National Vehicle Crime Working Group, Horizon Scanning Workstream: A Pallette for Horizon-Scanning?

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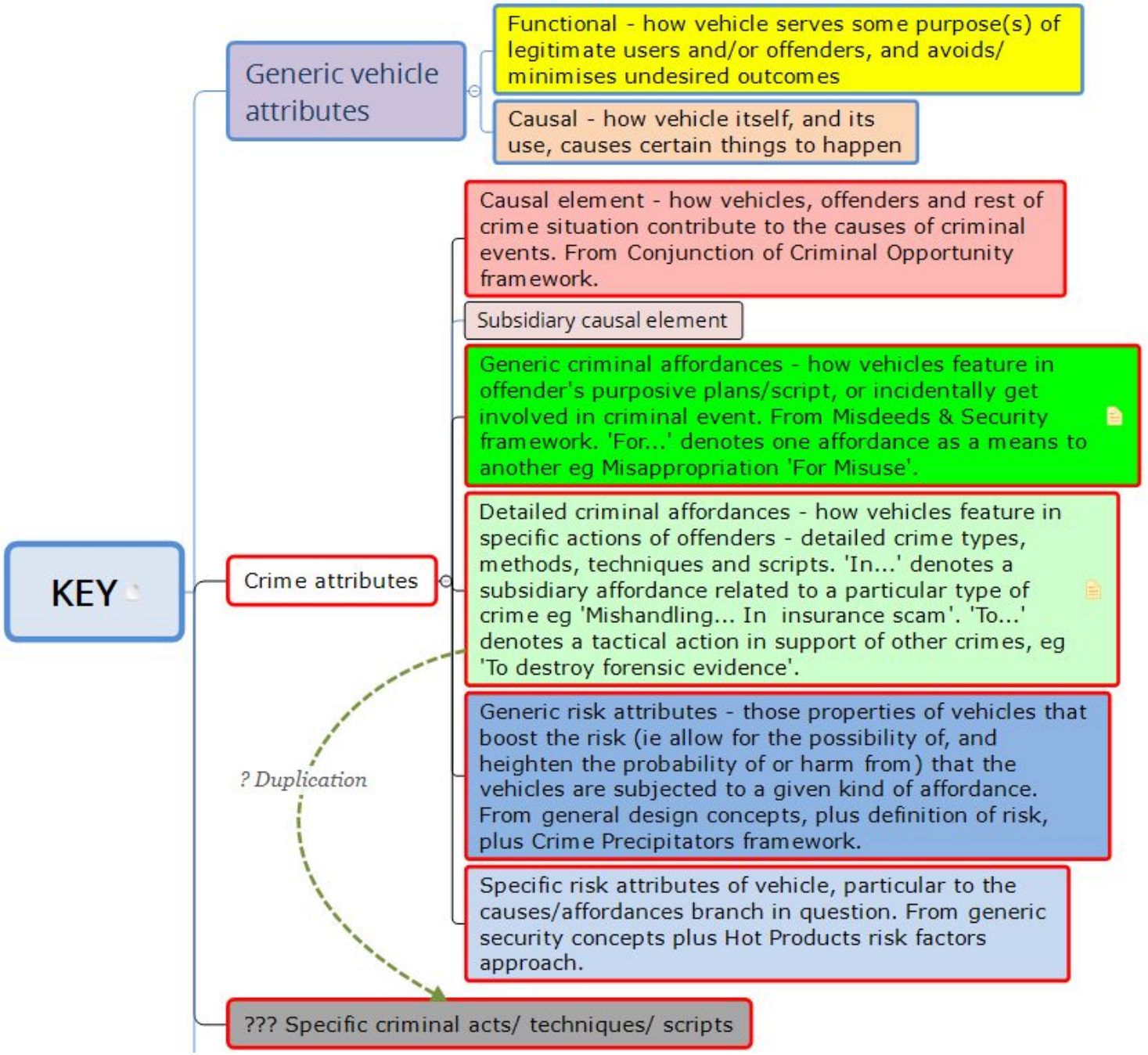
Introduction 1

- Scenario development is a major tool in the Horizon-Scanning repertoire. Yet developing scenarios is a highly intuitive affair, despite attempts to provide systematic structure such as the ‘axes of uncertainty’ approach or the more advanced ‘morphological analysis’ which uses domain experts to generate multiple dimensions/variables and then filter down to the most significant ones. I have been attempting to develop a related approach to the latter, but rather than relying on expert consensus, the dimensions/variables of the structure are built up by combining a number of theoretical frameworks that I and others have developed within crime prevention/ security. All this extends the approach in my chapter on product design in the ECCA handbook, and ideas developed in the UCL Dawes Centre Masters module on crime/security horizon-scanning.
- The frameworks/perspectives I draw on include the following.
  - Familiar ones from Situational Crime Prevention, e.g. Rational Choice, Routine Activities, Crime Scripts, Situational Precipitators, and Risk Factors e.g. Hot Products.
  - My own developments of these including the Conjunction of Criminal Opportunity (integrating the common situational approaches plus richer coverage of the offender’s motivation, perception and goals), and the Misdeeds framework (basic criminal affordances as they relate to things like vehicles – e.g. Misappropriate or steal, Mistreat or damage, Misuse as tool or weapon).
  - Various design-related approaches, covering generic affordances and other requirements centring on vehicles, what we use them for and what we want to avoid.

Introduction 2

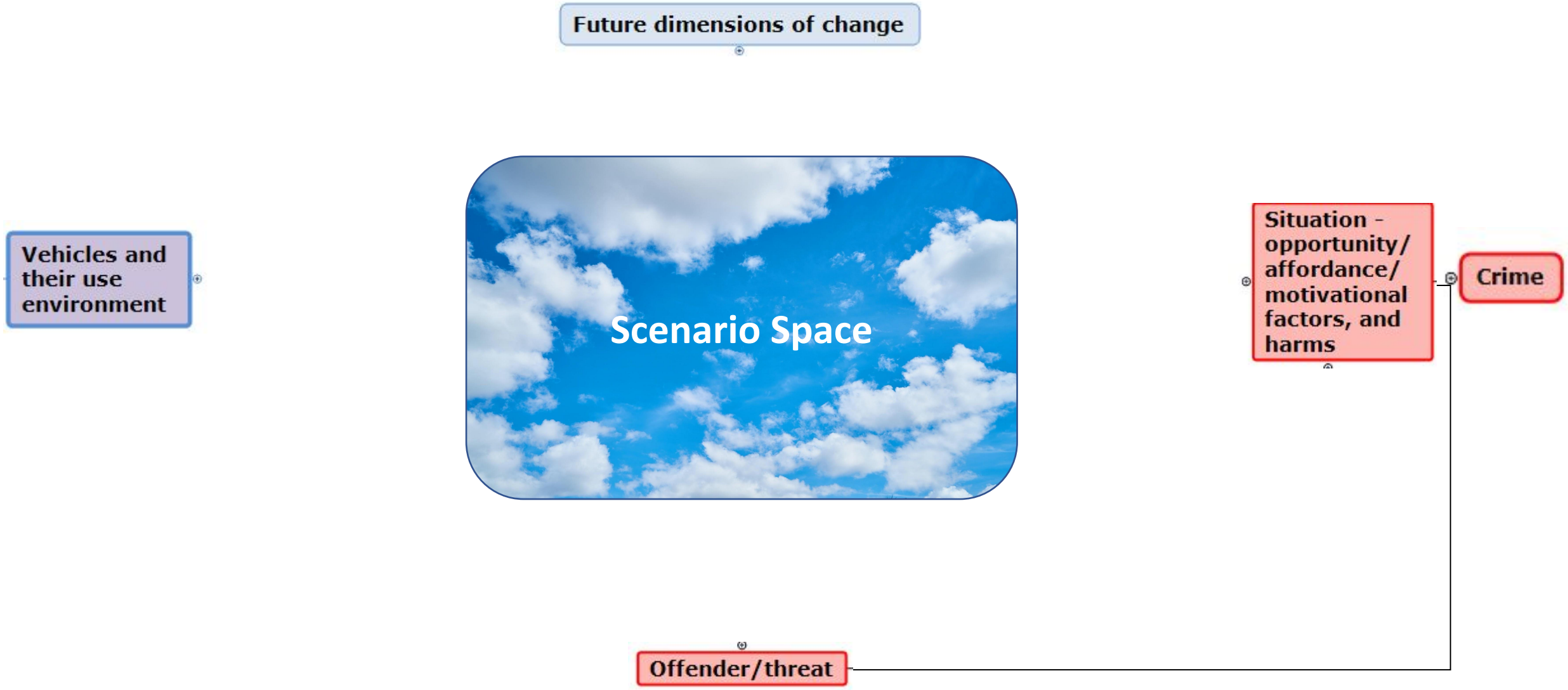
- The pallette is currently in graphical form. It's developed in XMind, a basic version of which is freely downloadable (I used v8, but latest is probably back-compatible). It can be exported as pdf or svg, but currently hard to get into expandable/collapsible form in HTML.
- At the moment, the pallette is essentially a working space in the centre, with structured prompts on all sides, covering:
  - Vehicle design and the use environment
  - The offender threat
  - Situational risk factors
  - Future changes (across the whole PESTELOMI range)
- It's pretty crude but I think could usefully be developed and turned into some sort of interactive toolkit. More could be added when taking in ideas from the VCWG log.
- This presentation takes you through the 4 different sides in progressive detail. The next slide shows a colour key.
- I haven't yet given much attention to how the palette can be used, but I think this could involve a) focusing on a particular criminal affordance (e.g. Misuse of vehicle in collision insurance scam) and then b) posing a sequence of questions, such as these:
  - How do the vehicle design requirements serve the criminal affordances?
  - How do offender threat factors interact with situational risk factors to generate opportunities, precipitation and harms?
  - How might future changes in the PESTELOMI dimensions affect vehicle design and use, offender threat and situational risk factors, and their interactions?
- At the moment the crime side is fairly well-developed, but not yet the security side. Questions on the interaction between crime and security could include, e.g.:
  - What are the script clashes between offenders and security (or the vehicle users/owners)?
  - How might future changes of various kinds influence these affordances, and tip the balance of these script clashes in favour of one or other side?
- Feedback welcome, e.g. as a commented version of this Powerpoint. Let me know if you want a copy of the Xmind file to play with

Key

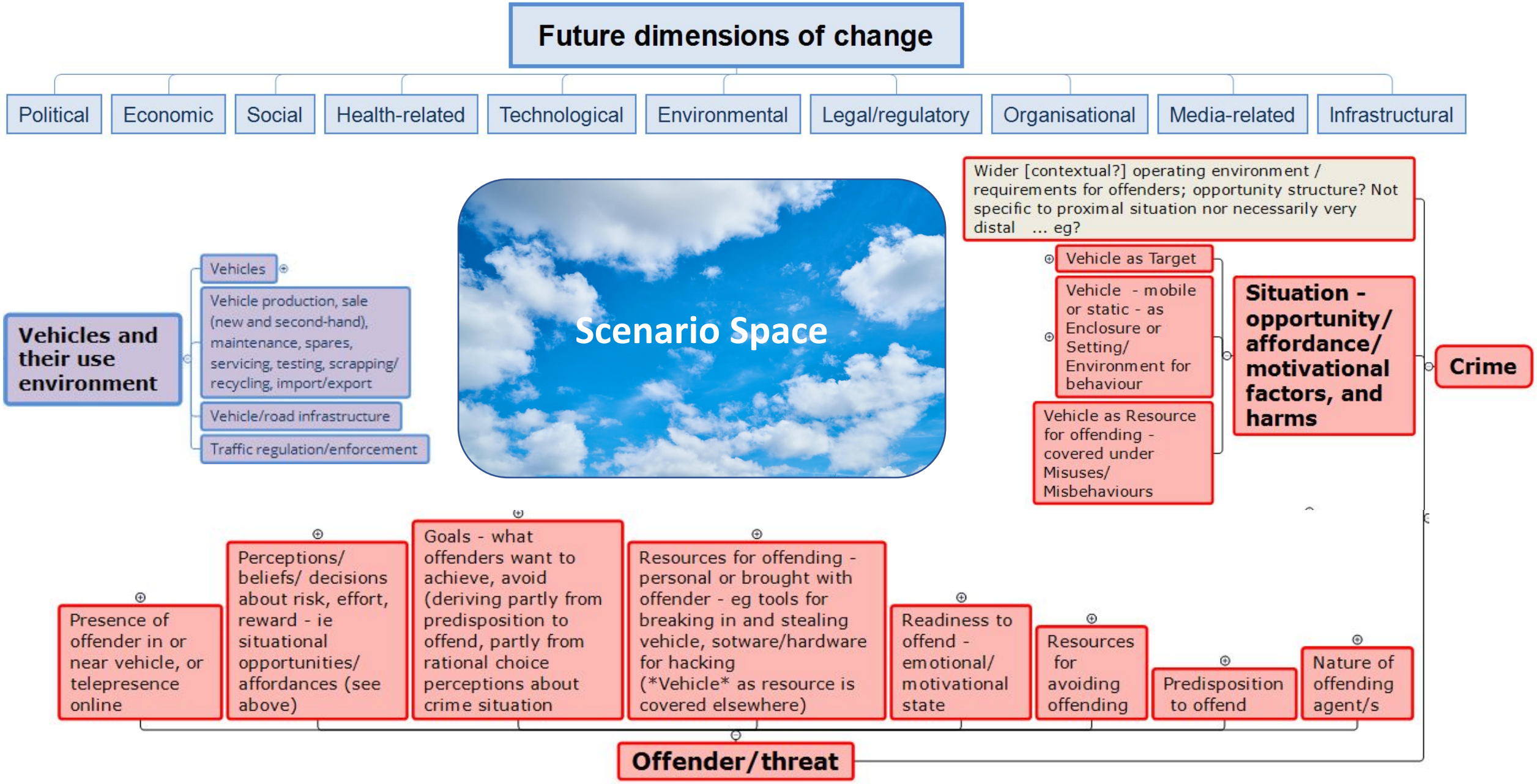

KEY
Generic vehicle attributes
Functional - how vehicle serves some purpose(s) of legitimate users and/or offenders, and avoids/ minimises undesired outcomes
Causal - how vehicle itself, and its use, causes certain things to happen
Crime attributes
Causal element - how vehicles, offenders and rest of crime situation contribute to the causes of criminal events. From Conjunction of Criminal Opportunity framework.
Subsidiary causal element
Generic criminal affordances - how vehicles feature in offender's purposive plans/script, or incidentally get involved in criminal event. From Misdeeds & Security framework. 'For...' denotes one affordance as a means to another eg Misappropriation 'For Misuse'.
Detailed criminal affordances - how vehicles feature in specific actions of offenders - detailed crime types, methods, techniques and scripts. 'In...' denotes a subsidiary affordance related to a particular type of crime eg 'Mishandling... In insurance scam'. 'To...' denotes a tactical action in support of other crimes, eg 'To destroy forensic evidence'.
Generic risk attributes - those properties of vehicles that boost the risk (ie allow for the possibility of, and heighten the probability of or harm from) that the vehicles are subjected to a given kind of affordance. From general design concepts, plus definition of risk, plus Crime Precipitators framework.
Specific risk attributes of vehicle, particular to the causes/affordances branch in question. From generic security concepts plus Hot Products risk factors approach.
? Duplication
??? Specific criminal acts/ techniques/ scripts

