

# Sharpening up CPTED

## A toolkit to better plan cities in the future

### Paul Ekblom

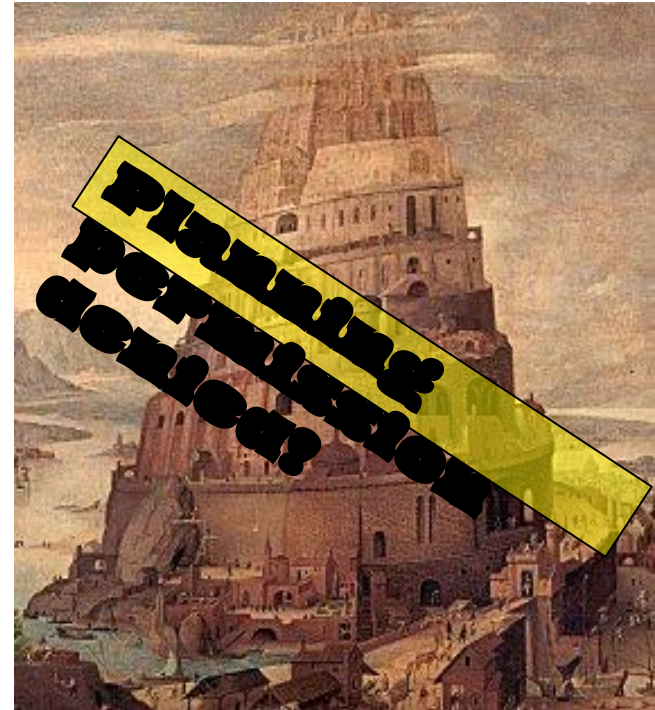


**ual:** university  
of the arts  
london  
central  
saint martins



# CPTEDbabel?

- The Tower of Babel story in the Bible is a pretty good analogy for CPTED
  - It relates to the built environment
  - It could be seen as a crime impact statement - 'OMG! Says Jehovah, If they can build this, they're capable of doing anything!'
- But most seriously, we do face the issue of linguistic confusion: if we stretch this to include conceptual confusion, it's where I believe CPTED is today
- I'm a firm believer in CPTED, but I want it to be as good as it can be – so what follows is a constructive critique rather than the **Wrath of God**



# What's coming up

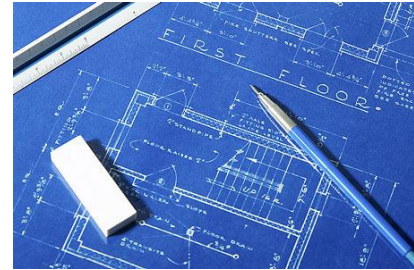
- Confusion within CPTED – difficulty coping with the present, let alone the future
- How the confusion happened
- Wider confusion
  - Between CPTED and other preventive approaches
  - Within crime prevention more generally
  - Within security
- The consequences of these confusions
- How to make things better – discourses, definitions and frameworks... experimental thoughts

And...

- CPTED and the future – nature of anticipation and how to do it

# Confusion within CPTED

- All the core concepts of CPTED overlap
  - Where does defensibility end, territoriality begin? Likewise defence and access control?
- All fail to distinguish between nature of **Action** and qualities of **Place**
  - Defence & Defensibility, Surveillance & Surveillability etc
  - And Territorial motivation/emotion, Territorial behaviour and plain Territory
- All fail to distinguish between **Preparation & Operation**
  - **Installation of Walls** enabling **Defence**
  - **Sightlines** enabling **Surveillance**
- Target-hardening has particular limitations
  - What **exactly** is the target to be protected – the house or the Ultra HD TV set inside it?
  - And what about target **softening**?



# Research by Victoria Gibson & colleagues at University of Northumbria

- Analysis of 64 CPTED documents identified
  - Significant terminological conflicts
  - Free-for-all use of vernacular terms to characterise CPTED framework, with little rationale – e.g. substitution of ‘Movement Control’ for ‘Access control’
  - CPTED organised under anything from 3 – 7 headings
  - But total of 58 terms used
  - 25 out of 64 papers offered a framework either of the author’s own interpretation or unreferenced

D. Johnson, V. Gibson and M. McCabe (2014). ‘Designing in Crime Prevention, Designing out Ambiguity: Practice issues with the CPTED knowledge framework available to professionals in the field and its potentially ambiguous nature.’ *Crime Prevention and Community Safety* DOI: 10.1057/cpcs.2014.3



# How did this confusion happen?

- CPTED has built up like a stack of pancakes, with an accretion of successive terms and concepts from different writers – Jacobs, Jeffrey, Newman, Coleman, Poyner
- This resembles succession of ‘schools’ of architecture and design practice – Bauhaus etc. – in extreme cases each school rubbishes its predecessors
- And now we have ‘generations’ of CPTED – 1x2nd, and at least 2x3rd gen – added content is good, but
  - Concern about revolution rather than accumulation
  - Divisive among practitioners/theorists
- We also have ‘quick grabs’ of ideas from other criminological domains – Opportunity, Broken Windows – which are then ‘stuck on’ to CPTED often uncritically with regard to evidence, and without much attempt to integrate the underlying theory or concepts



# Confusion between CPTED and other approaches to crime prevention

- CPTED label often used synonymously with crime prevention in general
- This risks
  - Over-reaching our expertise
  - Diluting quality of knowledge in both fields

# Confusion within Crime Prevention more generally

- Lack of clarity over status of **Routine Activities**, **Rational Choice** – are they theory, perspective, truism, approach? Is **Pattern Theory** a theory?
- **Opportunity** is oversimplified
  - Not just 1) something ‘out there in the **environment** enabling action’ but also defined by 2) offender’s **resources** to exploit and cope; and 3) offender’s **goals** – opportunity to do *what*?
- Sloppy usage
  - ‘**Likely offender**’ of Routine Activities (includes capability) shrunk to ‘**motivated offender**’
  - **Guardian** used for all preventer roles including place manager, handler of offender... and where are the planner, designer, architect and developer?





# Confusion within Crime Prevention more generally

- Poor integration between perspectives
  - RC is psychological, RA ecological, PT spatial
  - All use slightly different terminology, or same words with different nuances
  - Put together, they have gaps and partial overlaps
  - And they shy away from **offender-related** factors – knowing about offender goals, resources and emotional/motivational Precipitators can help design situational interventions
    - Prompts, Provocations, Permissions and Pressures (Richard Wortley)
- Process model (SARA) too crude
  - **Response** covers huge diversity of action, from fitting locks to running security campaigns to building Olympic stadia – hard to capture, organise, retrieve, articulate practice knowledge



# Confusion within Security

- Many meanings of
  - **Threat** (risk, hazard, intent, intent + capability)
  - **Vulnerability** (weak points, exposure, manifest risk pattern)
  - **Hazard** (harmful event, something with potential to cause harm)
  - **Risk** (likelihood, likelihood x harm; negative uncertainty or all uncertainty)

# What are the consequences of the confusion?

- Our tools for thinking & communicating about CPTED principles and CPTED action are blunt & inefficient
- Operationally, in the here and now, this can
  - Limit the scope of the problems we can tackle
  - Allow objectives to drift – e.g. from inclusive community safety to exclusive gated security
  - Reduce the quality of interventions suggested/ designed to address particular problems
  - Constrain our ability to undertake the CPTED process as professionally and rigorously as we might
  - Disadvantage CPTED in the wider planning/ development process
  - Hinder collaboration within CPTED locally, nationally and internationally, and limit the transfer of CPTED principles to other cultures and contexts



# What are the consequences of the confusion?

- In the background, the conceptual confusion can
  - Hinder collaboration and cross-fertilisation with wider disciplines/ professions – especially links with criminology, security and architecture
  - Hinder the capture, consolidation, retrieval & sharing of practice knowledge – efficient training and briefing is increasingly important with staff turnover/ reductions
  - Jeopardise formal research, evaluation of what works, & theory building
  - Hinder computer simulation/ agent-based modelling which can increasingly contribute to research, training, planning/ design of developments, and to crime impact assessment
- Imagine medicine or chemistry without a controlled vocabulary

# What are the consequences of the confusion?

- Facing the future, the conceptual confusion can
  - Leave residents, other users, police and government with a legacy of vulnerable buildings for decades... any retrospective fixes may be expensive, ugly, user-unfriendly
  - Constrain innovation and adaptability to new threats, new uses in the face of
    - Changing social and technological context which generate new conflicts, new pressures, new opportunities for crime
    - And adaptive criminals and terrorists who can exploit these opportunities



# Consequences of confusion – the example of Territoriality



# The example of Territoriality

Territoriality is central to CPTED – but **poorly defined**, so we can't

- Reliably spot **weaknesses** in design relating to territoriality
- Positively design **for** territoriality – designers need clear briefs
- Monitor & adjust **mechanisms** of prevention (how designs work)
- Clarify **values** embedded in design (e.g. connection with inclusiveness)
- Undertake innovative tradeoffs with values **outside** security e.g. between territoriality and aesthetics
- Handle tradeoffs and conflicts **within** security e.g. territoriality v surveillance (walls demarcate private space, but may block sightlines)
- Be alert to **cultural differences** in how territoriality is interpreted

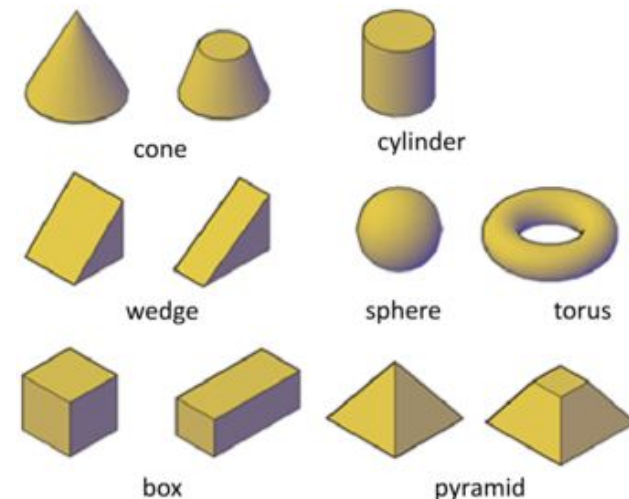
# How to make things better?

