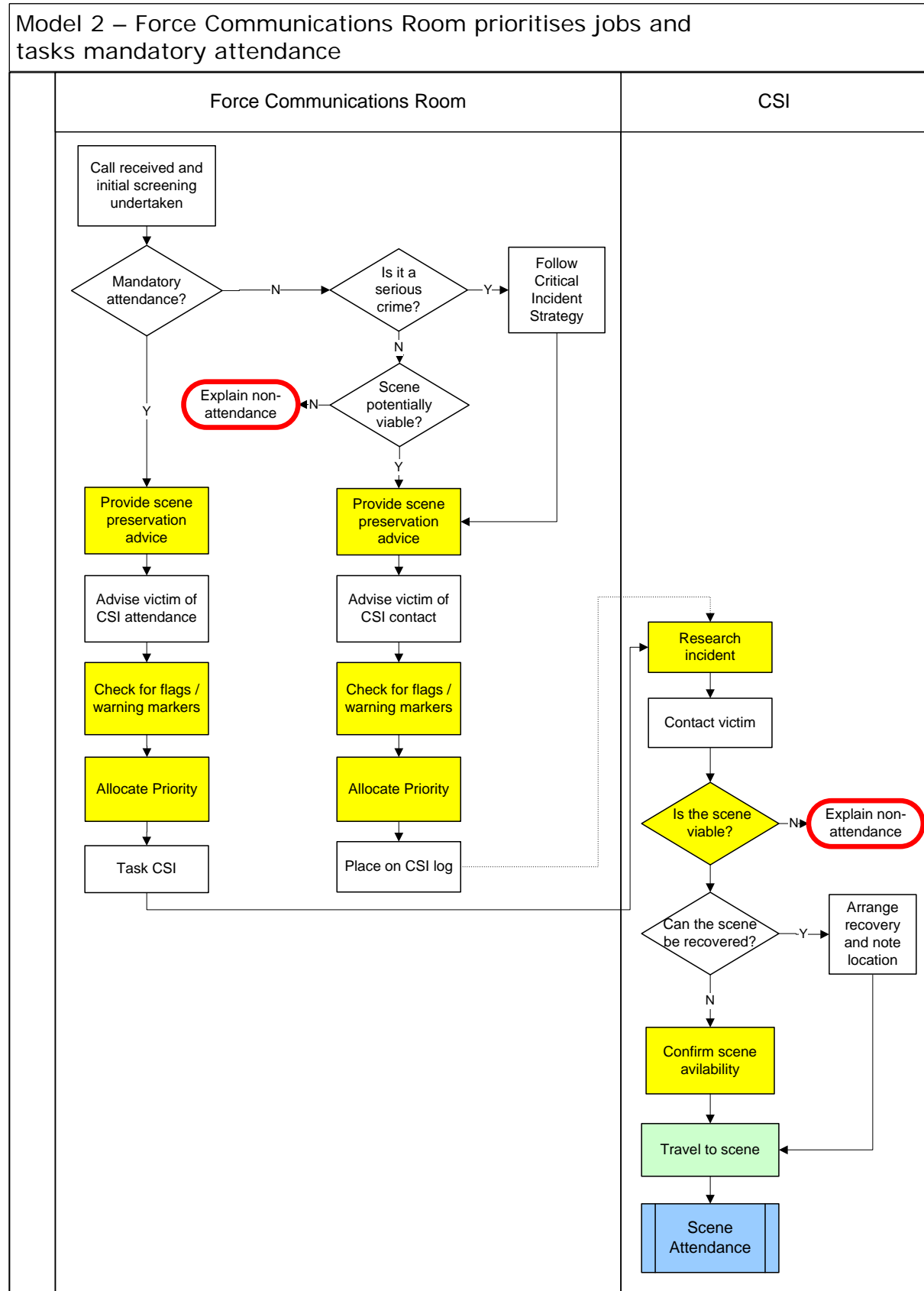
The decision was taken to focus on outcome, thus a measure of attrition was identified ($\text{Matches} - \text{detections} / \text{Matches}$) and forces ranked based on their performance whereby low attrition is good.

This was done for both sets of data and forces that performed well or not so well in both crime types were selected to take part in the research.

APPENDIX C: Model 1 process map



APPENDIX D: Model 2 process map



APPENDIX E: Model 3 process map

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Model 3 - CSIs self-task with Force Communications Room providing support