The four edges of the palette

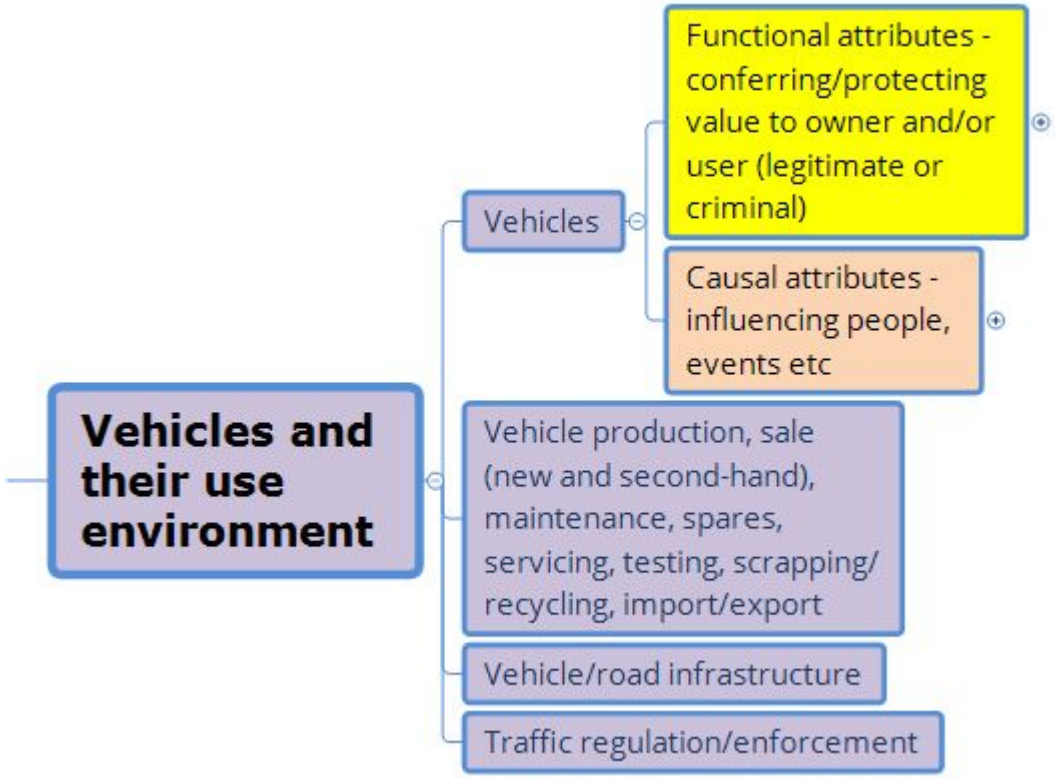
- Where to put Security?



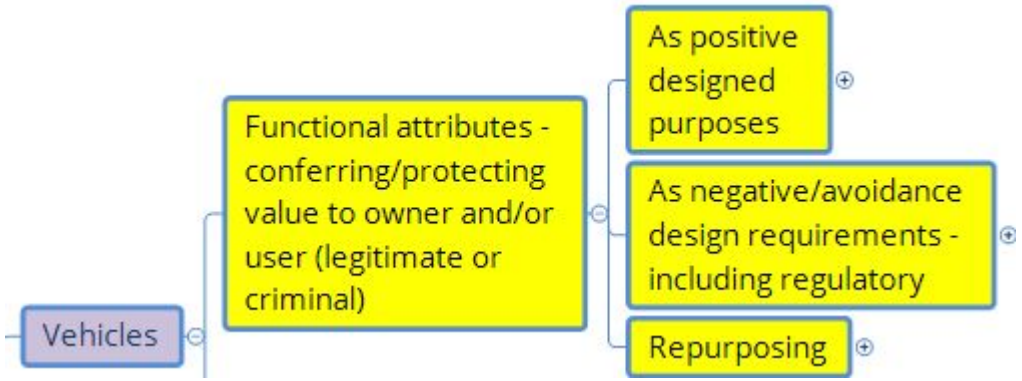
Edges in more detail



Vehicles and their use environment



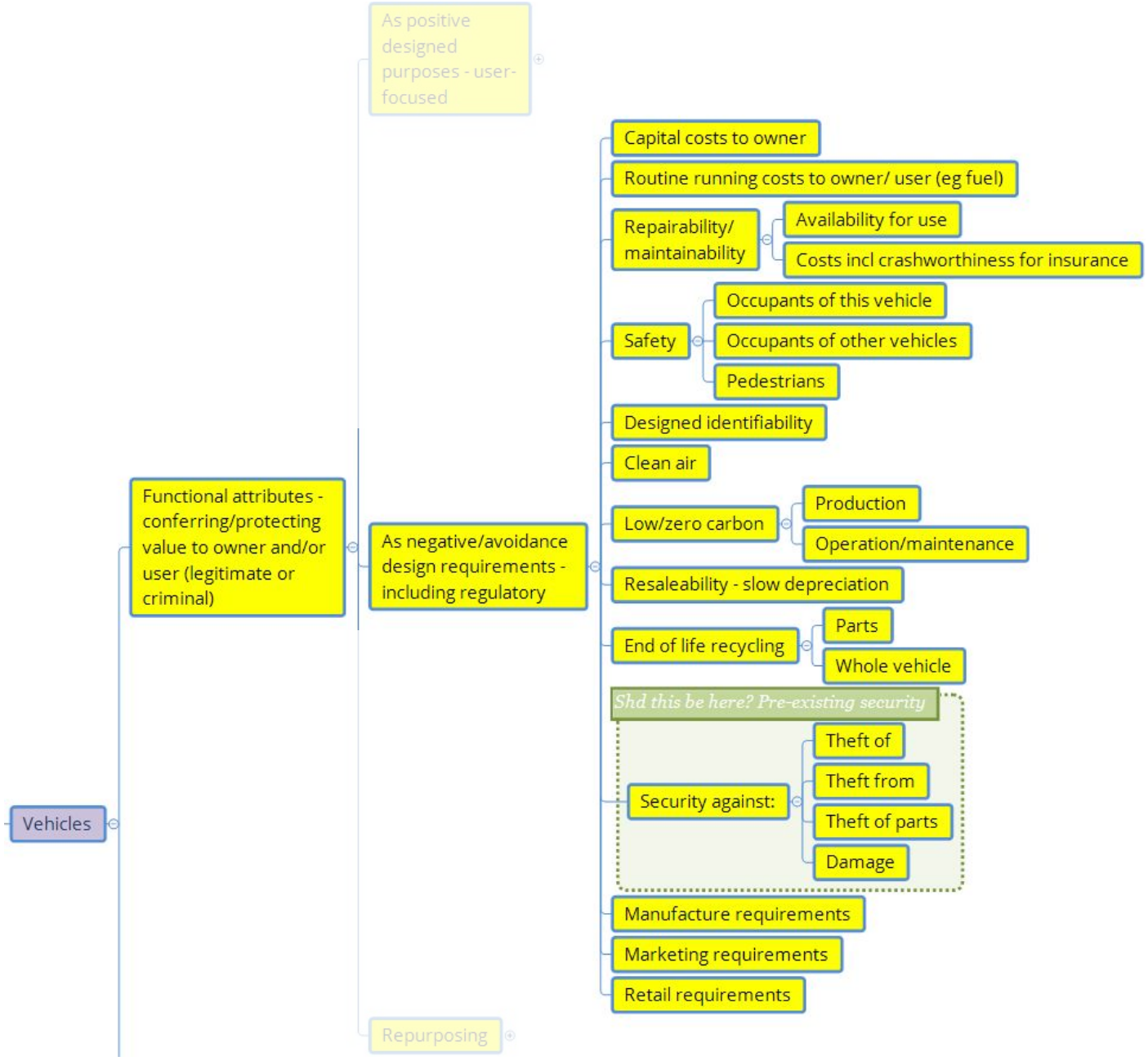
Vehicles – functional attributes/design requirements



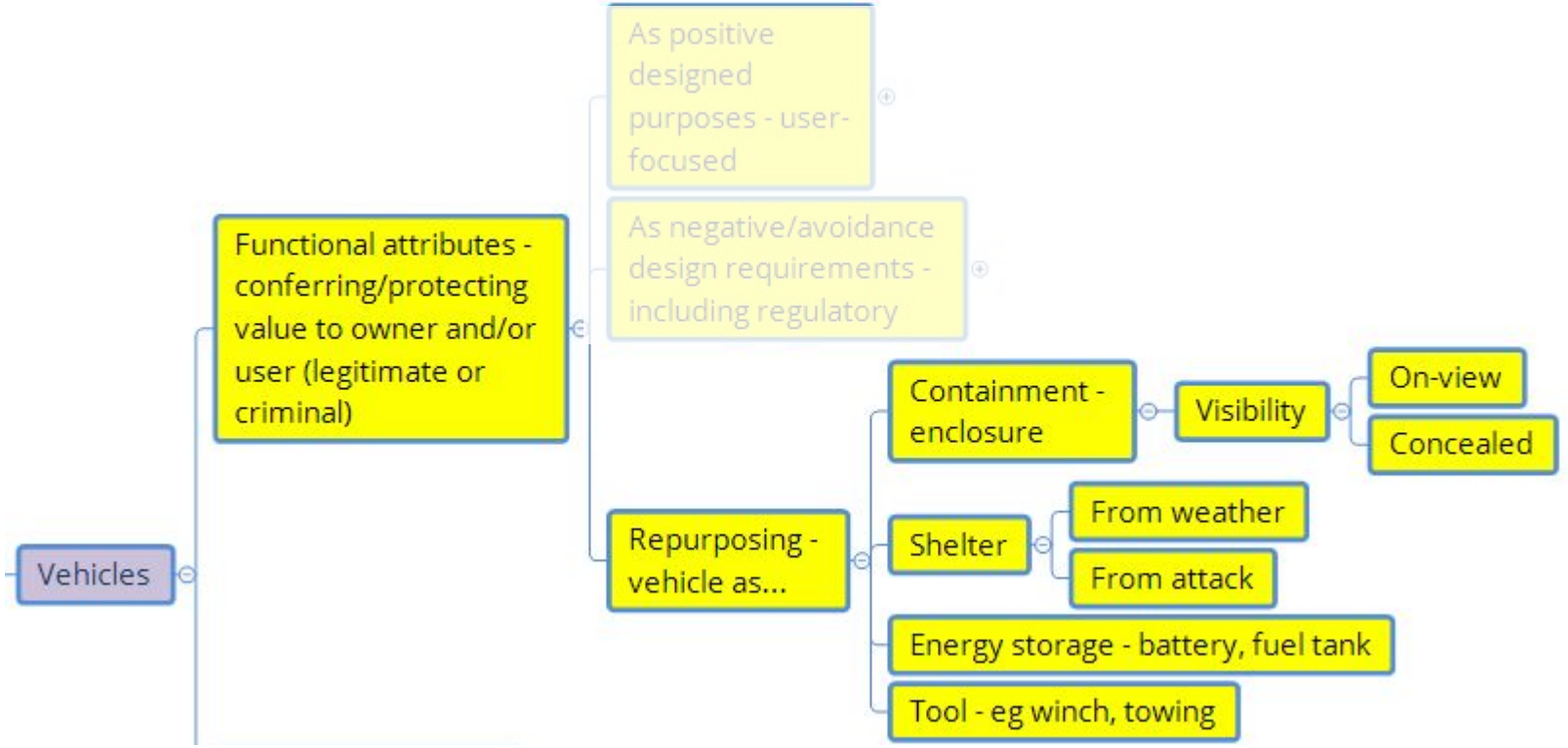
Vehicles – functional attributes/design requirements

Vehicles – functional attributes/design requirements – positive design requirements