- Time for a sharpener



# How to make things better?

- Since all core principles of CPTED overlap, to understand Territoriality, for example, we have to simultaneously understand the rest of the concepts – they define each other
- So we need to **deconstruct** them and develop **definitions in depth** – to expose the ‘buried connections’ between the concepts and link them up
- Those definitions all need to be in a common set of **discourses** and draw on same set of **subsidiary concepts/ elements**
- This means setting out and combining:
  - **Environmental/architectural** discourse – building properties, structures, features
  - **Crime prevention** discourse – risks, causes and interventions
  - **Security** discourse – threat, hazard, mitigation
  - **Action and implementation** discourse – the messy people bits without which it all fails
- With each, we must start with **primitives**



# Discourses of environment & architecture – primitives

## Causal properties

- Space
- Movement
- Manipulation/force
- Shelter/refuge
- Perception/ prospect
- Understandability/ information
- Motivation/ emotion
- Ownership, competition, conflict
- Each has physical, psychological and social dimensions

## Structural Features

- Nodes
- Paths
- Barriers /screens
- Enclosures/ containers
- Furniture
- Signage

## Content

- People (bodies)
- Furniture
- Mobiles (cars etc)

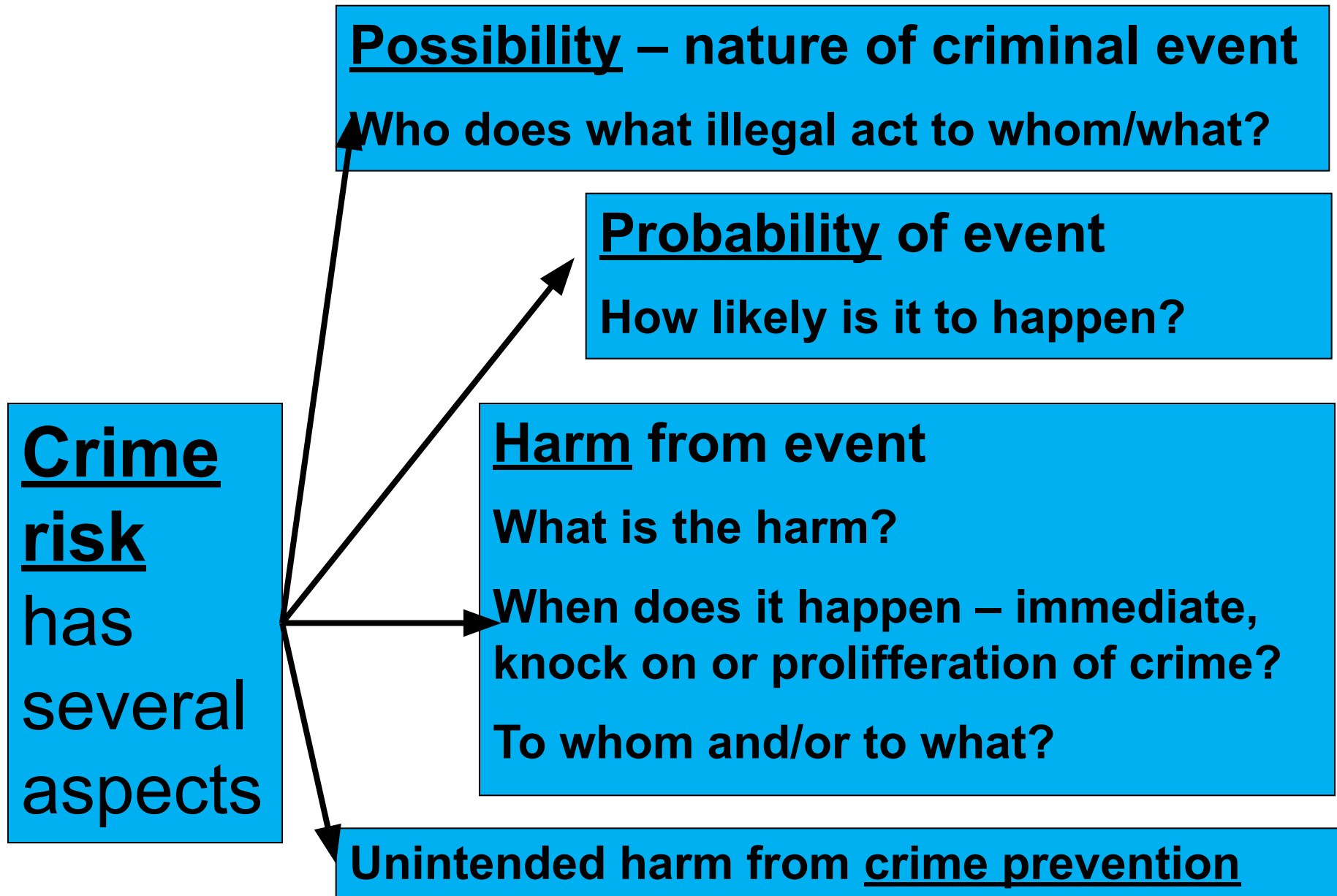
## Expanding the detail of properties, and of features & content that confer them

### – Sight

- Light
- Discrimination – camouflage etc
- Sightlines
  - » *features affecting this property:*  
**Dog-legs, Sight screens, Barriers, Recesses, Enclosures, Containers**
  - » *content affecting this property:*  
**Crowds, Parked cars**



# What is crime risk? Definition in depth



# What is crime prevention?

- Crime prevention seeks to reduce the risk of criminal events
- In particular, to

Eliminate **possibility** of crime

or if not

Reduce **probability** of criminal events

or if not

Reduce or mitigate **harm** when events do happen – including propagation of crime

Equivalently by

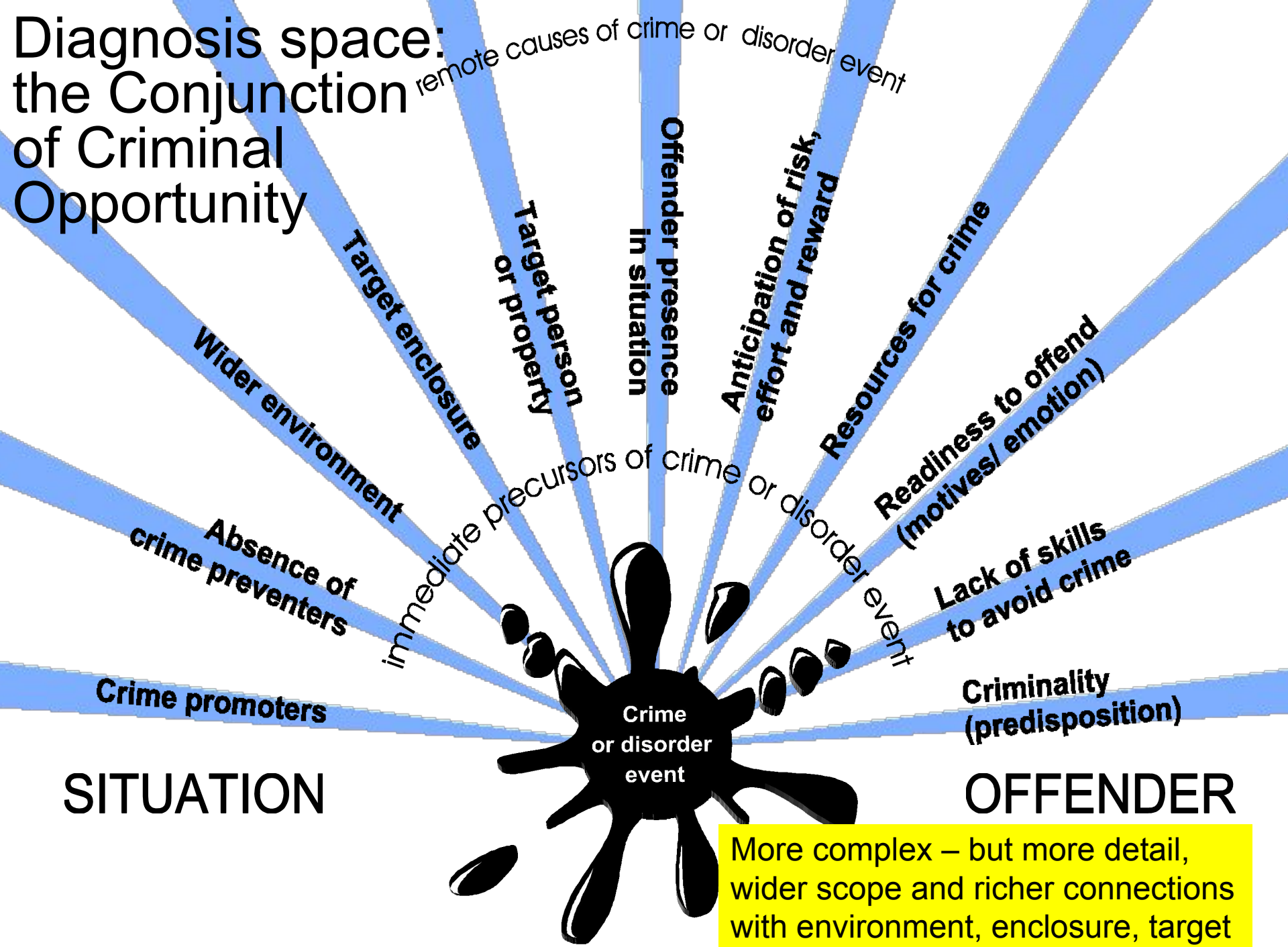
- Intervening in causes
- Frustrating criminal goals/ plans

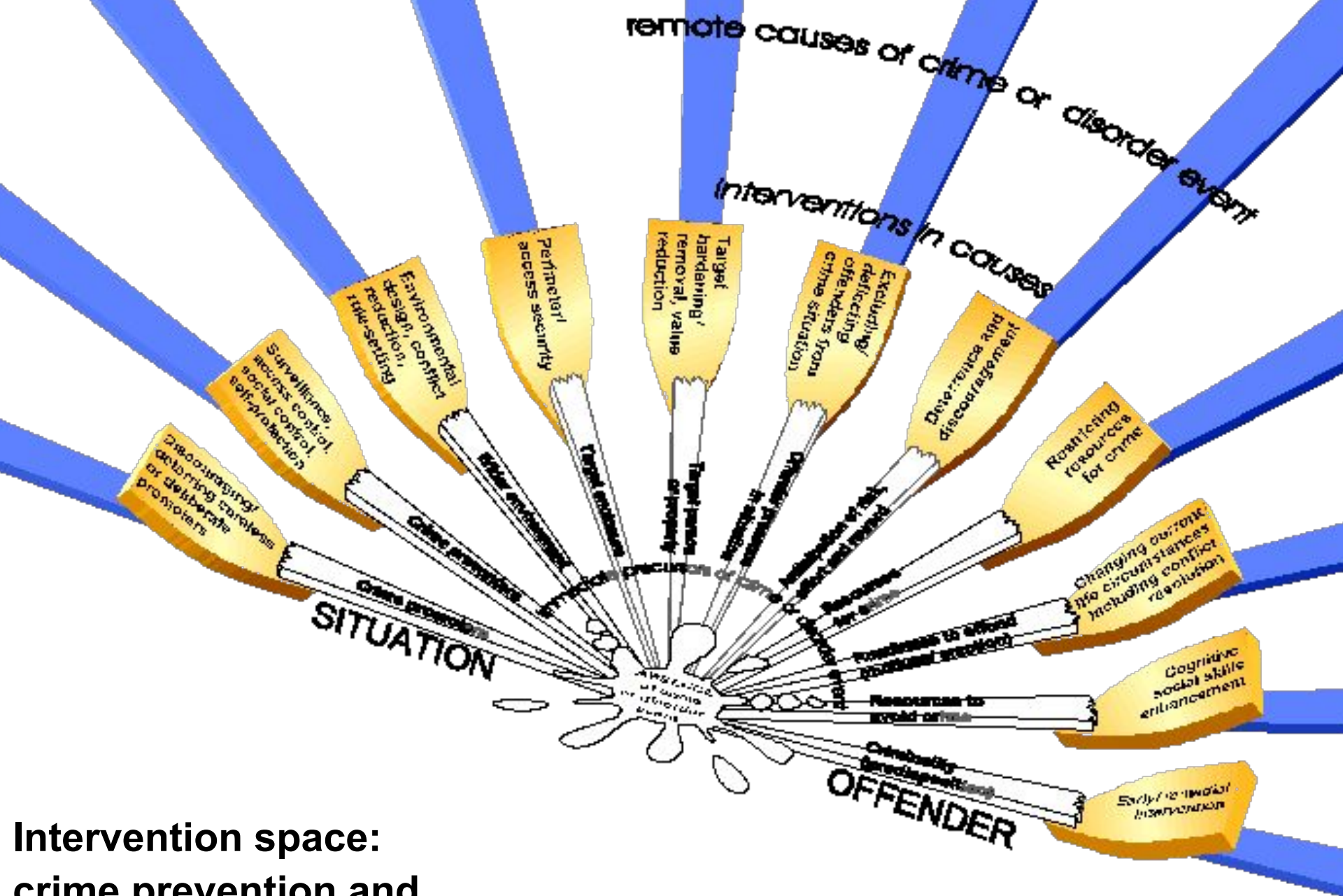
# Discourse of Crime and Crime Prevention – causes and interventions