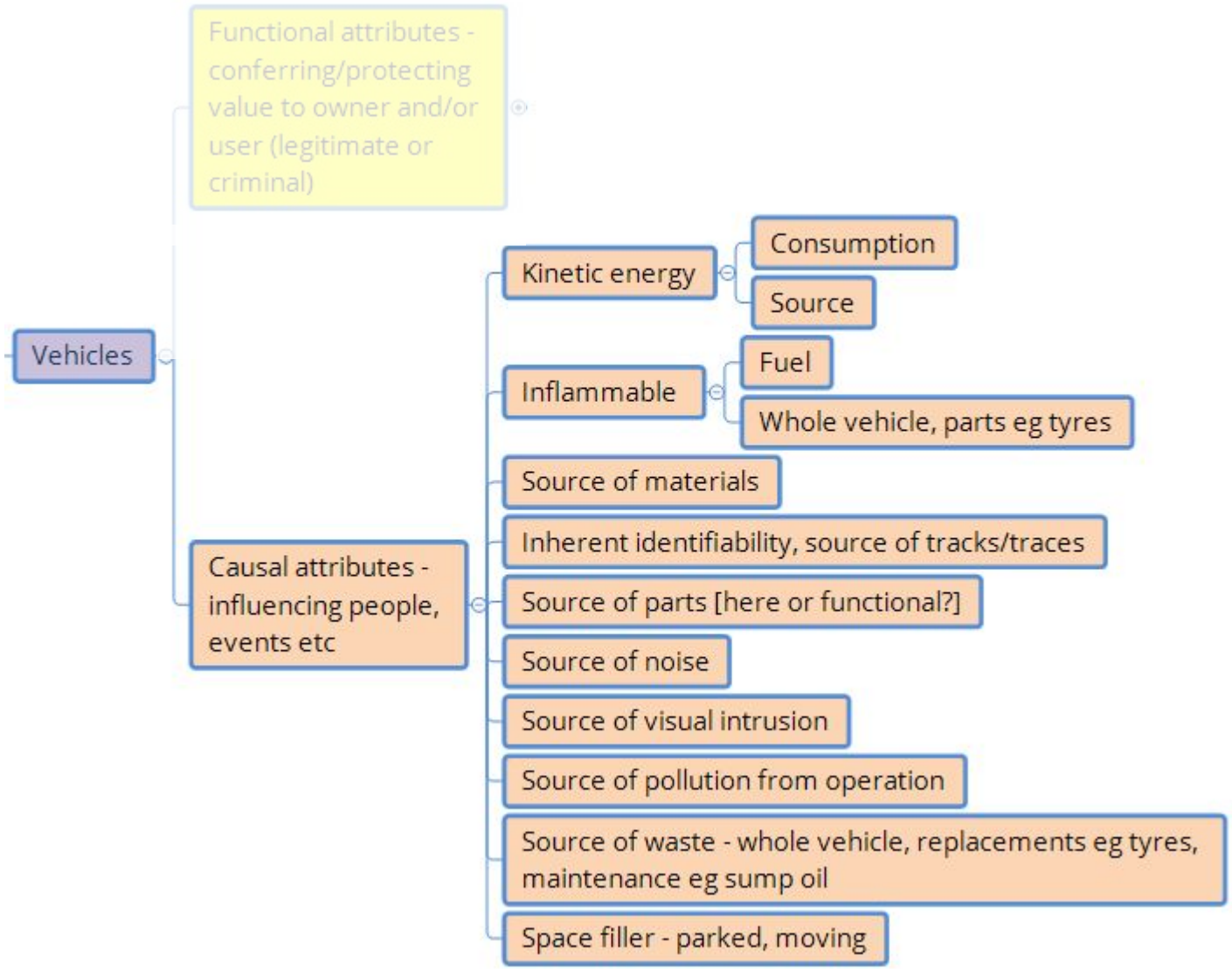
Vehicles – functional attributes/design requirements – negative/avoidance design requirements



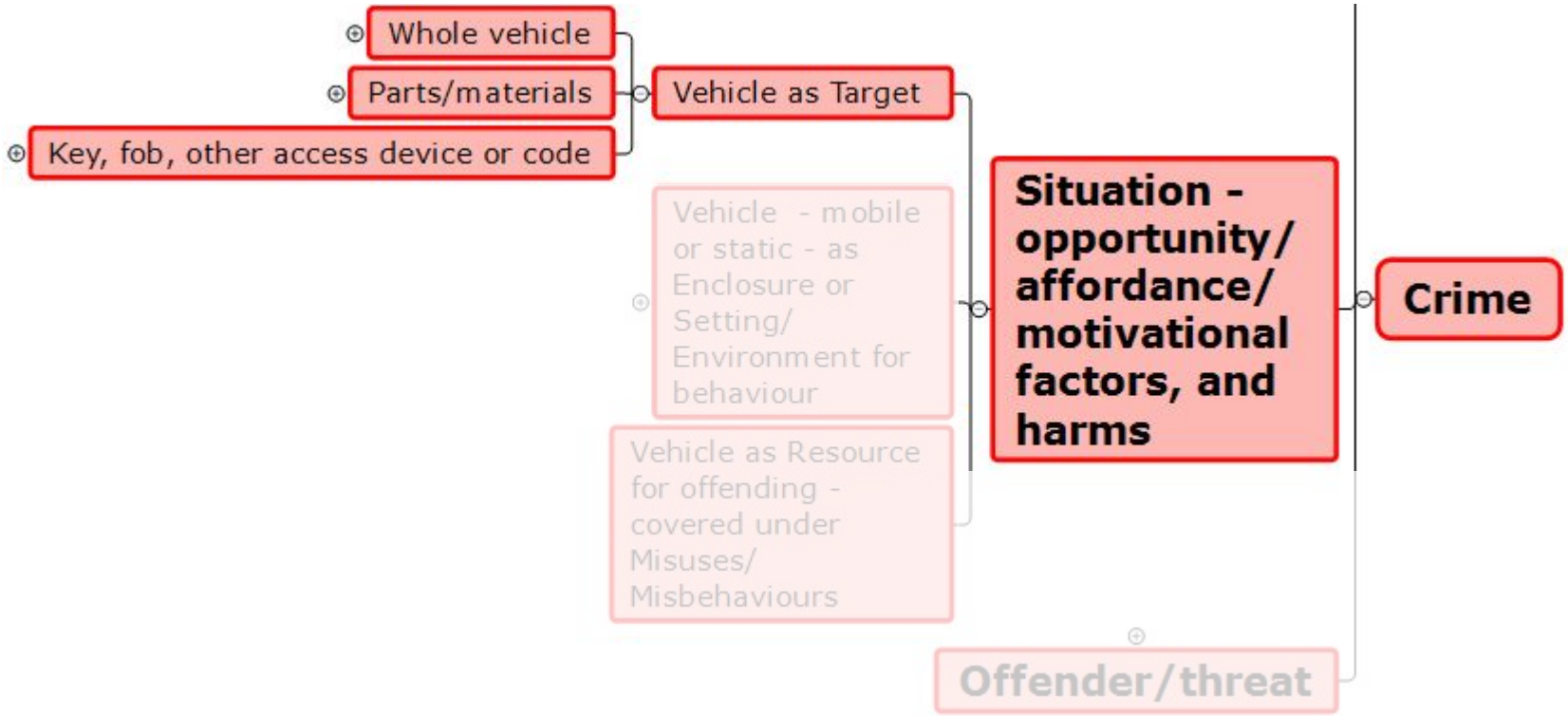
Vehicles – functional attributes/design requirements – repurposing



Vehicles – causal attributes

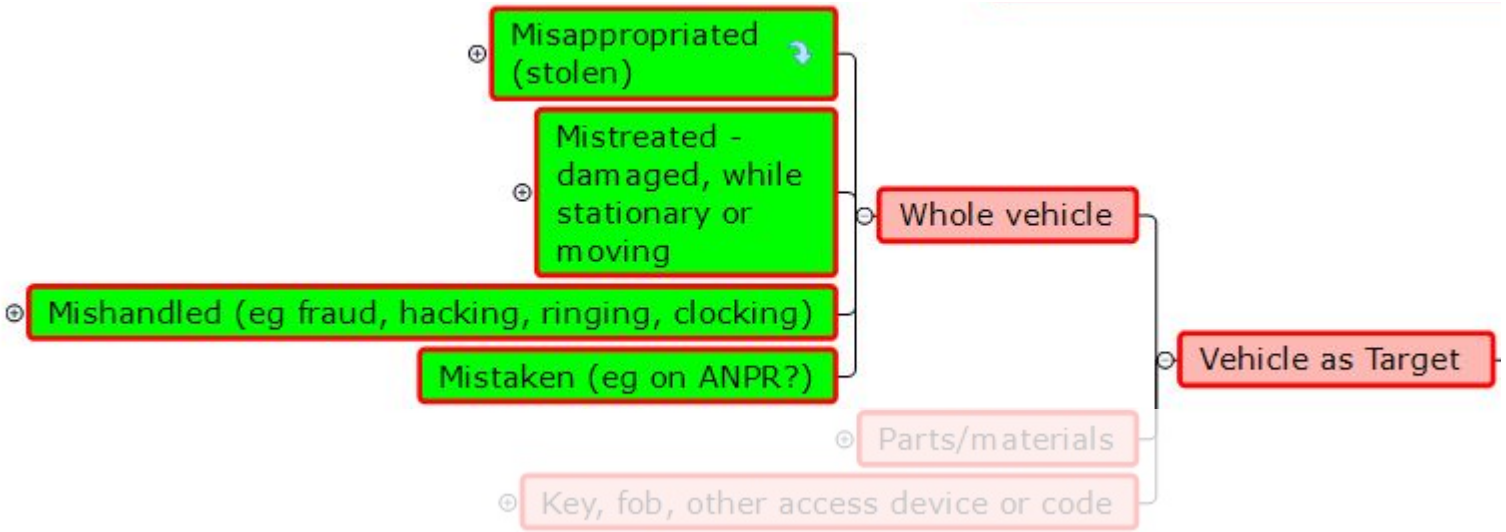


Crime situation – whole vehicle as target



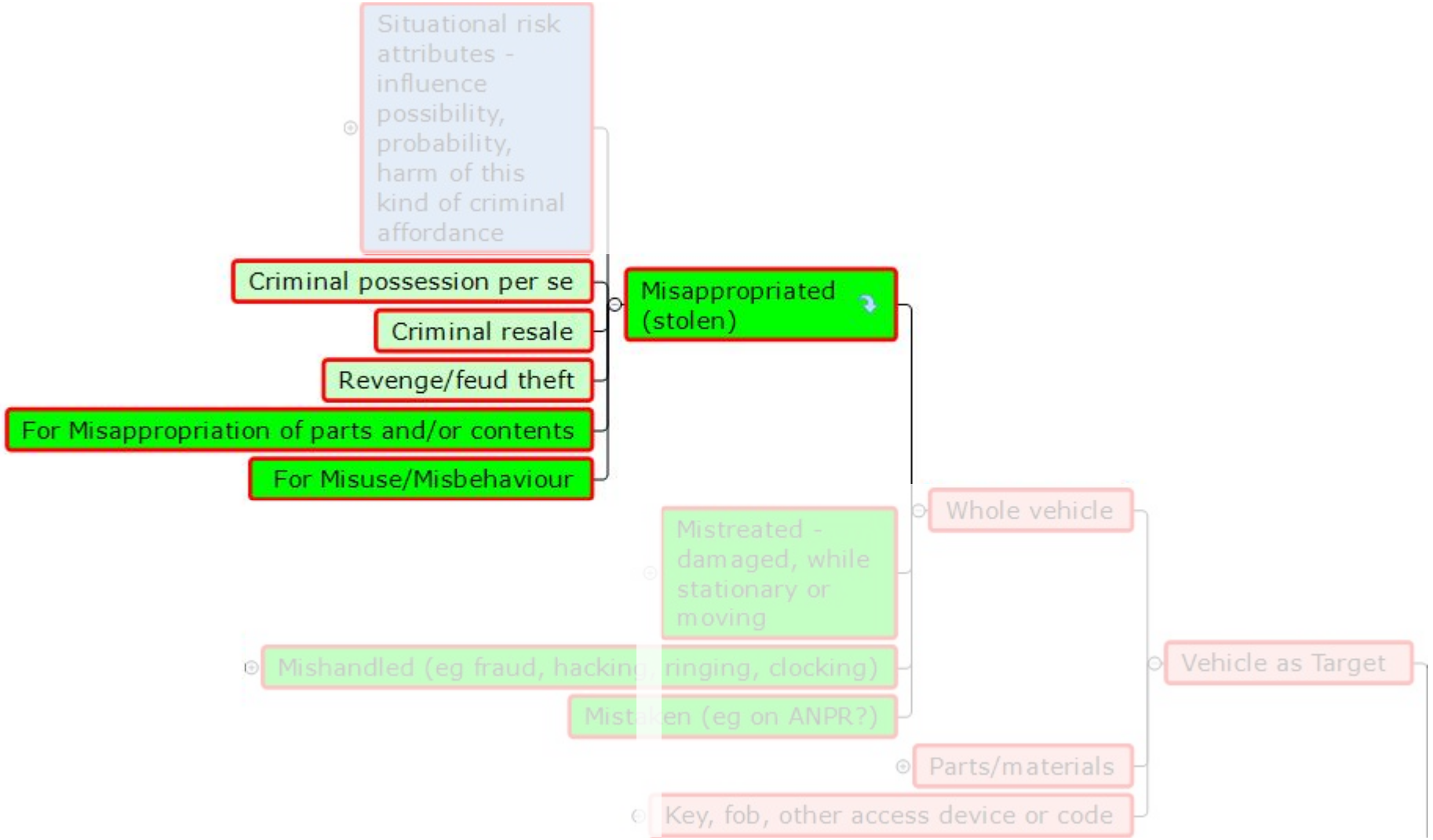
Crime situation – whole vehicle as target – generic criminal affordances

- This uses the Misdeeds framework

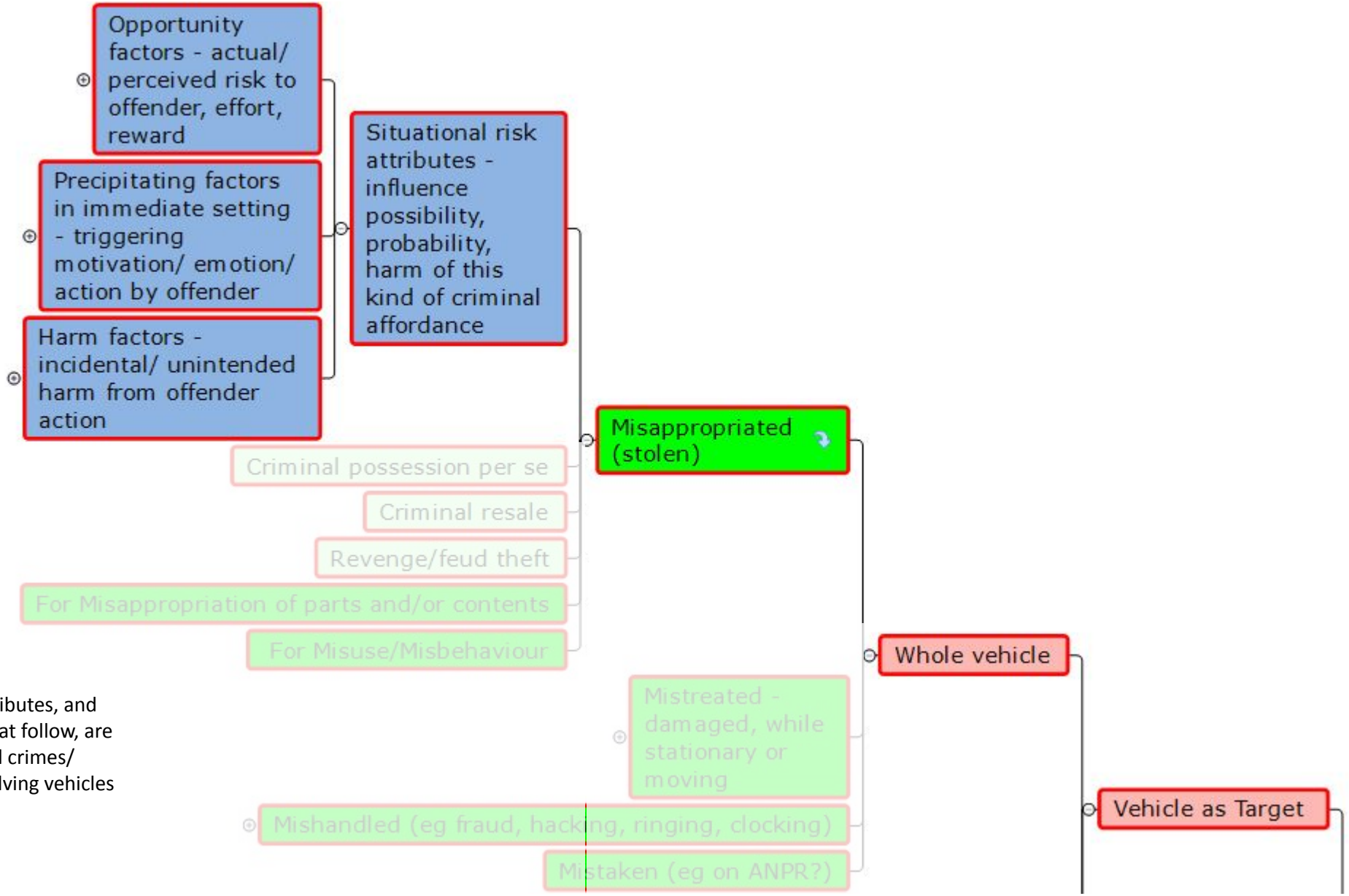


Crime situation – whole vehicle as target – of misappropriation (theft): detailed affordances, and linked generic affordances

- Linked generic affordances are where, for example, a vehicle can be **misappropriated** in order to **misuse** it (e.g. stolen for use as a getaway car). In effect, these are operational-level steps in a crime script



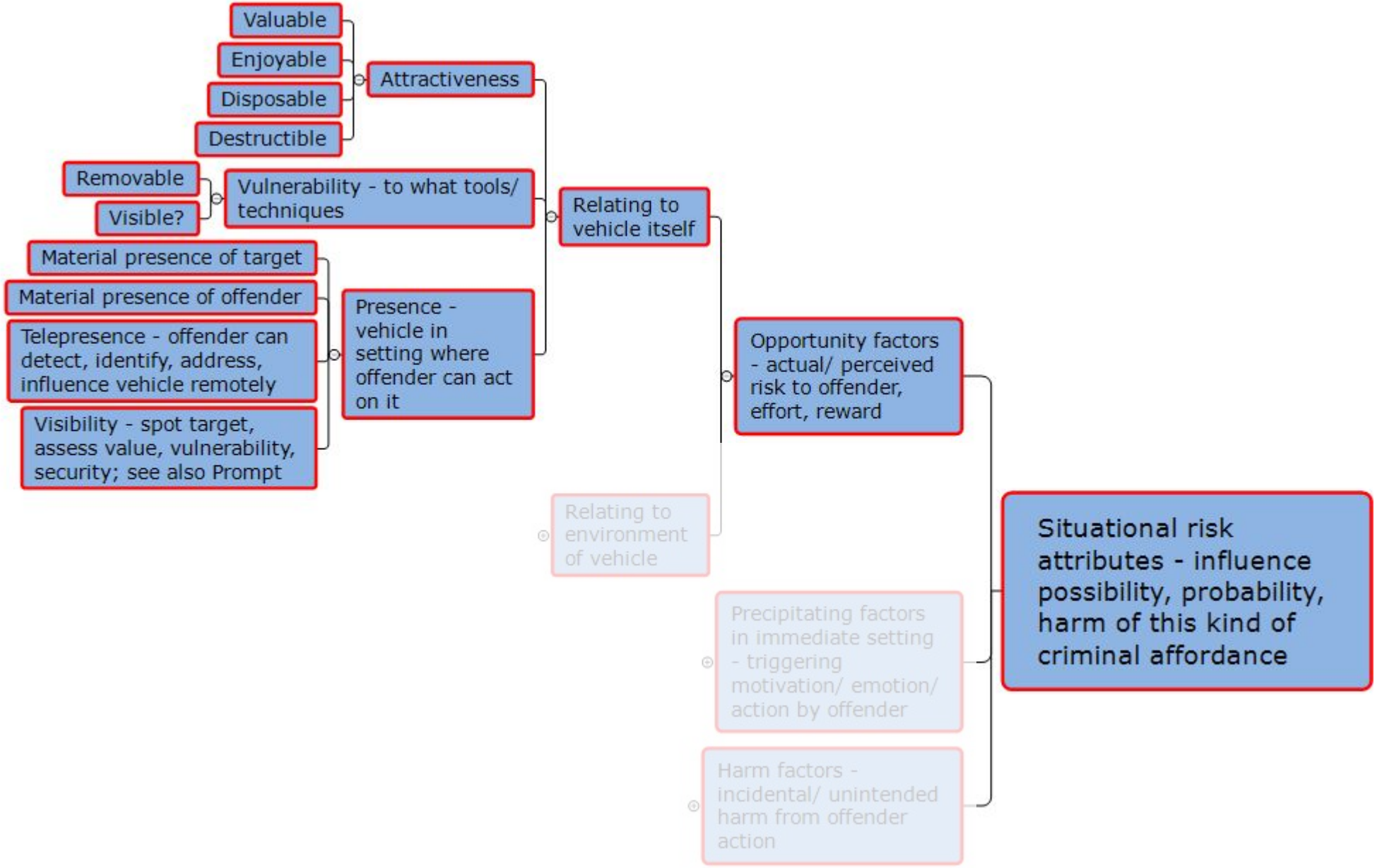
Crime situation – whole vehicle as target – of misappropriation (theft): situational risk attributes



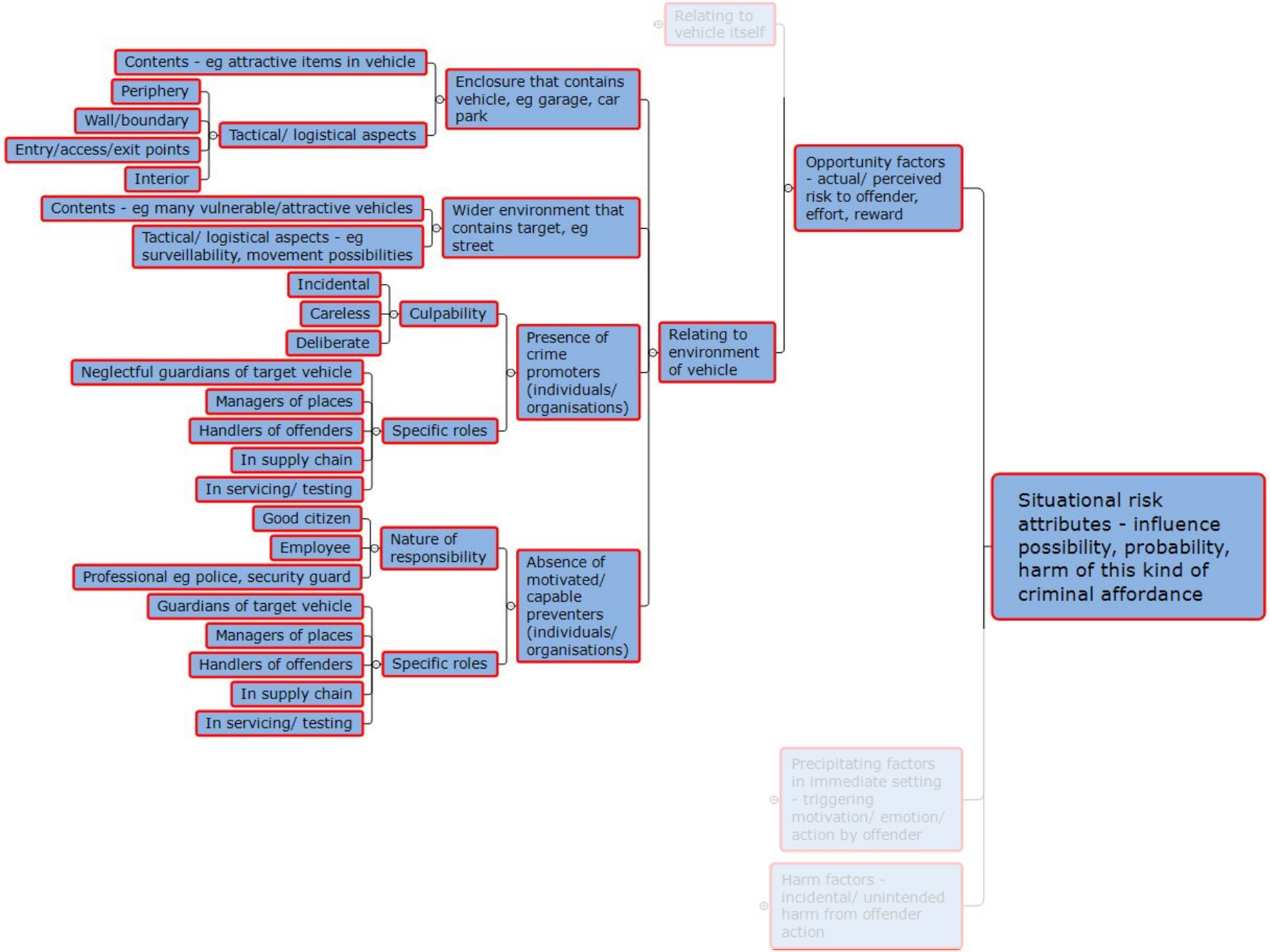
- These situational risk attributes, and the expanded versions that follow, are generic – they apply to all crimes/ criminal affordances involving vehicles

Crime situation – whole vehicle as target – of misappropriation (theft): situational risk attributes – opportunity factors – relating to vehicle itself

- Using CCO, CRAVED



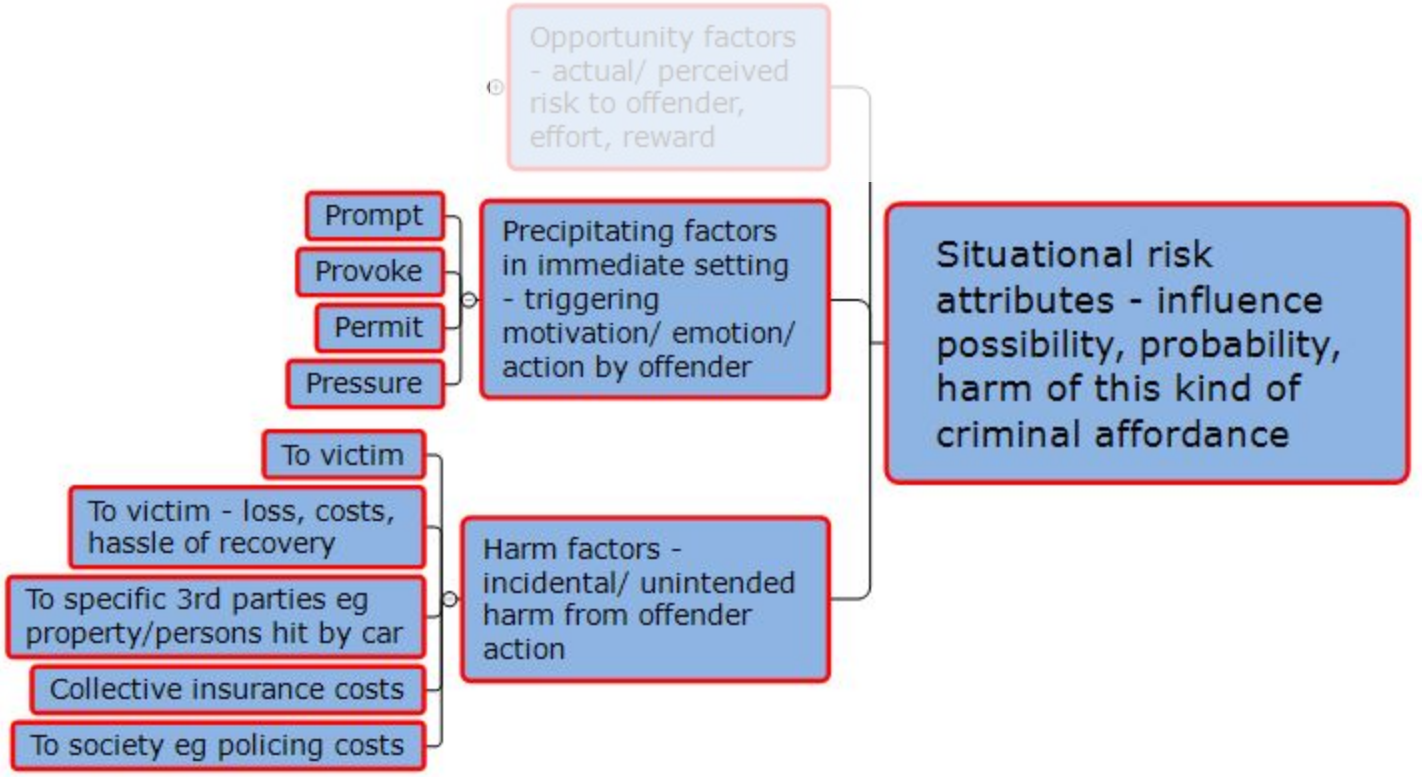
Crime situation – whole vehicle as target – of misappropriation (theft): situational risk attributes – opportunity factors – relating to environment of vehicle