Very simple – but very limiting –  
can't handle the detail

# Diagnosis space: the Conjunction of Criminal Opportunity





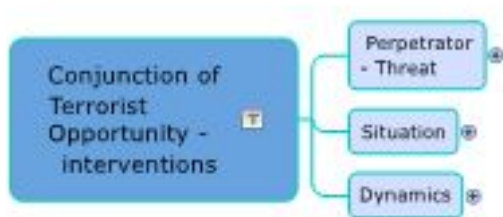
**Intervention space:  
crime prevention and  
the Conjunction of Criminal Opportunity**



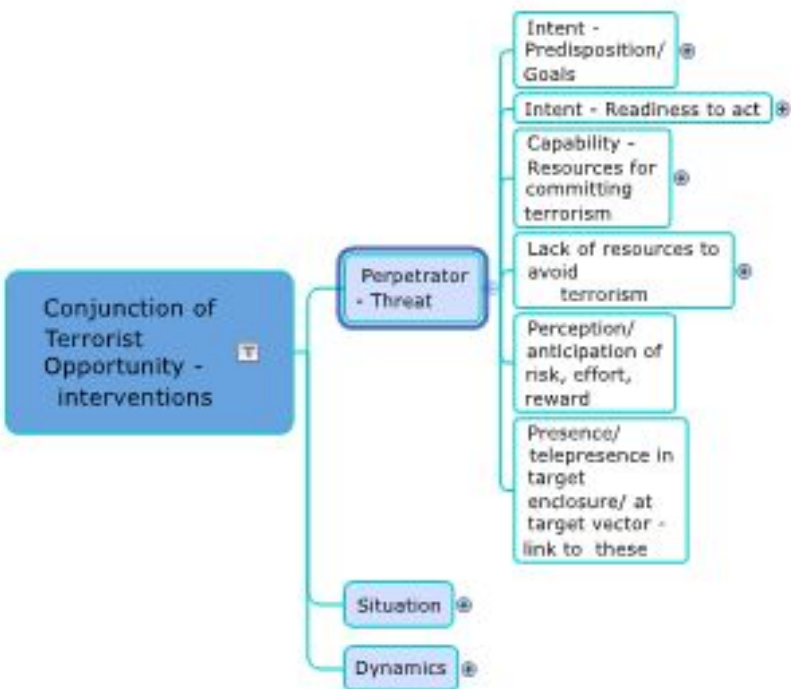
# Combining environmental properties and crime preventive interventions – Counterterrorism project

EU Project on what works in tackling terrorism at complex stations

Start with map of causes of terrorism events, and the perpetrator perspective, and drop the interventions onto them later

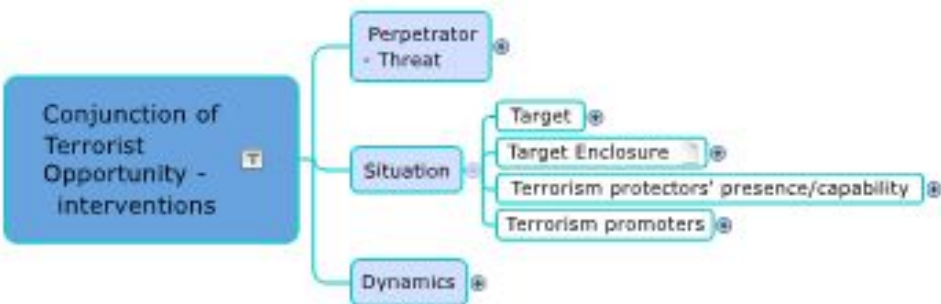


# Combining environmental properties and crime preventive interventions



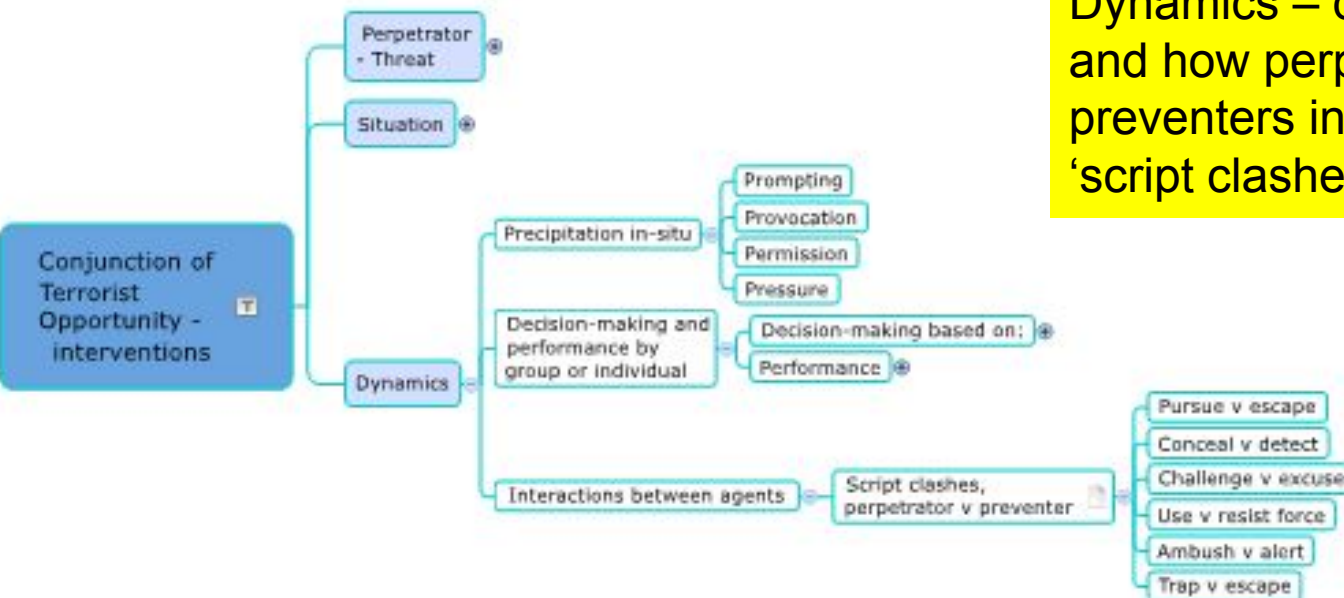
Start by 'thinking perpetrator' – intent, capability, perception, presence

# Combining environmental properties and crime preventive interventions



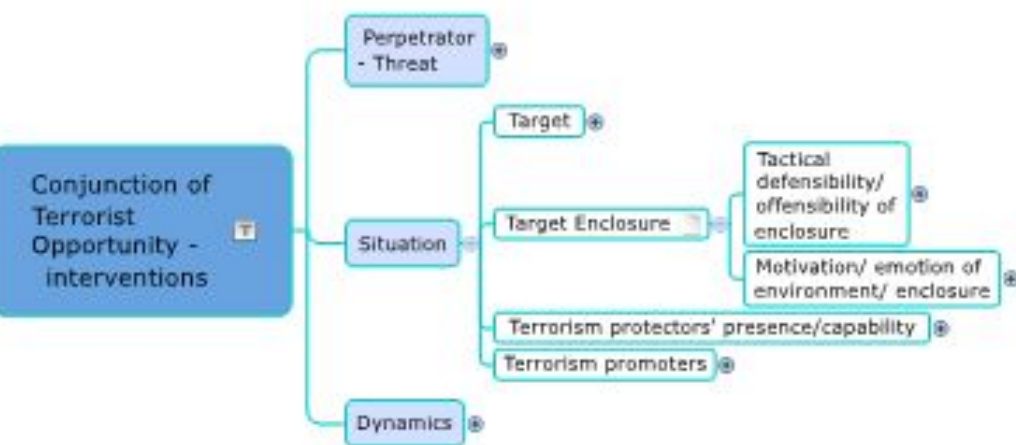
Then 'think situation' – target, target enclosure, preventers and promoters

# Combining environmental properties and crime preventive interventions



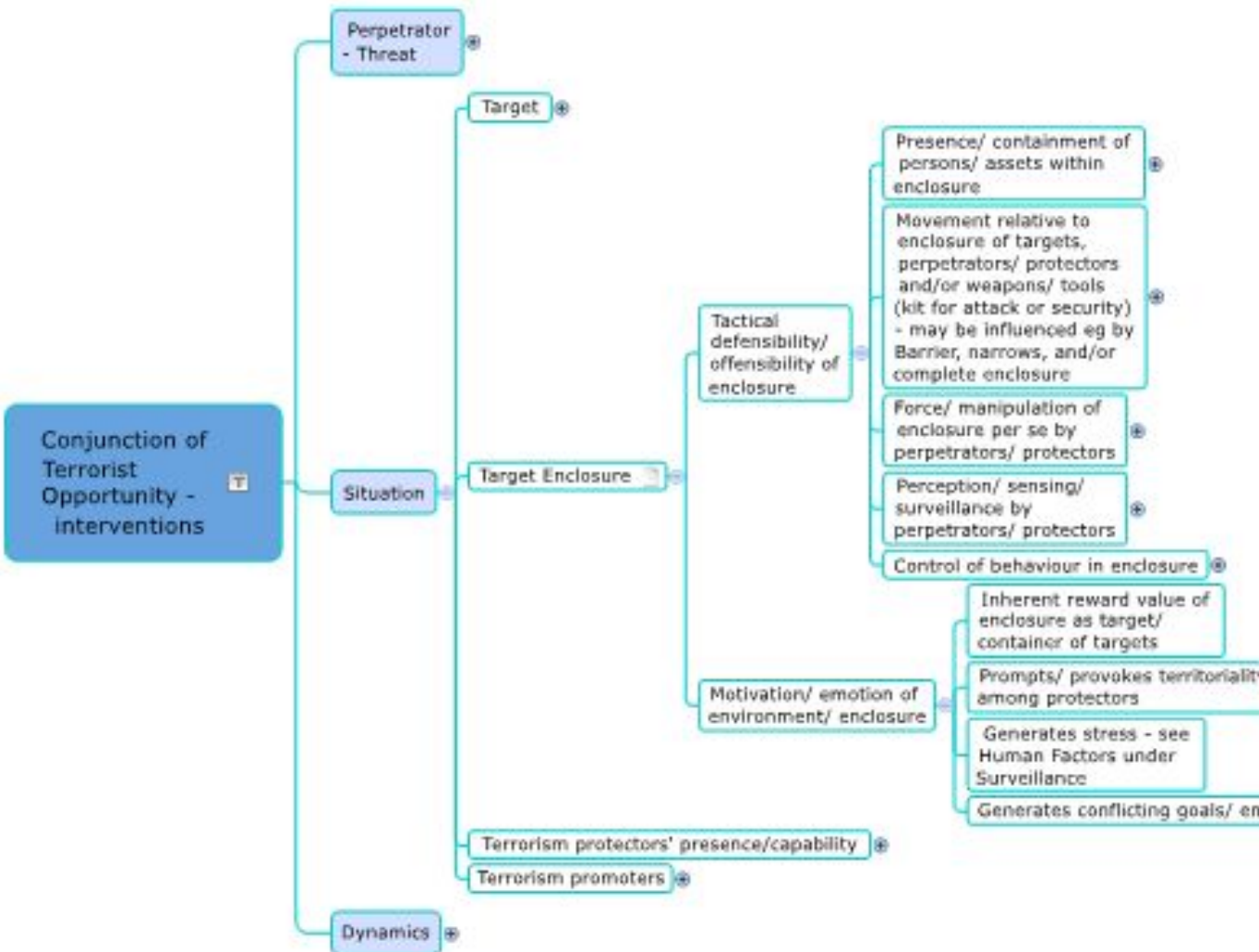
Dynamics – decision-making, and how perpetrators and preventers interact through ‘script clashes’

# Combining environmental properties and crime preventive interventions



Detail of situation – target, target enclosure... its defensibility and offensibility, and motivational/ emotional properties