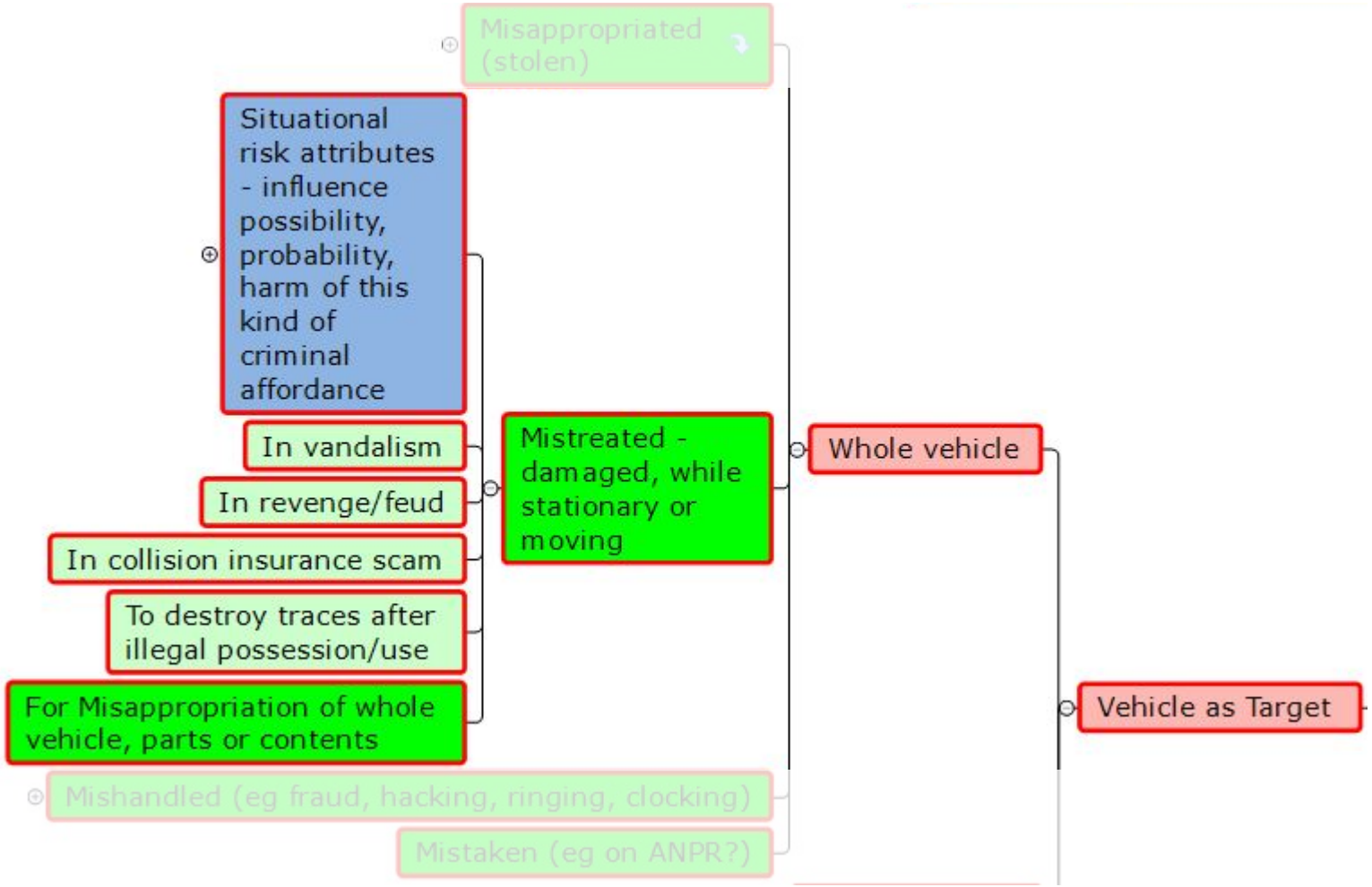
- Using CCO (covering RA, Problem Analysis Triangle, Geometry of crime)

Crime situation – whole vehicle as target – of misappropriation (theft): situational risk attributes – precipitating factors in immediate setting, and harm factors

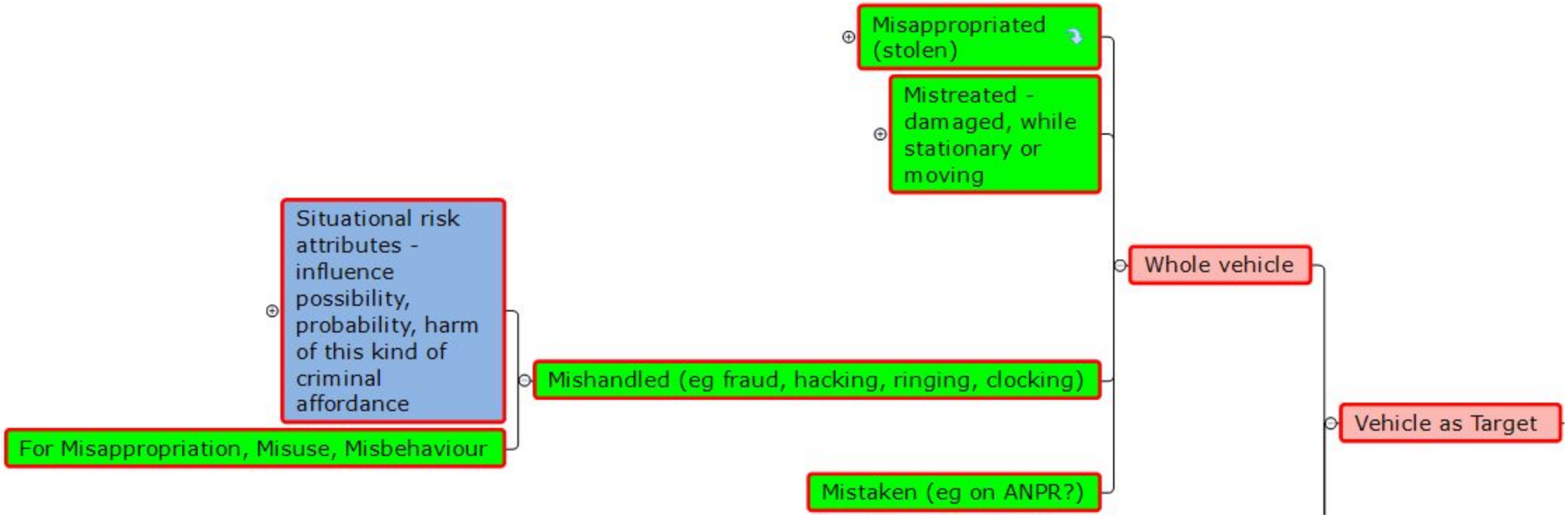
- Using Crime Precipitators



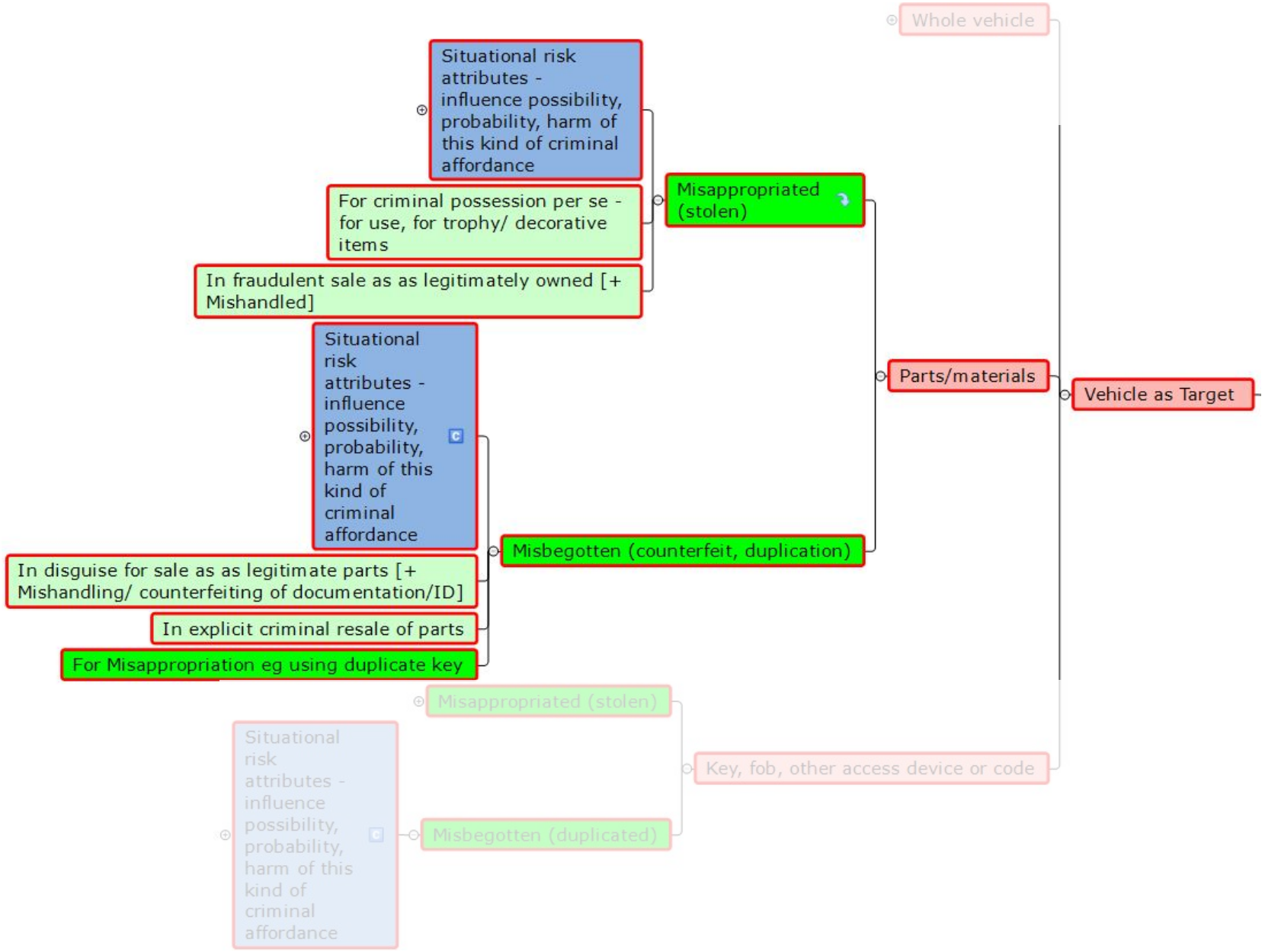
Crime situation – whole vehicle as target – of mistreatment: detailed affordances, and linked generic affordances



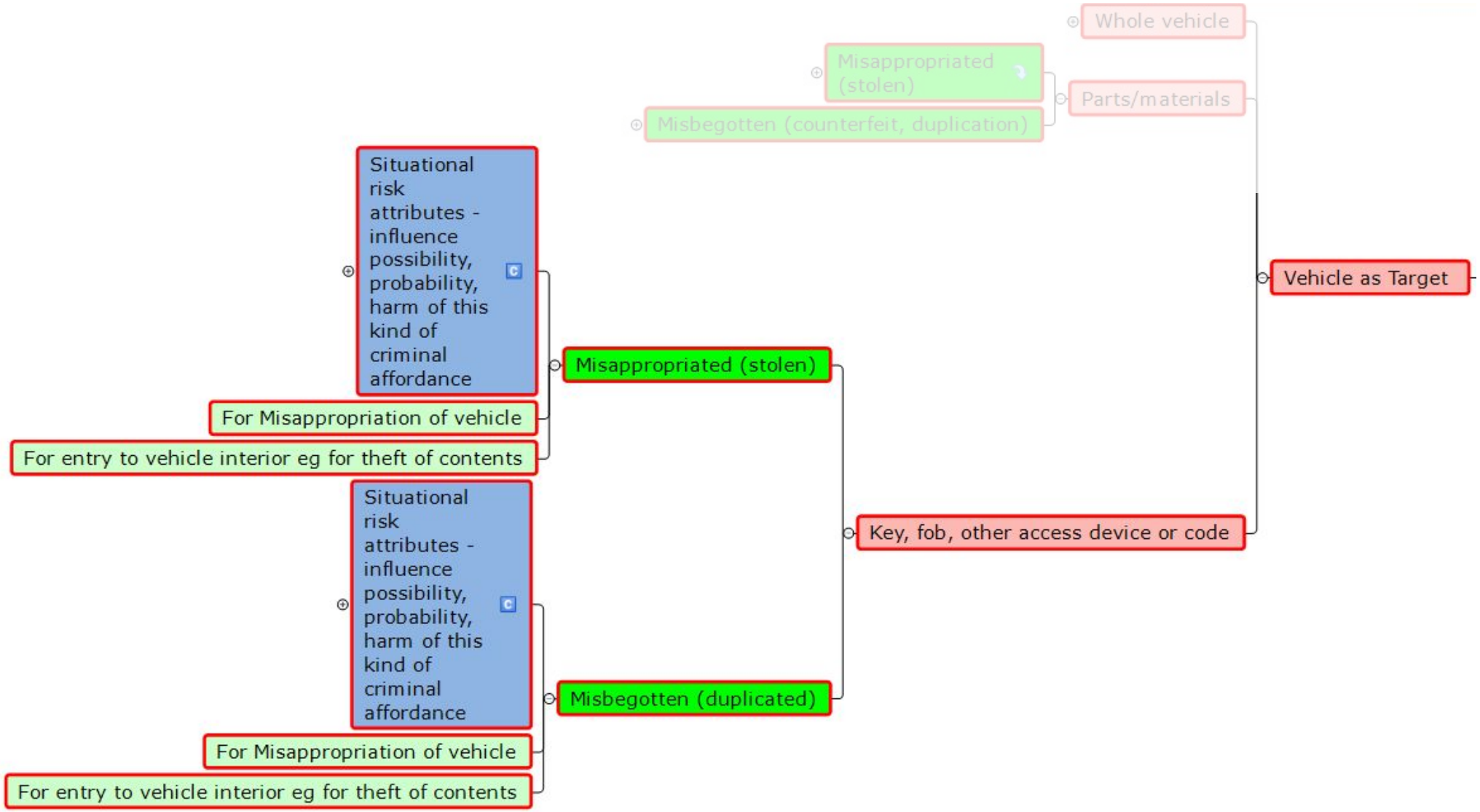
Crime situation – whole vehicle as target – of mishandling/mistake: detailed affordances, and linked generic affordances