# Combining environmental properties and crime preventive interventions

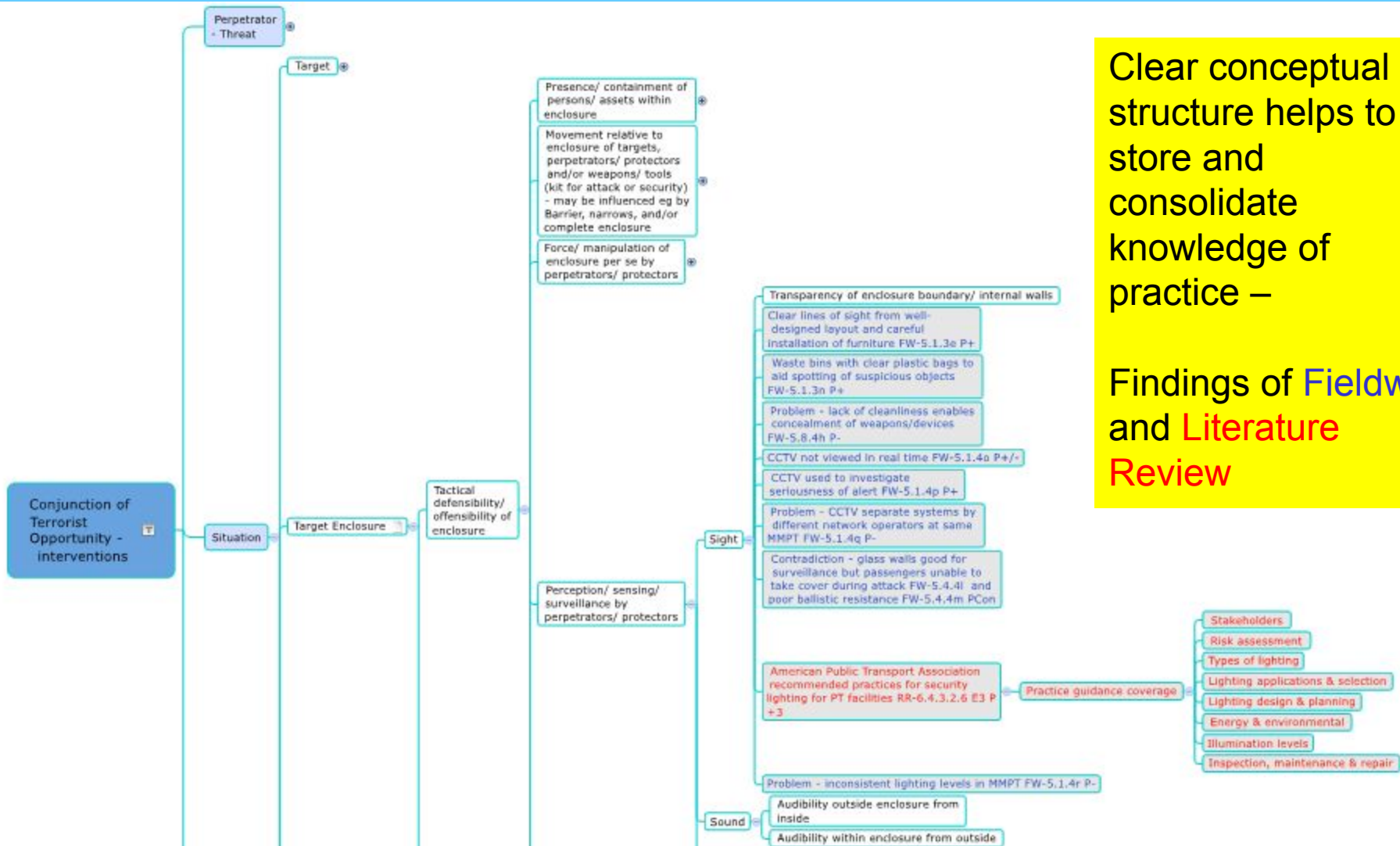


Situation in still greater depth – **Defensibility...**  
 Containment,  
 Movement,  
 Force/ manipulation,  
 Sensing,  
 Control;

**Motivation/ emotion...**  
 Reward value to  
 perpetrator,  
 Prompting/provoking  
 territoriality;  
 Generating stress and  
 conflict



# Combining environmental properties and crime preventive interventions

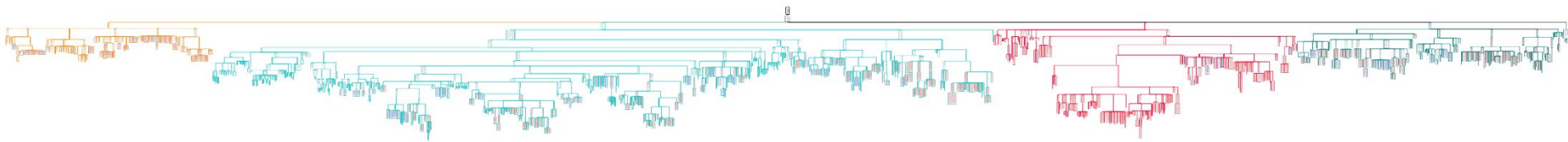


Clear conceptual structure helps to store and consolidate knowledge of practice –

Findings of Fieldwork and Literature Review

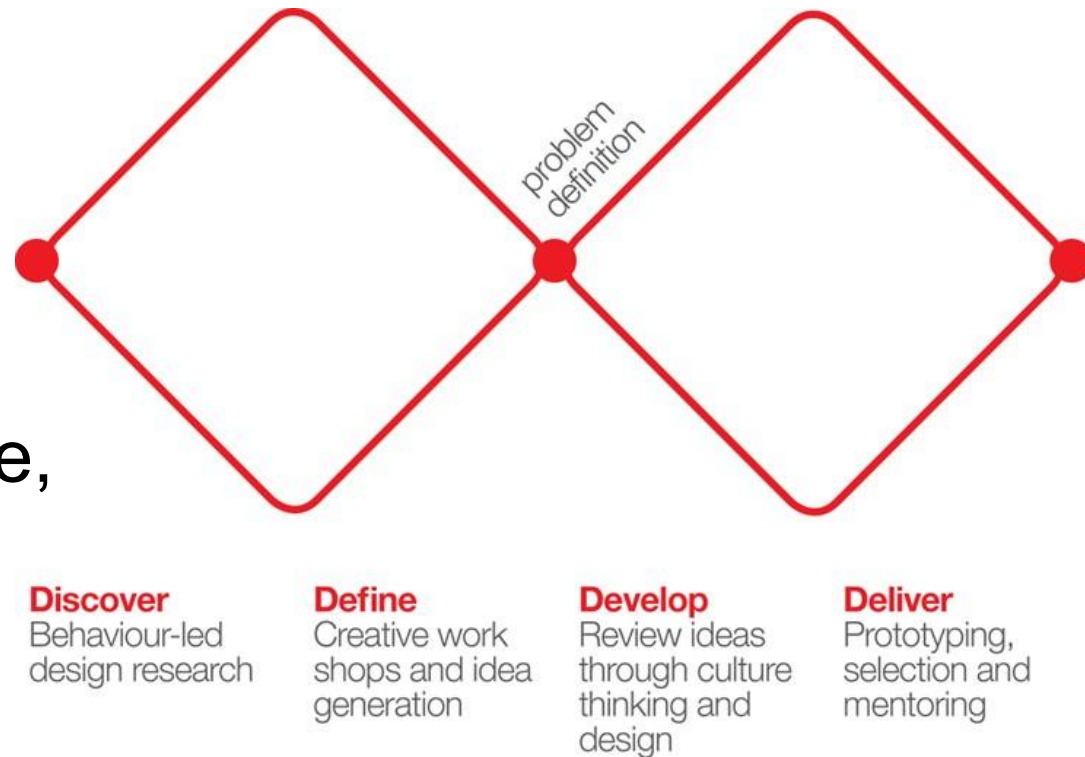
# Combining environmental properties and crime preventive interventions

Storing knowledge of practice – **the whole caboodle** – 400-odd items of research, guidance, fieldwork



# Discourse of Design – Process models

- Ted Kitchen – CPTED lacks a decent process model
- Design has a generic model – the **Double Diamond**
- Not so far removed from Designate, Define, Design



# Discourse of Crime and Crime Prevention – Process models

5Is framework  
for crime  
preventive  
action

- Crime prevention has SARA ....
  - Scanning, Analysis, Response, Assessment
- But also 5Is which can catch more of the detail and complexity of preventive action
  - The better to connect with CPTED

<http://5isframework.wordpress.com>

# Discourse of Crime and Crime Prevention – Process

5Is framework  
for crime  
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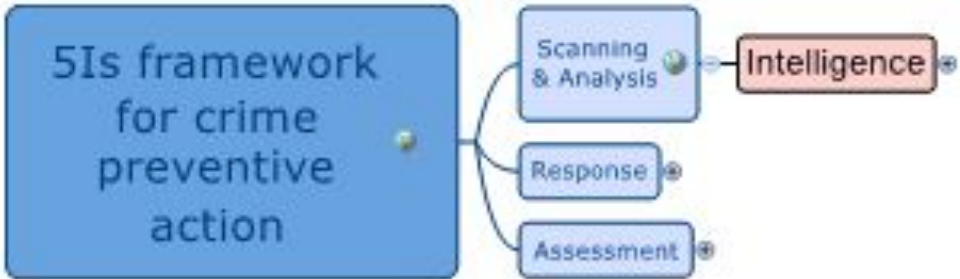
Scanning  
& Analysis

Response

Assessment

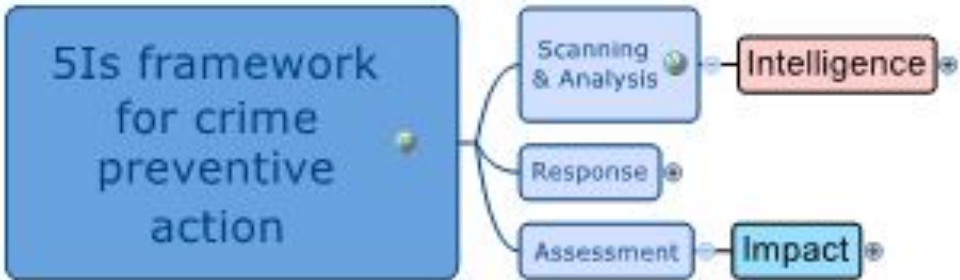
Starting with familiar  
equivalent – SARA

# Discourse of Crime and Crime Prevention – Process

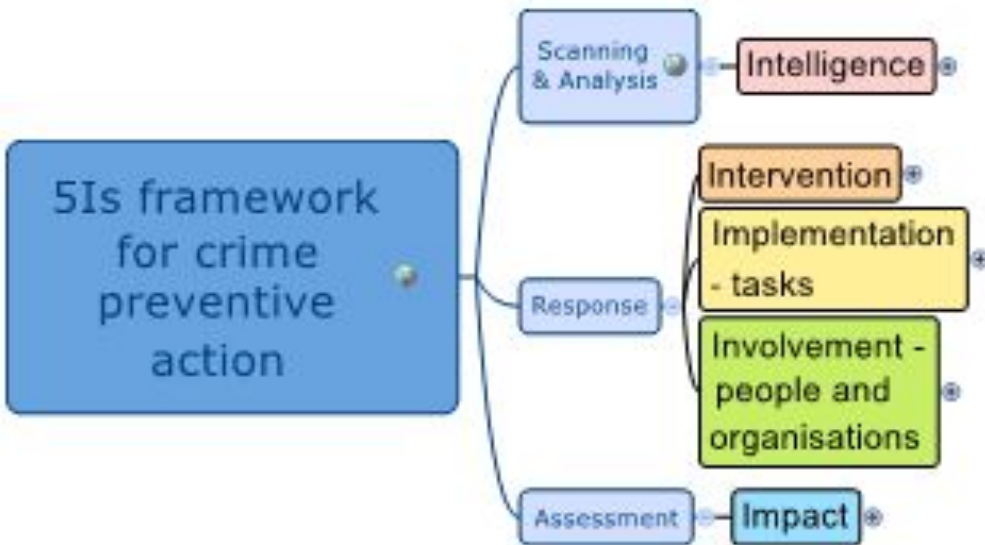




# Discourse of Crime and Crime Prevention – Process

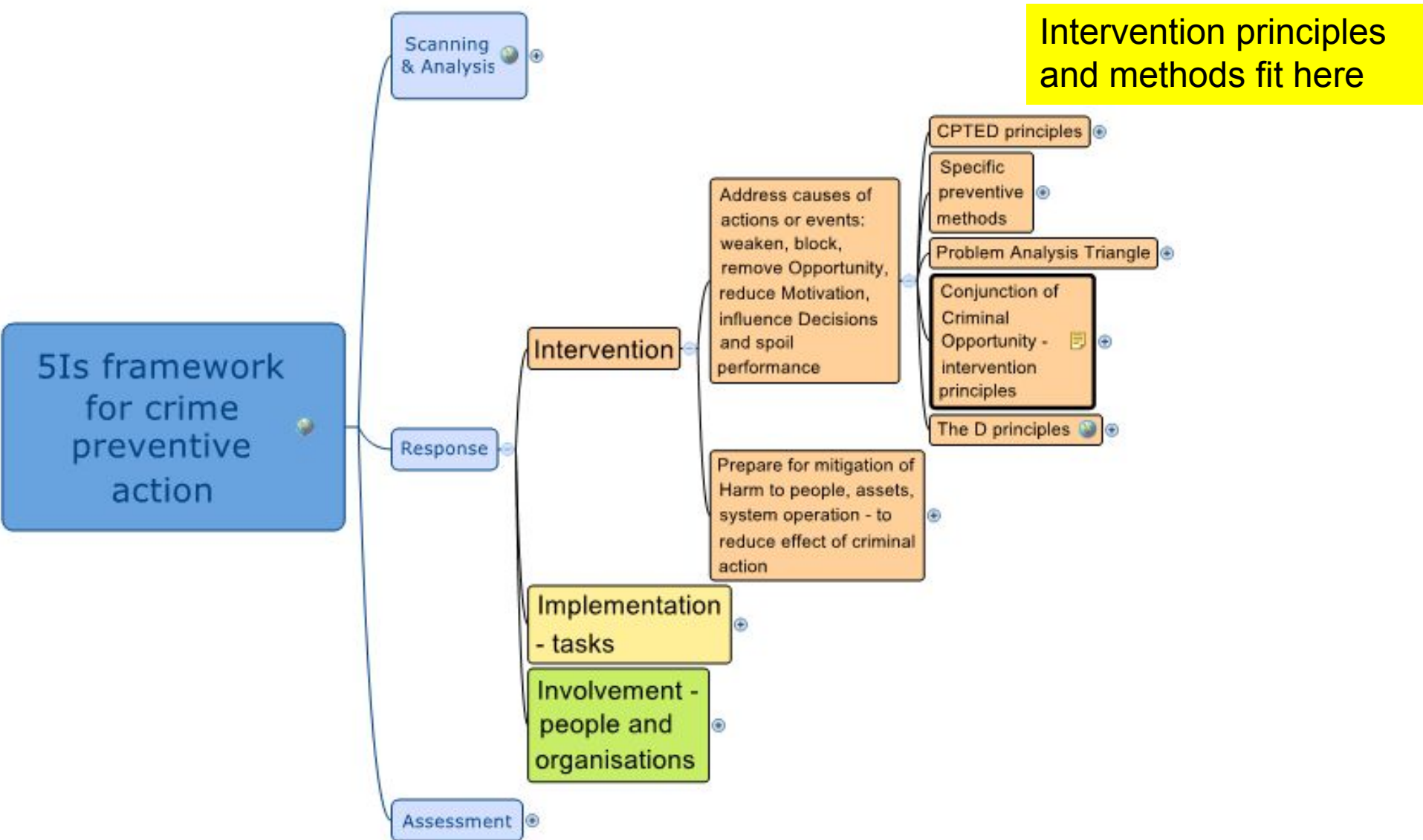


# Discourse of Crime and Crime Prevention – Process

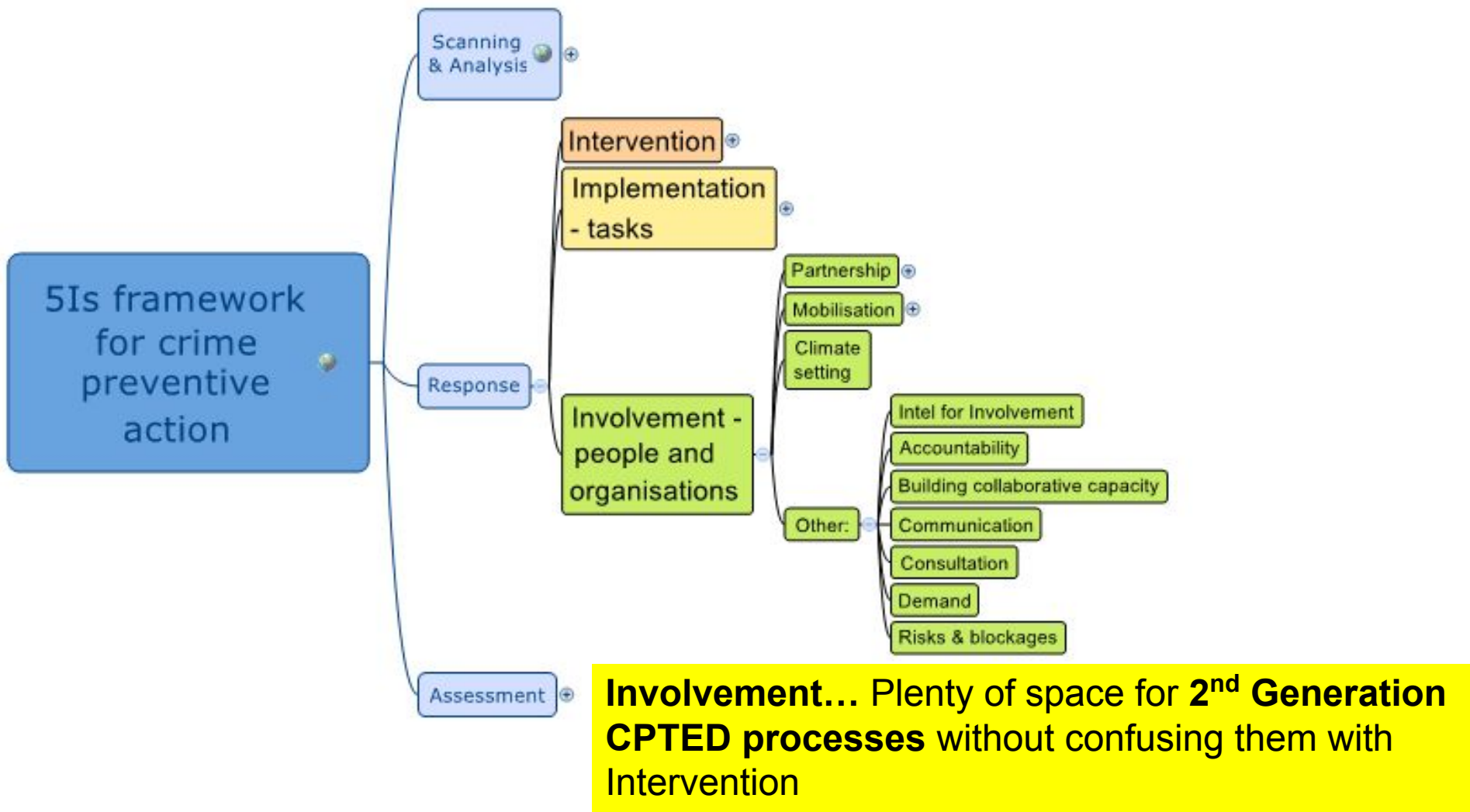


SARA's Response task expanded

# Discourse of Crime and Crime Prevention – Process



# Discourse of Crime and Crime Prevention – Process



Task (to be done) is to adapt 5Is to articulate all the specific processes of CPTED so there is a common family of process models

# Towards a controlled vocabulary: Developing definitions for CPTED

- Aim is to define and determine the scope of
  - The CPTED field as a whole
  - Its individual principles
  - How the principles relate to one another
  - How the principles relate to wider crime prevention and security
  - Ultimately, how they relate to wider design requirements for the built environment – what we want **more** of, as well as what we want **less** of

# A Definition of CPTED

**CP** Reducing probability of crime and related problems, and their consequent harm, and enhancing the quality of life through community safety, by intervening in advance to block causes or equivalently, frustrate offenders' plans/goals

**ED** By using processes of planning and design of environment

- On a range of scales and types of place from individual buildings and interiors to wider landscapes, neighbourhoods and cities
- To produce designs that are 'fit for purpose', and contextually appropriate in all other respects, achieving a creative balance between
  - the efficiency of avoiding crime problems *before* construction
  - and the *adaptability* of tackling them through subsequent management and maintenance
- And between
  - what we want *less* of (crime), and what we want *more* of (positive community life)



# Definition of principles – Surveillance

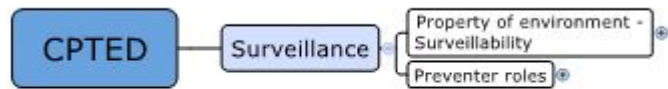
- **Surveillance** is an **activity** for which someone or some institution, acting in a **crime preventer role**, has taken responsibility
- **Surveillability** is an instrumental **property** of the **environment** conferred by **features** e.g. sightlines and lighting, that facilitate surveillance; and **content** e.g. obscured by parked cars
- Surveillance may be undertaken in support of **Territoriality** and may exploit advantages of **Defensible Space** (prospect)