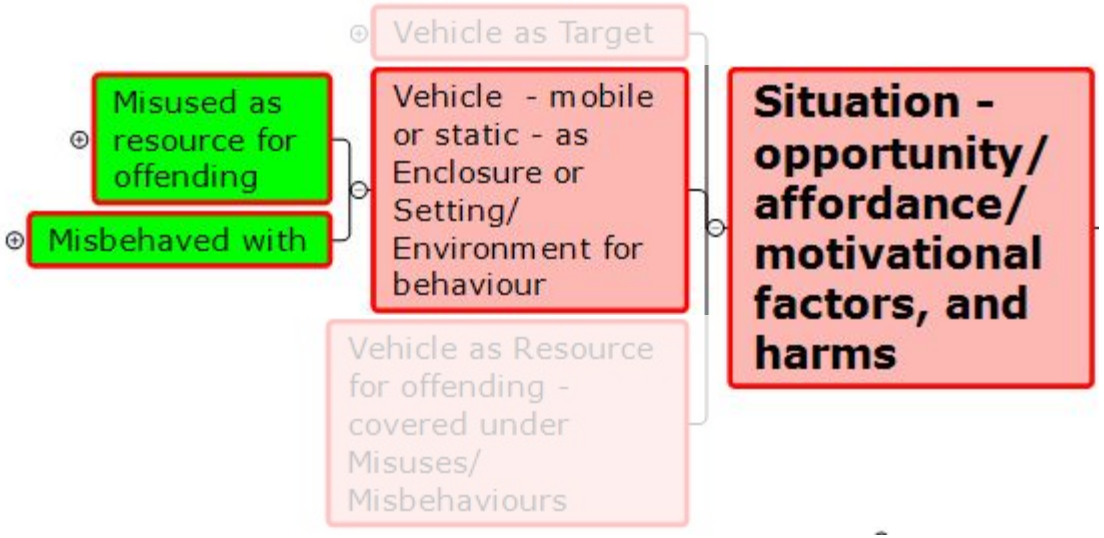
Crime situation – parts/materials of vehicle as target – of misappropriation/misbegetting (counterfeit etc): generic and detailed affordances, and linked generic affordances



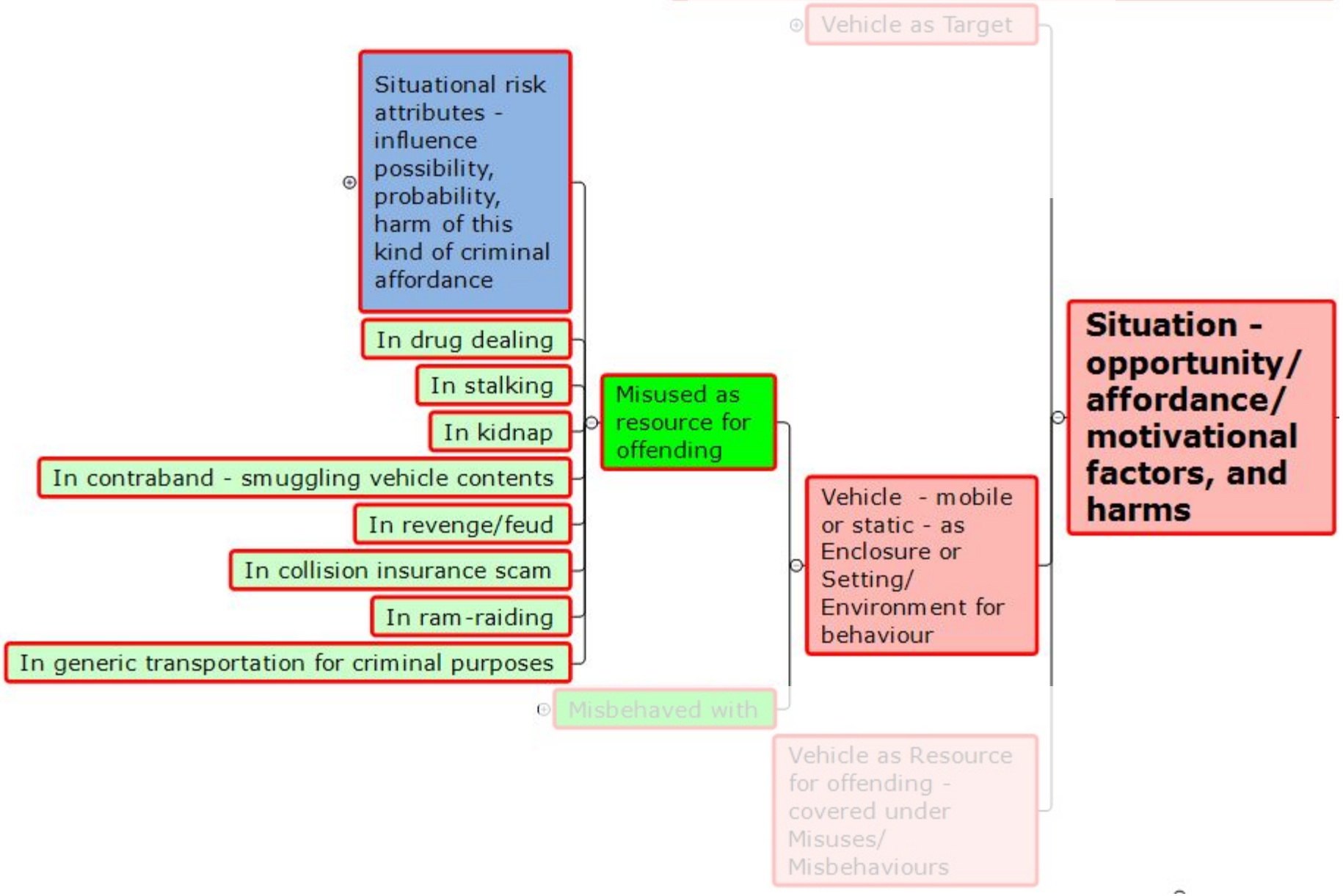
Crime situation – key, fob, other access device or code of vehicle as target – of misappropriation/misbegetting (duplication etc): generic and specific affordances



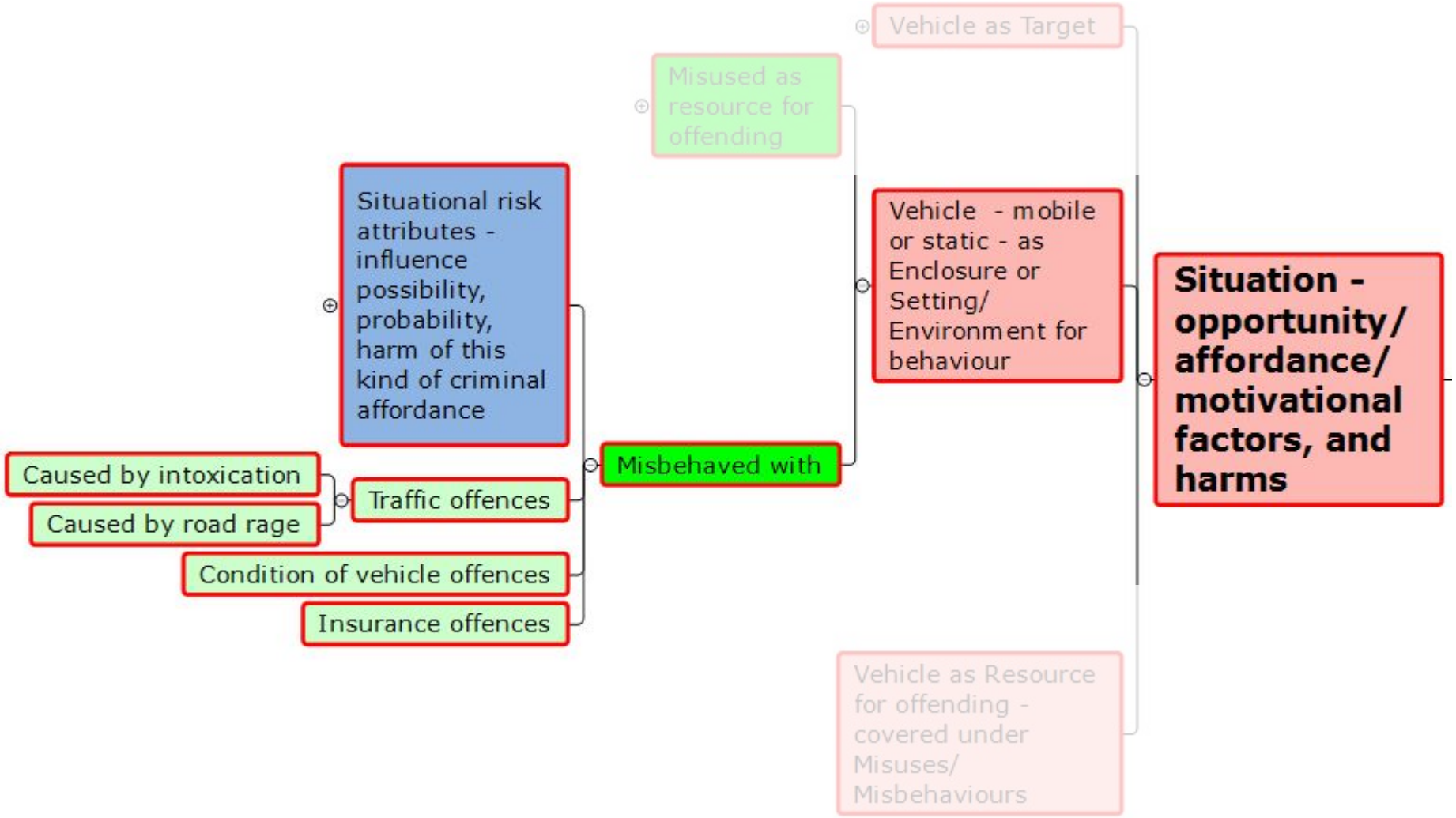
Crime situation – vehicle as enclosure or setting: for misuse and misbehaviour



Crime situation – vehicle as enclosure or setting: for misuse and its detailed affordances

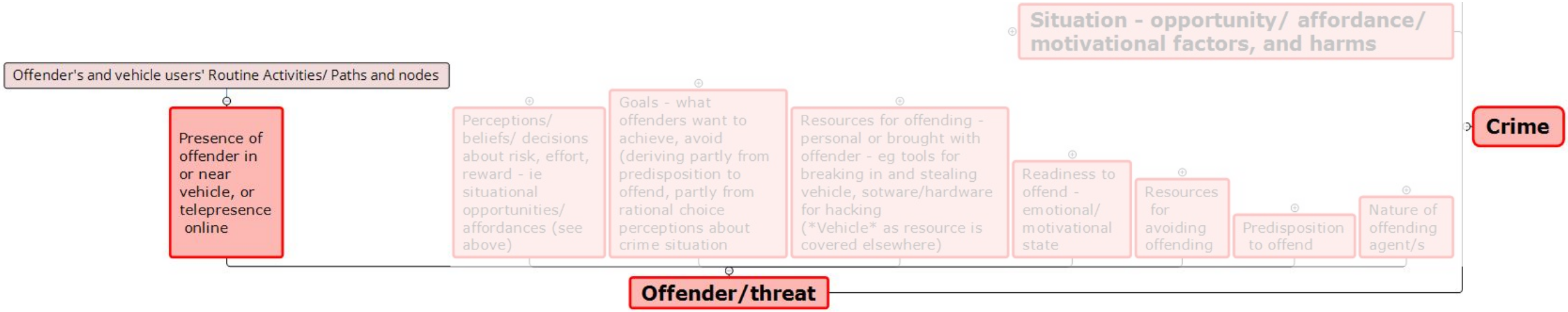


Crime situation – vehicle as enclosure or setting: for misbehaviour and its detailed affordances



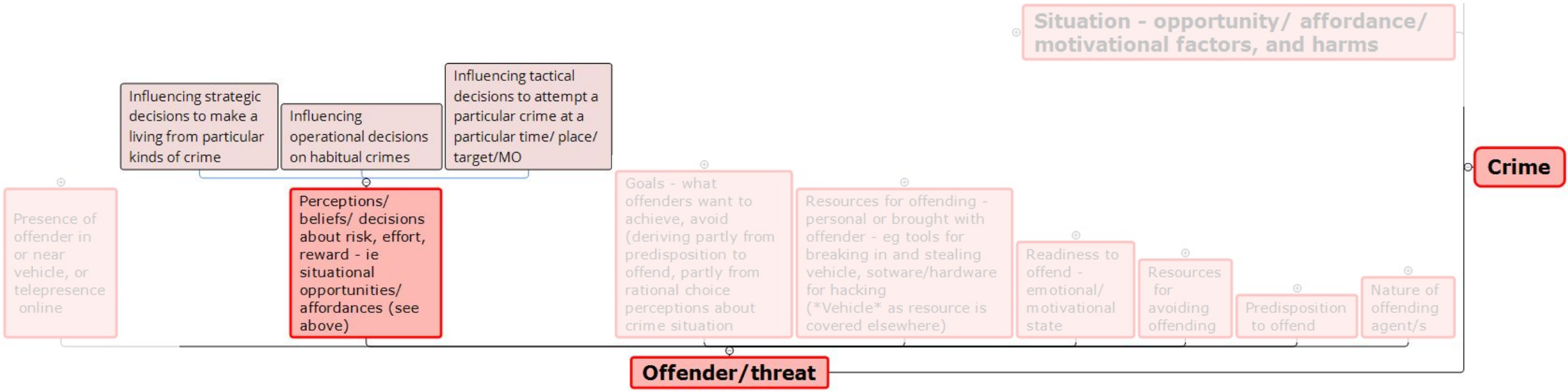
Offenders and the threat they pose in vehicle crime: presence