# Surveillance – concept map

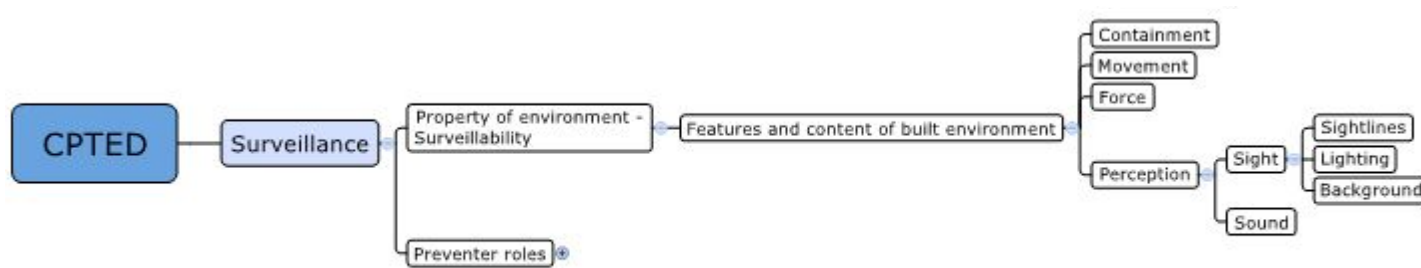
```
graph LR; CPTED --- Surveillance;
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A concept map consisting of two rectangular boxes connected by a horizontal line. The left box is blue and contains the text 'CPTED'. The right box is light blue and contains the text 'Surveillance' followed by a small plus sign.

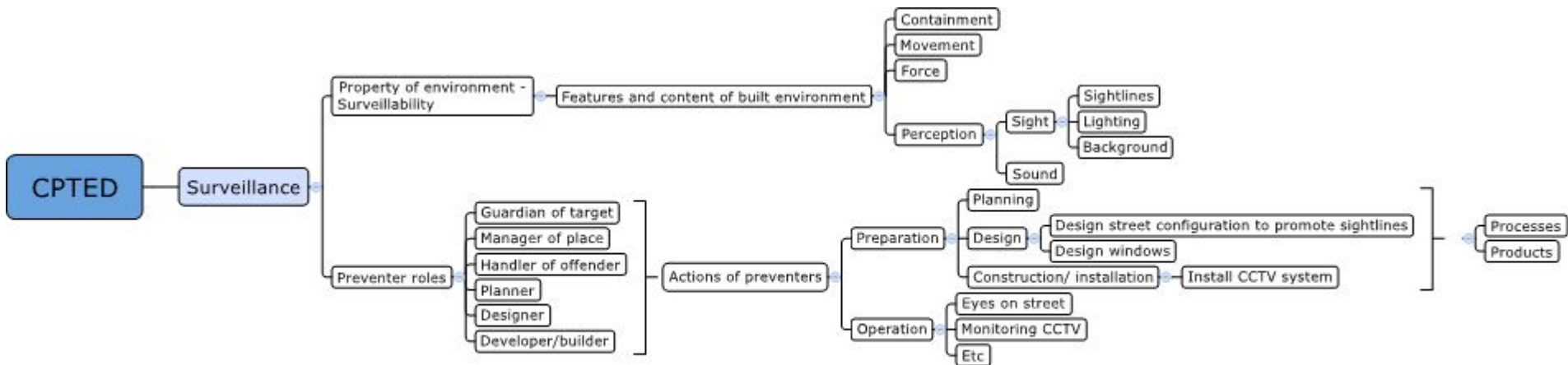
# Surveillance – concept map



# Surveillance – concept map



# Surveillance – concept map



The fine details under each of these headings could well be modified by new research (e.g. interviews with offenders) or future changes in offender and preventer behaviour – but the overall framework is designed to be a flexible, adaptive ‘learning engine’

# Definition of principles – Territoriality

- Territoriality is both a **value** in itself (an Englishman's home is his castle) and an **instrumental means** to crime prevention ends
- As used in CPTED practice and literature, it is unclear whether it is a **human attribute**, or a socially-ascribed and physical **property of space**
- Best to consider it as both (**territoriality** and **territory**), subsumed under an **ecological** framework which includes human **agents** in relation to their **environment**



# Territoriality – human side (1)

- A complex **propensity** of perceptual, emotional and motivational tendencies, goals and resources leading to responses of acquisition, preferential enjoyment, ownership, management, control and defence of a tract of space
- These processes may operate individually or collectively at group, community, institutional or national level
- Territoriality is a common human propensity but may be **realised** and **communicated** differently by different individuals and/or (sub)cultures

# Territoriality – human side (2)

- Territory is held **relative to other possible owners**, so
  - There have to be relations of either **acceptance/legitimacy or conflict** between private parties, or with the involvement of the community and/or state
  - and **cultural understandings** of concepts of ownership, norms (and laws) of legitimate acquisition, use, defence etc
- Territoriality in particular requires people's **roles** to be understood
- **Sharing** of territory will pose particular issues

# Territory – spatial side (1)

- Has to be **extended** in space and **durable** over some time period (brief or lasting)
- May extend into virtual or cyber space
- Will normally have properties relating to **utility to users**
  - Either for **itself** (a private garden to enjoy)
  - Or as an **enclosure** to secure their person and belongings
- Has to have the **properties of identifiability** (whose is it?) and **demarkability** (where is it/what are its boundaries?)

# Territory – spatial side (2)

- May also have properties of **access control** and **wider defensibility**, both of which may be facilitated by **surveillability** and **hardening of enclosure**
- Will have an **image** to the owner and/or to other parties
- Will usually require **maintenance**, which influences image
- All these properties may be influenced for good or for bad by
  - The **design** of the environment on micro to macro **scales**
  - In interaction with the **social context**

# Definition of principles – Defensible Space

- An instrumental **property** of the **environment**
- Conferred by **features** eg barriers and markers, plus the property of surveillability
- Linked to **capacity of people** to defend it through human resources (eg numbers, assertiveness, knowledge of how to challenge and respond) and technical resources eg alarms
- **Defending** the space is an **activity** closely linked to **Territoriality**

# Definition of principles – Target hardening

- A preventive **activity** whose purpose is to give material or informational **targets of crime** the **property of resistance to physical attack** in the service of some offender's attempt to **misappropriate** (steal), **mistreat** (damage), **mishandle** (counterfeit, smuggle), **misuse** (as tool or weapon) or **misbehave** with (in antisocial behaviour)
- Note that hardening the **target** is often confused with hardening the **target enclosure** such as a building or compound which offenders wish to enter – this last is achieved eg by creating, strengthening or heightening barriers
- Hardened **enclosures** may contribute to **Defensible Space**
- **Target hardening** of built environment against mistreatment, misuse or misbehaviour may aid (or spoil) **Image and Maintenance**

# Definition of principles – Access control

- An **activity** intended to
  - Discriminate between individuals seeking to enter the interior **space** of an **enclosure** (in terms of who, when, what carrying/wearing and how they are behaving)
  - Prevent their committing crime by their **presence** (eg minors in a bar), or their **actions** once within the enclosure
- May be motivated and facilitated through **Territoriality** acting on owners/managers and visitors
- May be facilitated by **Defensible Space**

# Definition of principles – Activity support

- A **property** of the **environment** which variously
  - **Alerts, informs, motivates, empowers and directs** people to enter it and remain there
    - Where they act as **users** playing legitimate roles/ undertaking legitimate activities, and double up as potential **crime preventers**
  - And/or which channels them away from **conflict** over space, noise, incompatible behaviour etc
- Legitimate users may supply preventive support by
  - **Occupying space** that would otherwise have been taken by (potential) offenders
  - Their mere **presence** may **deter and discourage** offending
  - Or they may undertake **surveillance** and make appropriate preventive responses including **informal social control**
- **Territoriality** may empower owners/managers to *influence* activity support, & visitors to *accept* influence



# Definition of principles – Image & Maintenance

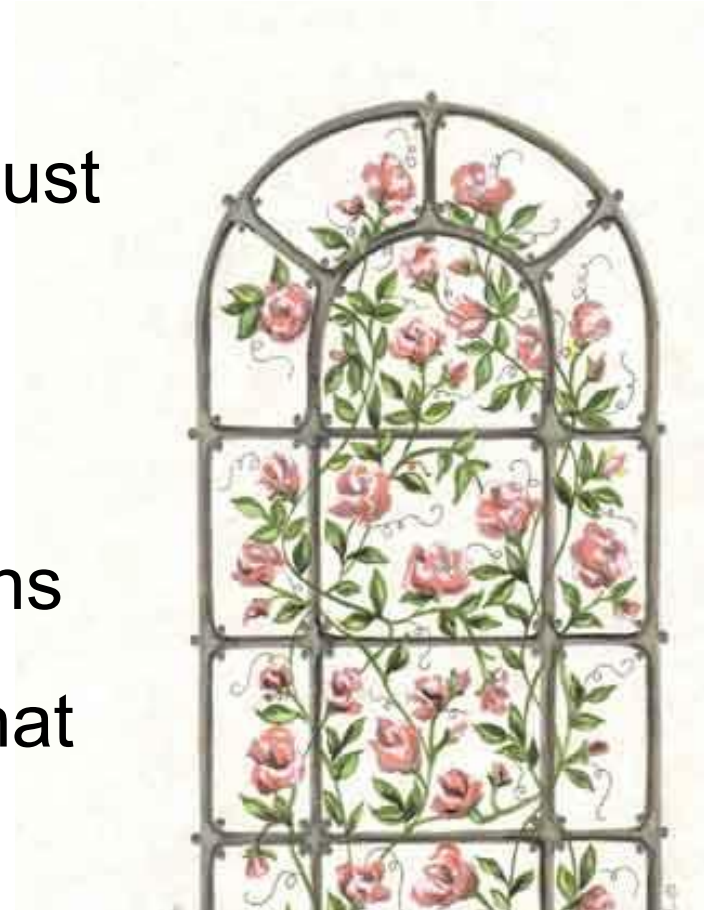
- **Image** is an **individually/collectively** held **perception** with **emotional** content
- It relates variously to
  - **Crime risk**
  - Wider **community safety/quality of life**
  - **Reputation** of residents/users etc
  - Influencing people's **decisions and actions** (eg to visit, work, live there)
- **Image and maintenance** together may influence **objective crime risk** by **prompting, provoking or permitting** offending through broken windows-type processes

# Image & Maintenance

- **Maintenance** is **activity** (or the **state** of an **environment** reflecting that activity or its absence), which influences **image**
  - Both in terms of the litter, graffiti etc which may be present
  - And by the perception of the very fact that someone is/is not doing the maintenance
- Maintenance relates to **Territoriality** in terms of
  - Individuals, families or institutions being motivated and permitted to take responsibility for undertaking maintenance of a given **space**
  - and **defensibility** and **access control** to enable them to do the maintenance without interference, or risk of it being messed up

# Overall message

- CPTED needs a controlled vocabulary and sharpened concepts...
- *But* we designers against crime must combine discipline & rigour *with* exploration & creativity
- And this must cover material, informational and social dimensions
- The people stuff in particular is what makes or breaks CPTED



# **CPTED and the future**

# Every design is a bet on the future

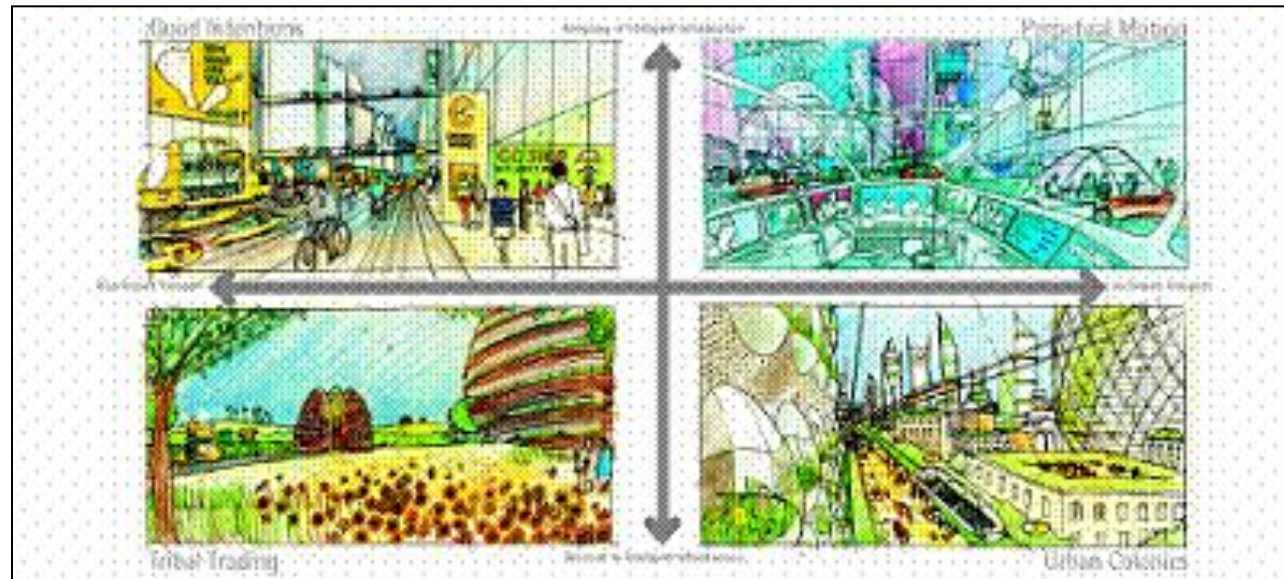
- Can the product be made, the place be built?
- Will it work?
- Will it last or fall to bits?
- Will it sell at a profit – what's the competition?
- Will people use it as intended?
- *Will it be involved in crime?*
- *With buildings, crime legacy might last decades*



# Changes coming up

- Changing crime – new tools, new targets
- Changing priorities

- Sustainability
- Low energy
- Resilience to climate shift, terrorism



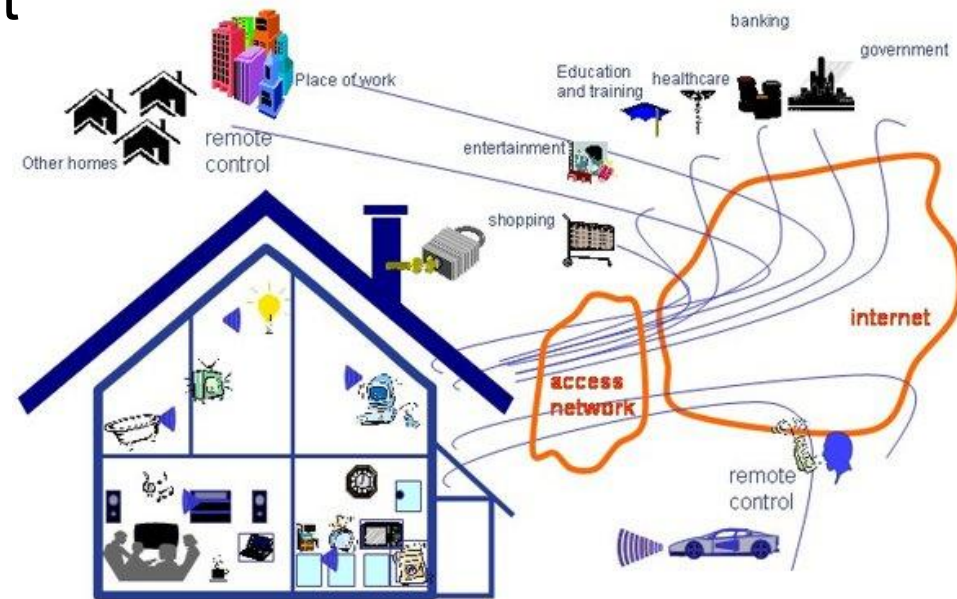
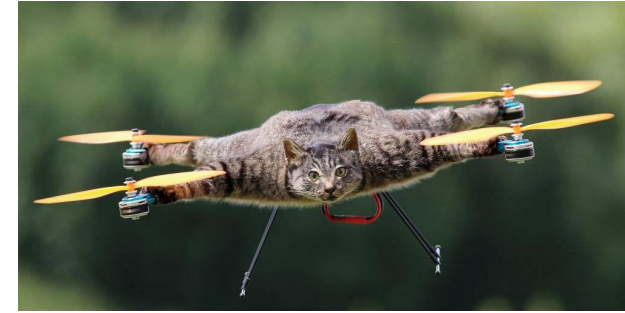
- Privacy/freedom v security



# Changing crime context for built environment

Changing context on all scales – crime threats and CP opportunities

- New land uses
- Blur between products, places, systems
- Intelligent homes/products linked to internet - IoT
- Automobiles v public transport
- Cameraphones – changing nature of ‘eyes on street’
- Intelligent CCTV, multimodal alarm systems
- New materials – sensitive, resilient, anti-graffiti?
- Drones



# Getting it wrong





**A receptacle  
for grime?**



**Importance of  
crime futures  
mindset: failure  
to *think thief***

**Or a tool  
for crime?**

# Response: The No ClimBIN

## Jenny Loqvist

### Griffith University Australia 2008



Competition organisers

Design Out Crime Research Group

Curtin University Australia

[www.designoutcrime.org](http://www.designoutcrime.org)

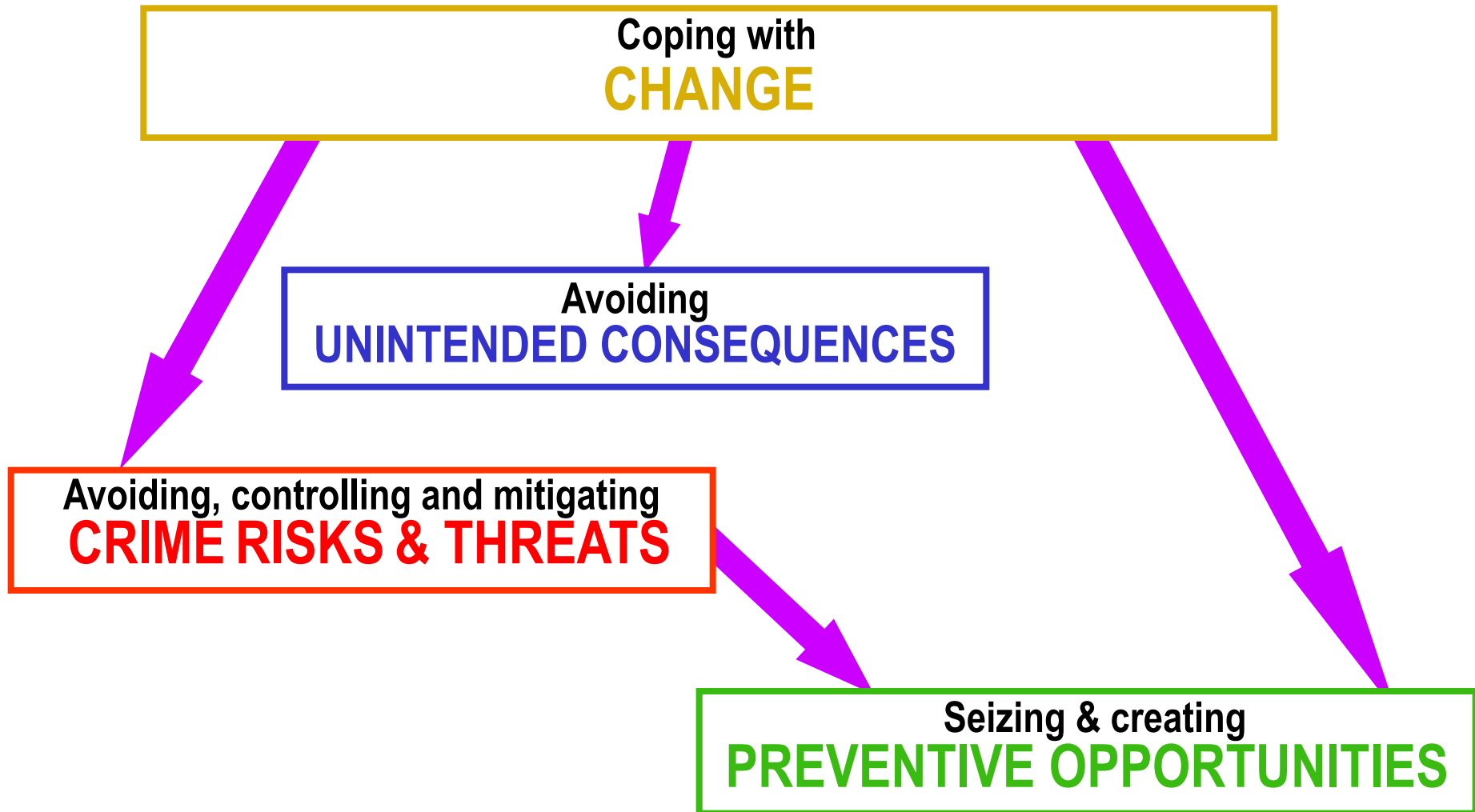
**Failure to ‘think  
drug user’ or  
‘think urinator’**



# Crime harvests: What made Queen Victoria turn red?



# The Anticipation dimension



# The **Anticipation** dimension

- **Crime Risk Assessment** – specific **incoming** threats from elsewhere affecting one's own activity/ assets
- **Crime Impact Assessment** – specific **generated/ exported** threats emanating from one's own activity
- **Horizon Scanning**
  - All-encompassing approach over a range of timescales eg 5-50yrs
  - needs wider knowledge of **trends** and forecasting of **events** over 'PESTLES' dimensions (political, economic, social, technological, legal, environmental, scientific) and their interactions
  - Makes plausible forecasts backed by **evidence, theory and logic** – inexact but not wild guesses or fringe ideas
  - Helps manage a **range** of risks and opportunities – 'futures thinking', not 'predicting a specific future' – policy and practice designed to be **robust across this range**



# How to Anticipate – Building on knowledge of correlations & causes

- **Empirical approaches**

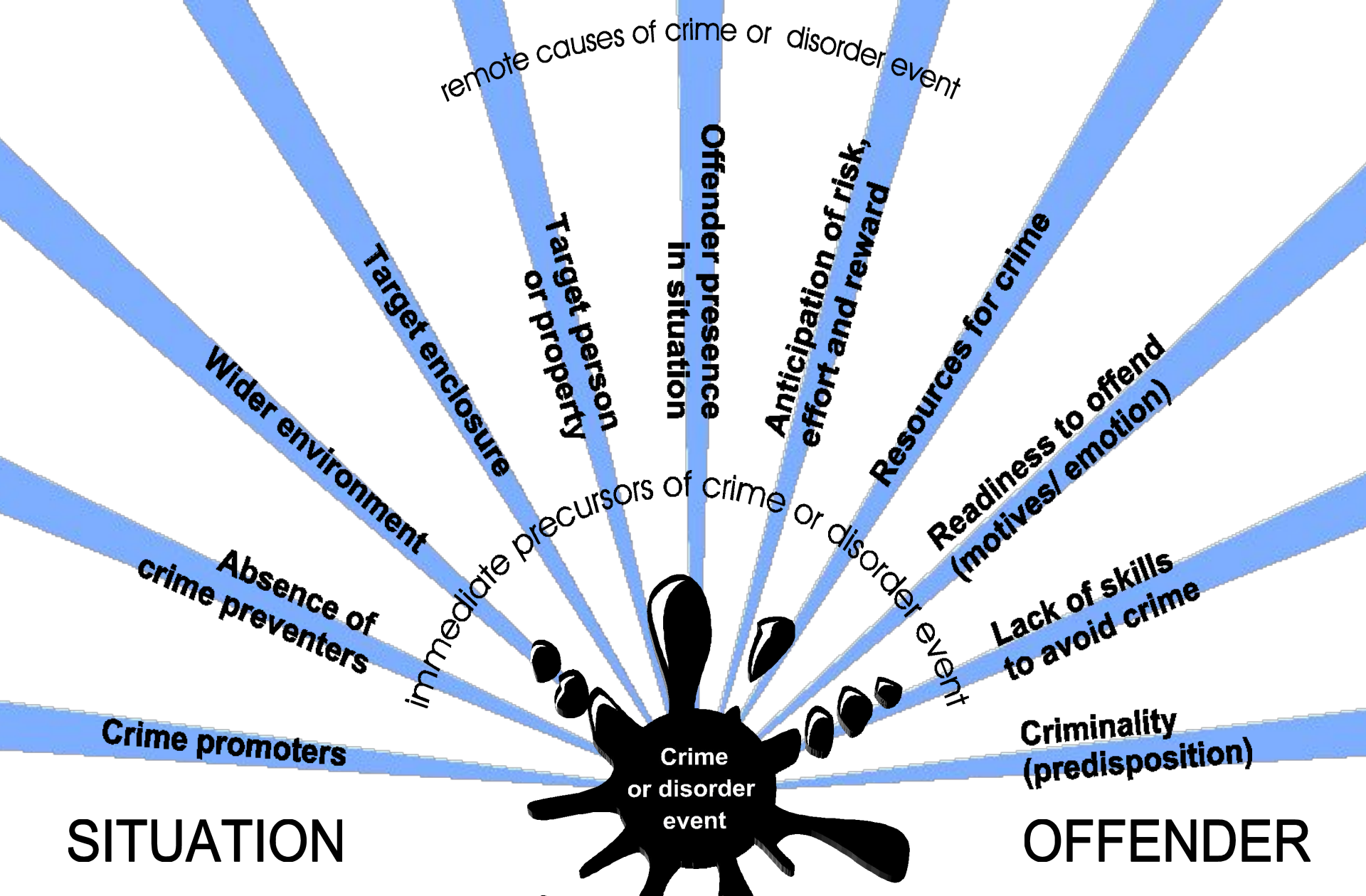
- Projection of linear trends
- Statistical modelling of cycles etc
  - eg time series techniques
- Risk and protective factors
- But - **nonlinearities**



- **Theory and logic**

- In each case we can use CCO (as an integrated map of theories) to systematically ask **‘Will the forecast changes affect *this* cause of crime, beneficially or harmfully? Will the changes affect the efficacy of *this* preventive intervention? And how easy it is to implement in practice?’**
- We can home in further by focusing on specific **types** of crime problem tackled
- Major issue with all theory-based approaches is that many causes **interact** – CP theory has limited knowledge of such interactions

- **Simulation** – software agent-based modelling – may be able to explore emergent processes from these interactions



CCO – theoretical mechanisms – we can look at the *causes of these immediate causes*, and how these might change in future



**CCO covers crime in general. But what *kinds* of risk might  
Built environment assets & services face?  
Misdeeds & Security framework**

Mistreatment (damage)

Misappropriation (theft)

Mishandling (e.g. fraud)

Misuse (e.g. site for ambush)

Misbehaviour (nuisance, conflict)

Mistake (e.g. false alarm)

Target of  
crime

Contributor  
to crime  
eg resource or  
provocation