- Modified from CCO (covering RA, Geometry of Crime)



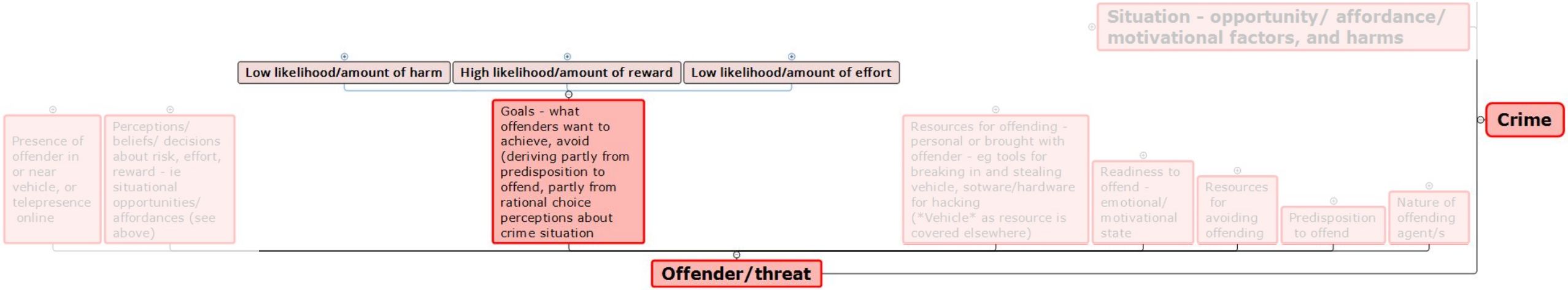
Offenders and the threat they pose in vehicle crime: perceptions and decisions

- Rational Choice at several levels

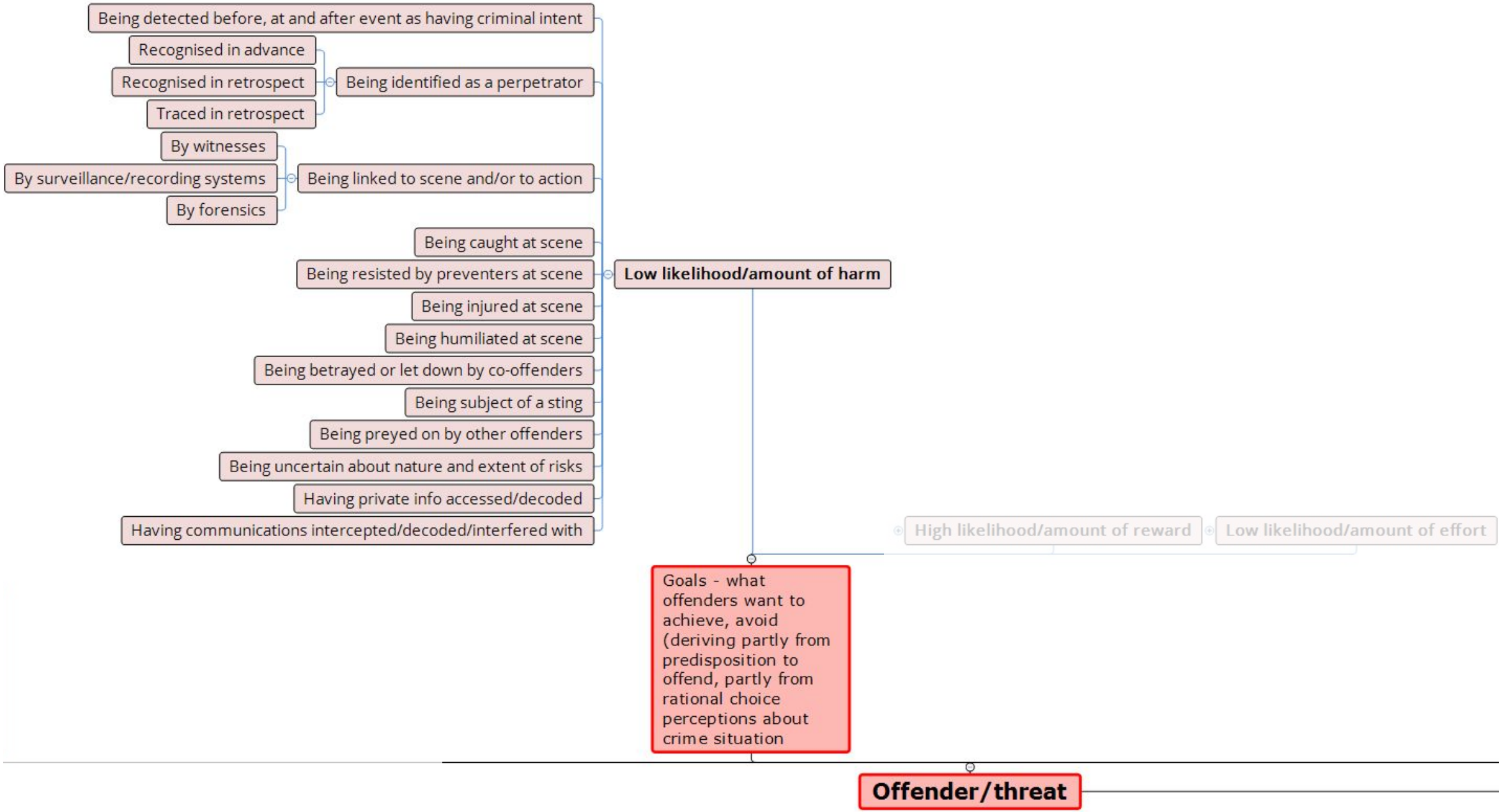


Offenders and the threat they pose in vehicle crime: goals/ purposes

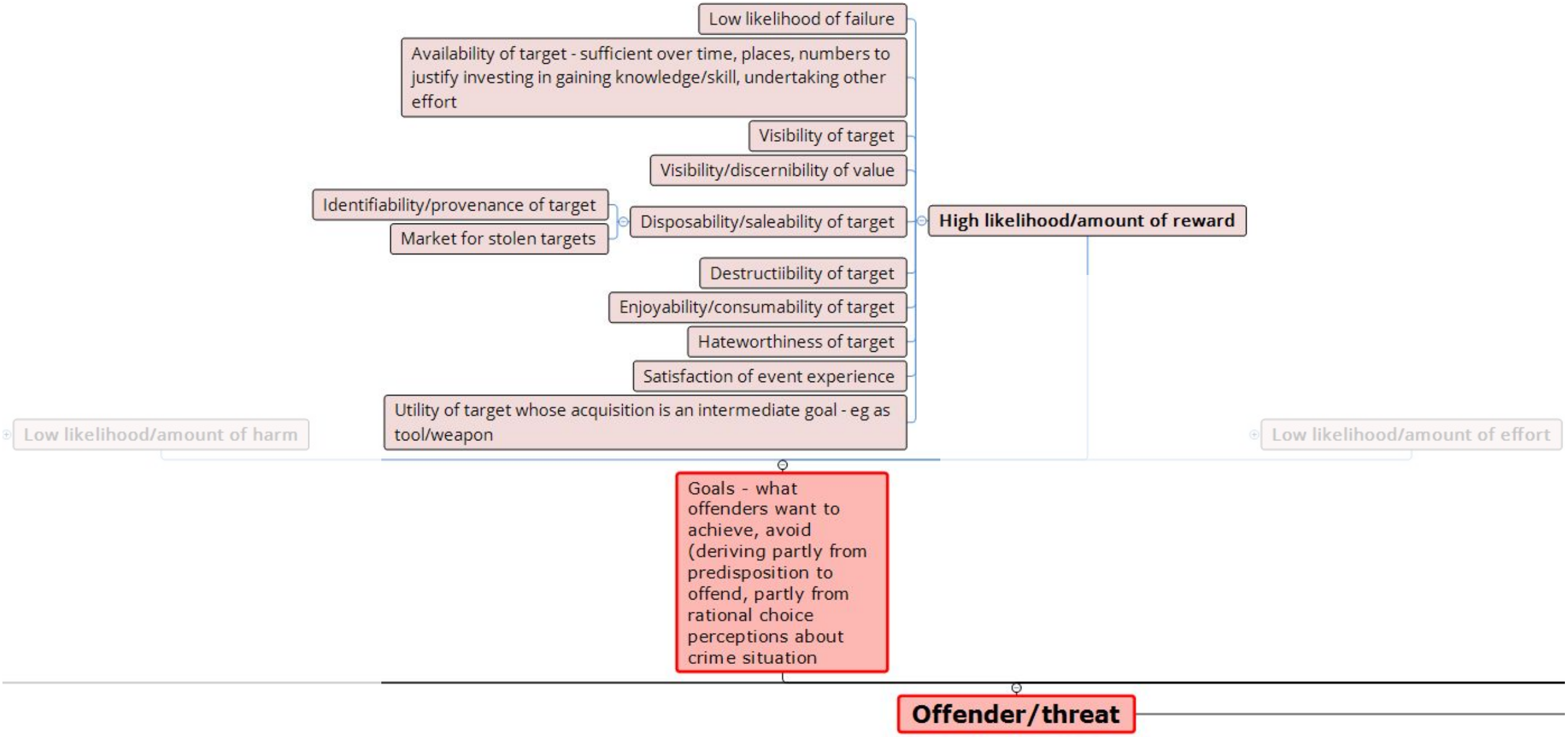
- Rational Choice



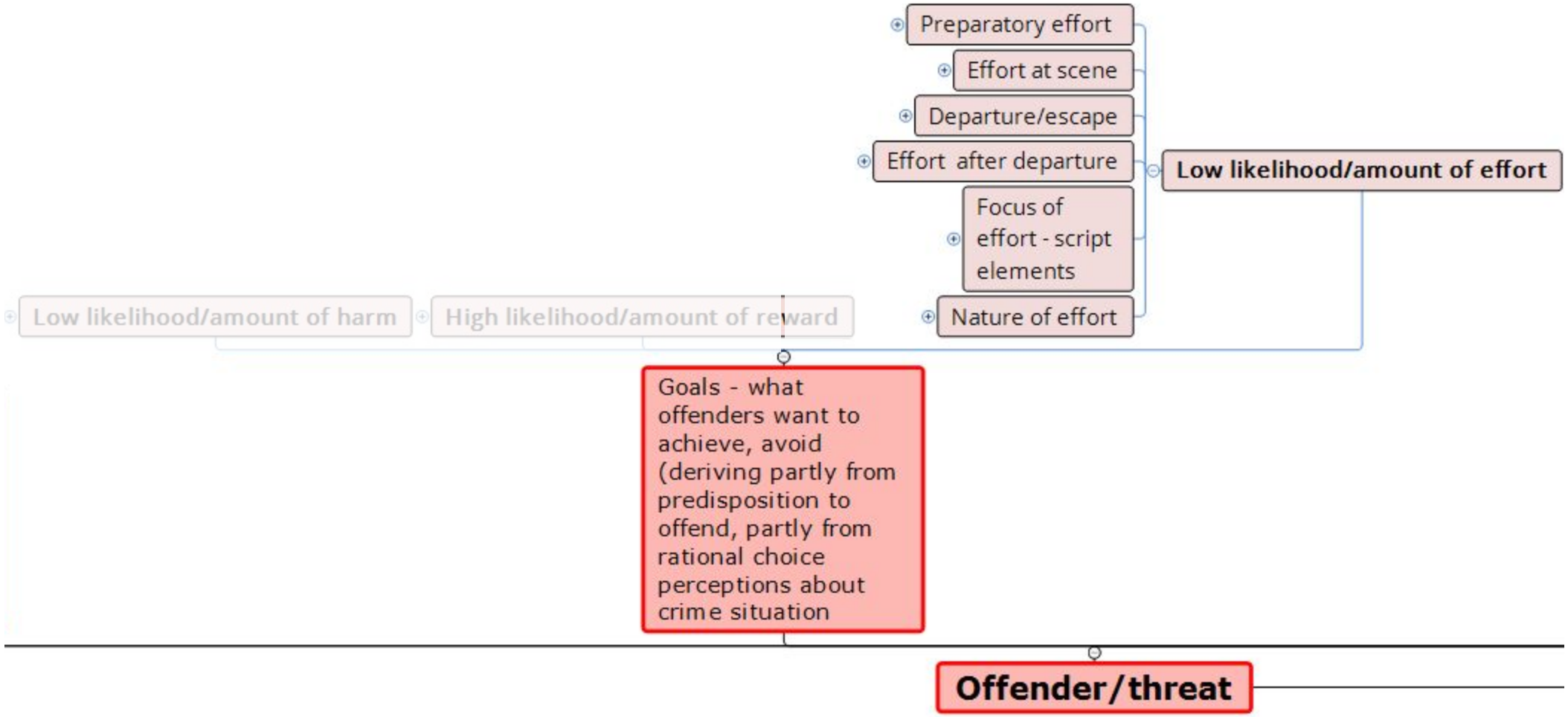
Offenders and the threat they pose in vehicle crime: goals/ purposes – low harm



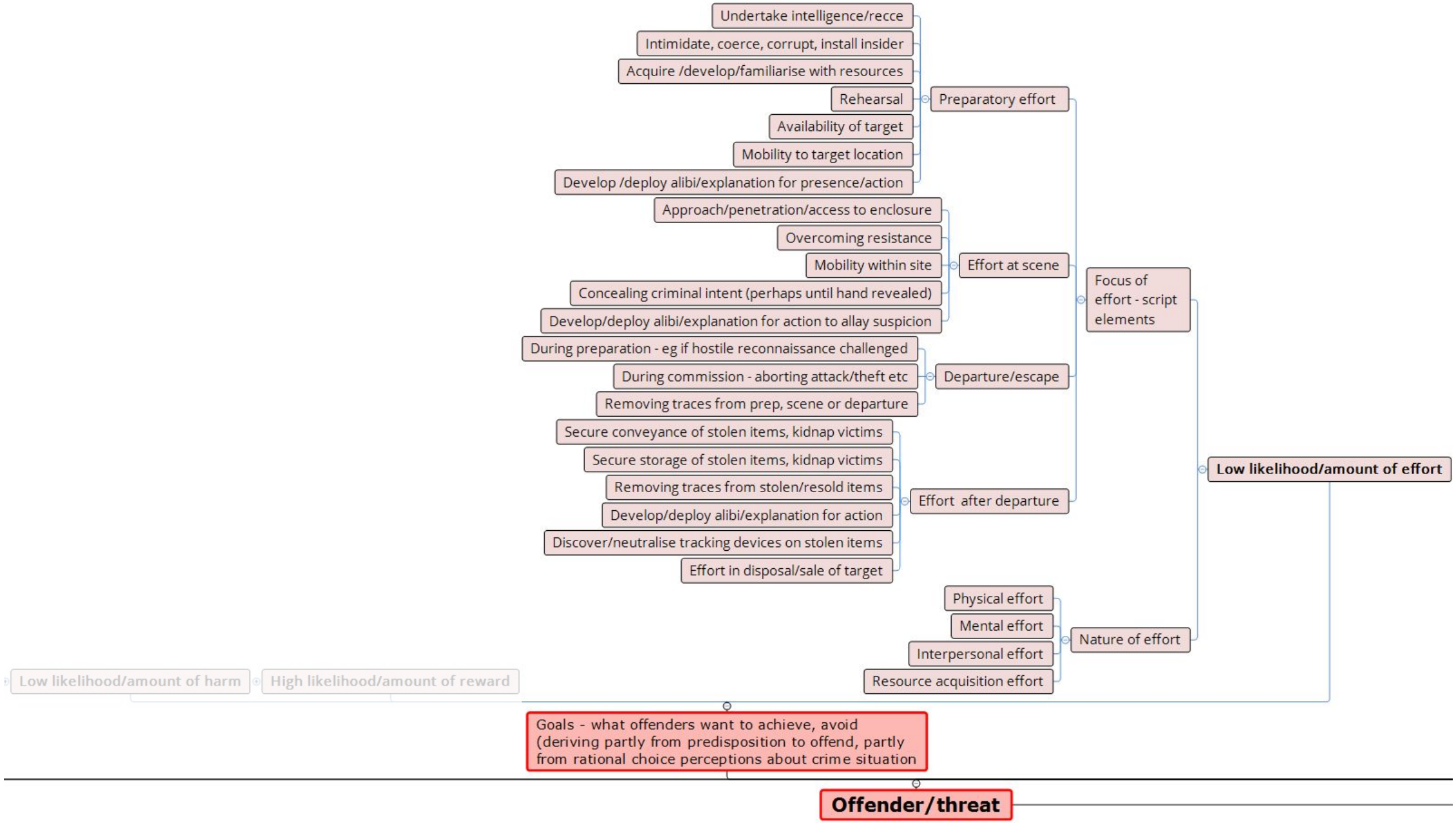
Offenders and the threat they pose in vehicle crime: goals/ purposes – high reward



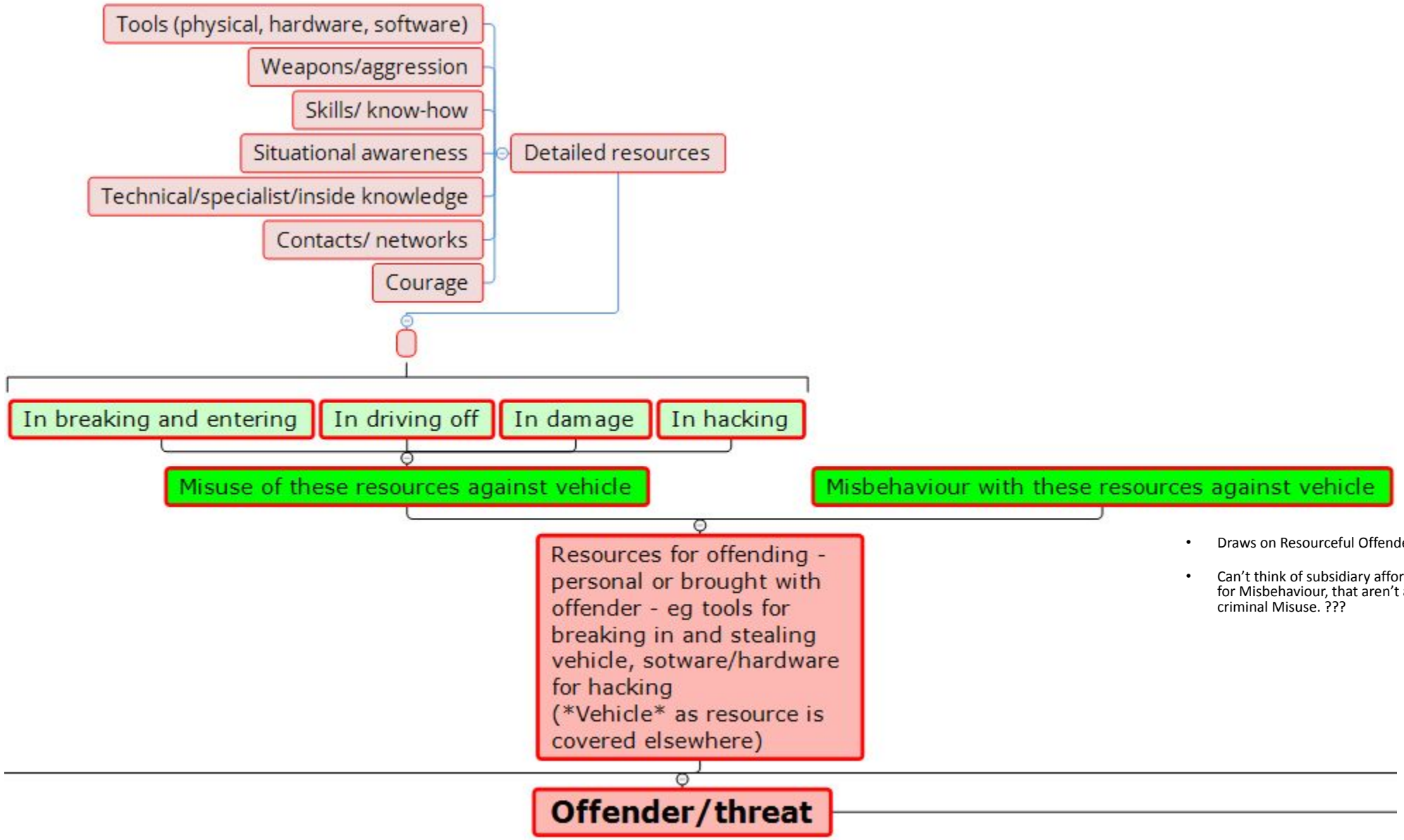
Offenders and the threat they pose in vehicle crime: goals/ purposes – low effort



Offenders and the threat they pose in vehicle crime: goals/ purposes – low effort - detail

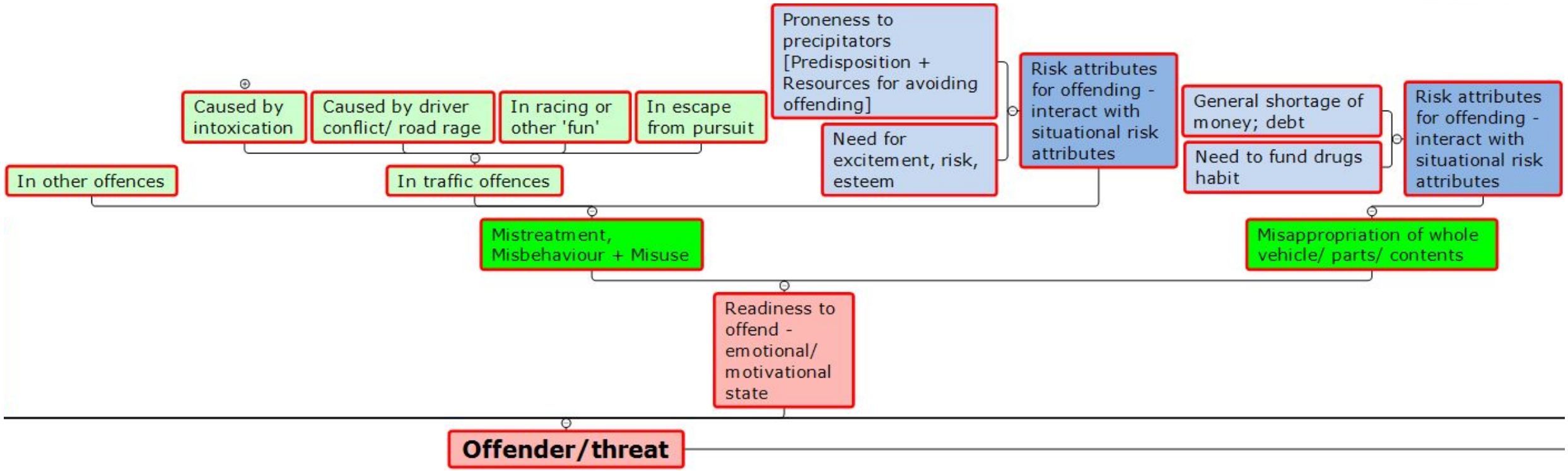


Offenders and the threat they pose in vehicle crime: resources for offending (other than provided by vehicle itself)

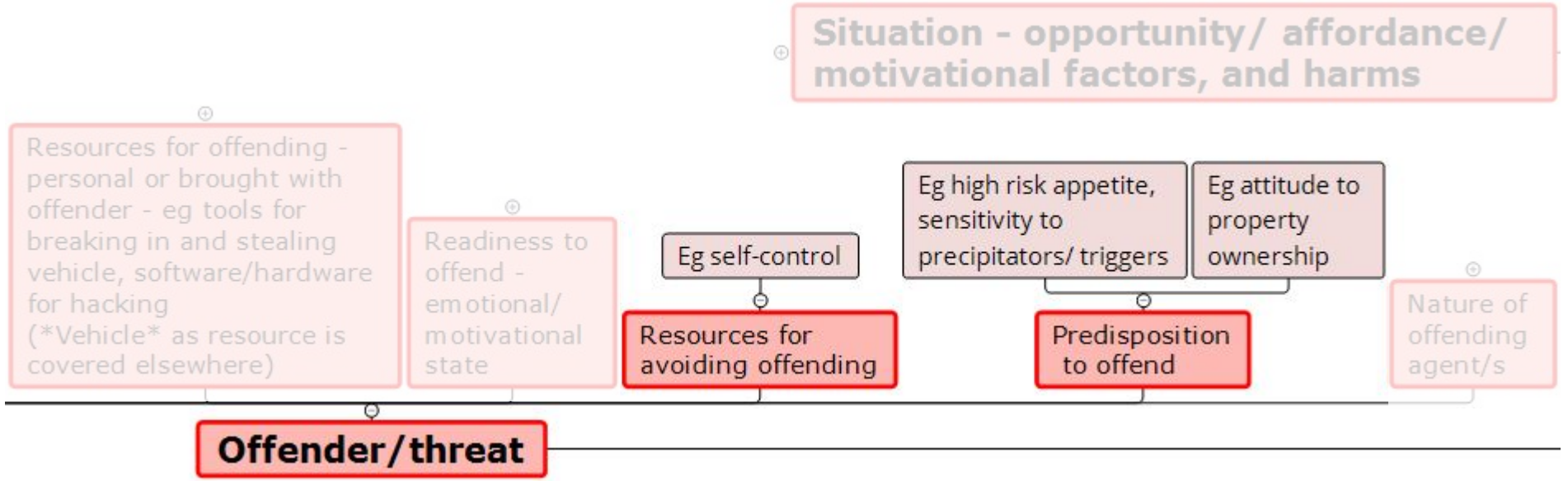


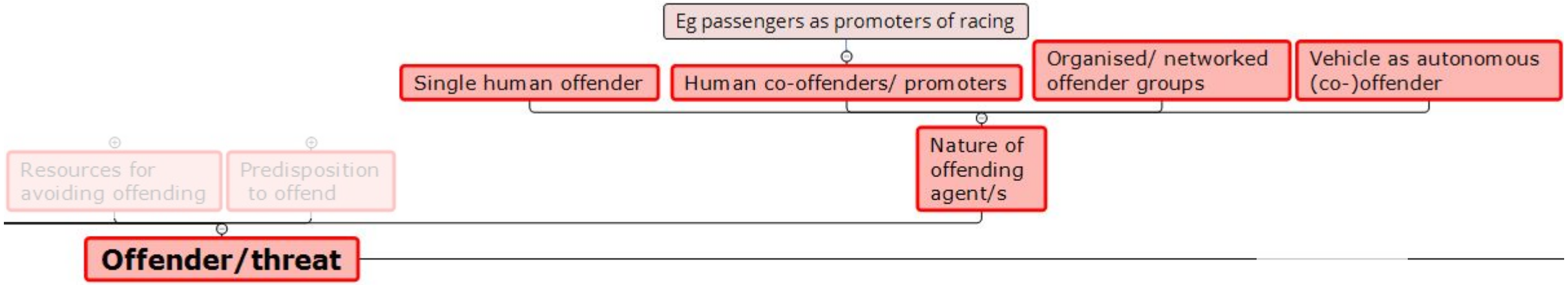
- Draws on Resourceful Offender
- Can't think of subsidiary affordances for Misbehaviour, that aren't actually criminal Misuse. ???

Offenders and the threat they pose in vehicle crime: readiness to offend (current emotional/motivational state)



Offenders and the threat they pose in vehicle crime: resources for avoiding offending, predisposition to offend



- To be extended

Offenders and the threat they pose in vehicle crime: nature of offending agent