Downside of  
prevention

# Risk factors for Misappropriation

## *Hot Products*

- **C**oncealable
- **R**emovable
- **A**vailable
- **V**aluable
- **E**njoyable
- **D**isposable



# Addressing tactical 'Script Clashes' between offenders and users/preventers

Wield force v resist  
(Damage v protect,  
Injure v keep intact)

Act at will v  
control misbehaviour

Conceal traces and  
tracks v detect

Take v keep

Confront v avoid

Surprise/ ambush v  
be alert

Challenge suspect v  
give plausible response

Surveill v conceal

Snoop v  
maintain privacy

Pursue v escape

Trap v elude

Conceal criminal intent v  
detect

- These clashes
  - Influence **criminal plans and outcomes**
  - are **generic and perennial** – will always need to be faced
- Innovations can **disrupt the balance** of these clashes, and favour one side over other – which side will gain from a sudden breakthrough in future?
- We must design things to **advantage the good side** – preferably in anticipation
- Approaches to **inventiveness** like TRIZ highlight these contradictions, and also identify **evolutionary trends in invention**

# Crime Futures: putting it all together, e.g. for Public Housing Organisation

## Forecast background changes

- Political
- Economic
- Social
- Technological
- Environmental
- Legal
- Organisational
- Media
- Infrastructure

## In wider society

## In HO partners' immediate operating environment

## Internal to HO and to partners

## Capacity and motivation of HO to prevent & react to trends/ events

- Before
  - During
  - After those events
- Intelligence** – anticipate & spot emerging trends/ events
  - Intervention** – plan preventive interventions, and reactions
  - Implementation** – make preventive and reactive actions happen
  - Involvement** – mobilise other organisations and individuals, engage in partnerships and set climate

## Actions of HO relating to CDT trends/ events

- Before
- During
- After those events

## Changes in stakeholders' perceptions and concerns about CDT events and HO actions

## Forecast changes in influences on stakeholder perceptions and concerns about CDT

## Forecast changes in causes of CDT events

## Causes of CDT events

## Changes in risk – patterns & trends of Crime, Disorder or Terrorist events re public housing

## Consequences of emergent patterns & trends in

- CDT events
  - CDT perceptions
  - HO prevention
  - HO reaction
- For HO – bad/good
- Operations**
  - Finance**
  - Reputation**

# Arms Races – Co-evolution between offenders and preventers – e.g. Safes and Safecrackers

ER  
REPLISH



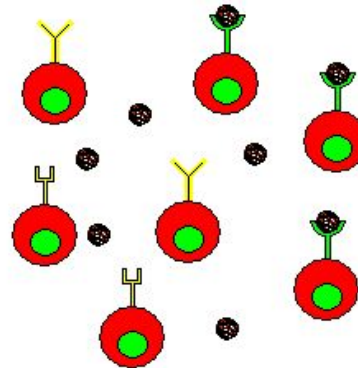
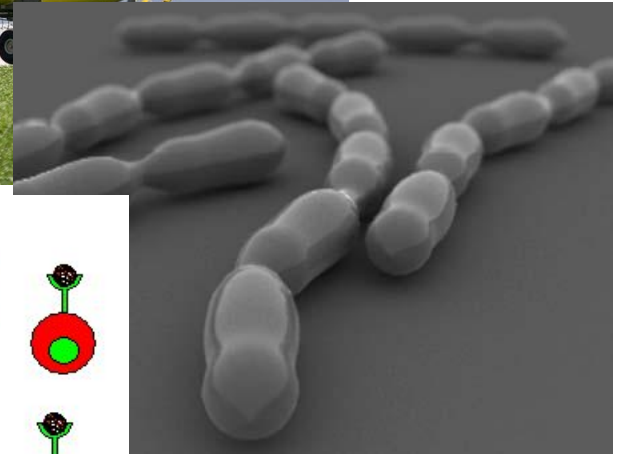
# Gearing up against crime – A dynamic strategy for arms races

- Encourage variety, develop and disseminate innovative capacity
- Design to performance standards/ generic principles
- Study offender resources – current and future
- Exploit new technology for prevention
- Avoid rigidity and lock-in
- Future proofing
- Pipelines
- Learn from other **evolutionary struggles**



# Learning from other struggles

- Military
- Predator-prey
- Pest-farmer
- Bacteria-antibiotic
- Immune system-virus

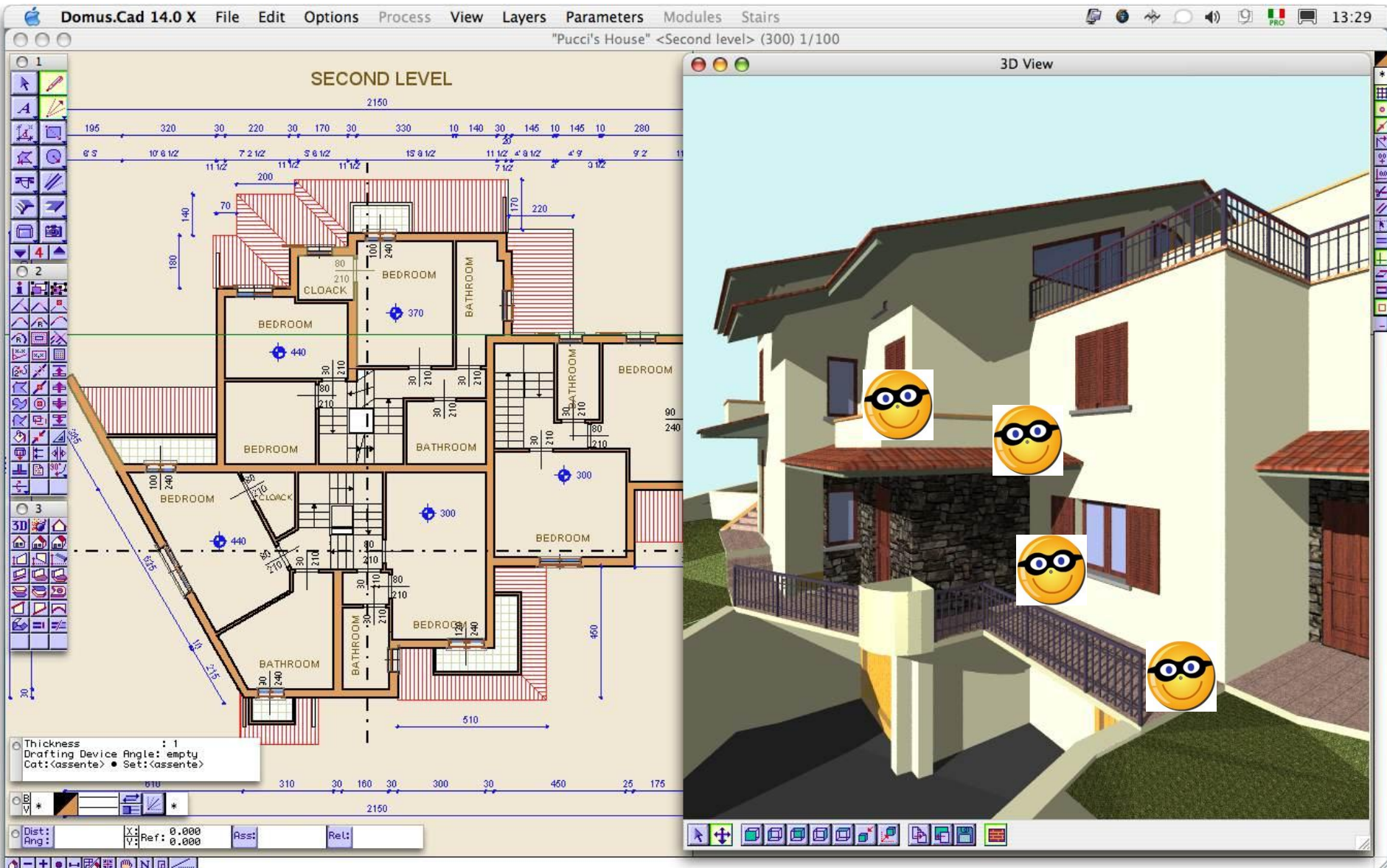


# **Technology of design visualisation –**

**Helping designers, clients and users  
with virtual reality design aids**



# Computer aided design



# Virtual Reality for lighting design

- Enables designers to visualise lighting before implementation
- Provides a means of communicating design ideas to different interest groups



**millets**

**Going Places**

*Thornlovs*

**GIRO CITTERI**

**Going Places**





**millets**  
THE GROCERY STORE

**Going Places**

*Thorntons*

CIRO CITTERIO

**Going Places**



**millets**

**Going Places**

*The Newsstand*

**GIRO CITTERI**

**Going Places**



# Assignments (1)

*Walk round a particular commercial or residential area.  
Choose 1 of 3 alternatives to do:*

Imagine the impact on crime, and on security, of a range of future trends affecting the built environment or people's use of it

- Eg new materials (smart or passive), Internet of Things, Augmented Reality, autonomous vehicles, drones, flexible electronics, smart lighting, smart buildings, SCADA (industrial remote control systems)
- How might these (or others) affect the actions of criminals or those of people who might be potential victims, private security personnel or police?
- How might they change how we implement the principles of CPTED (surveillance, access control, management/maintenance, target hardening etc)?

# Assignments (2)

Think about the range of 'script clashes' between offenders and preventers (who might be ordinary users or people responsible for security)

- Eg pursue v escape, conceal presence or criminal intent v detect, use force v resist force, ambush v be alert, trap v escape, gain access v prevent access
- Looking at the built environment where you are walking, how might its specific features or configurations favour one party or the other in the various script clashes?
  - Eg a recess in a wall might favour *ambush* over *being alert*.
- If they favour the bad guys, how might they be redesigned to favour the good?

# Assignments (3)

Find some features of the environment that may increase the risk (likelihood, harm) of crime

- Who (individuals or public/private organisations including businesses) might be responsible for creating the opportunities or precipitators (prompts, provocations, permissions, pressures), or allowing them to remain in place?
- How might it be possible to influence these people ('crime promoters'), mobilising them to prevent crime, or at least not actively to promote it?



# Contact/info

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