

# Design Against Crime and Socially Responsive Design for Public Space

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and Adam Thorpe

Design In Public Space Workshop, Ciesyn, Poland  
September 2008

Design Against Crime Research Centre



Arts & Humanities  
Research Council

The Grippa research programme, mainly funded by AHRC, is a collaboration between the Design Against Crime Research Centre, Central Saint Martins College of Art & Design, University of the Arts London, and the UCL Jill Dando Institute of Security and Crime Science. Papers and other materials from the programme are at [www.grippaclip.com](http://www.grippaclip.com) and wider practical and research material on preventing bag theft at [www.inthebag.org.uk](http://www.inthebag.org.uk)



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6. Bag theft - “Theory” into design “Practice” for public space
7. Conclusion

# 1. What is Design Against Crime and why crime is a barrier to sustainable development?

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Crime is a barrier to sustainable development as acknowledged by the UN and most domestic governments and impacts on public well being in the following ways:

- i. Economic
- ii. Environmental
- iii. Ecological
- iv. Emotional



## i. Economic

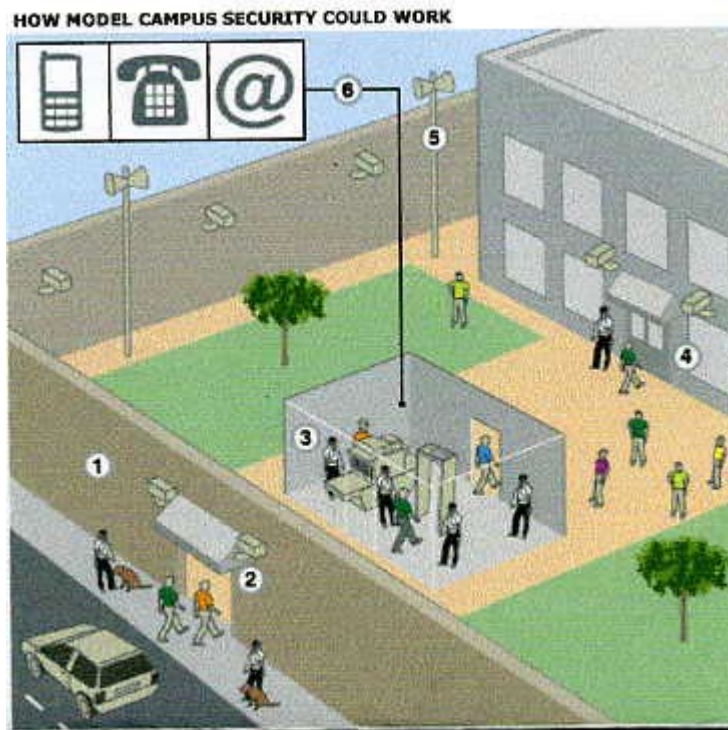
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Money spent on policing crime and dealing with the consequences of crime and vandalism could be better spent on essential infrastructure (health, education, transport and culture).



## ii. Environmental impact

Actual crime, as well as fear of it, can operate to determine the aesthetics of, and our interactions with, the environments we live in.



## ii. Environmental impact

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Vulnerability-led design responses, or too much emphasis on security can promote fear of crime (and each other) making people paranoid.





### iii. Ecological impact

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Crime trends often follow consumer trends and crime is a more voracious form of planned obsolescence, linked to insurance upgrade, than even fashion.





#### iv. Emotional impact

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Crime militates against well being. Prof Layard (LSE) argues if we don't feel safe we are unlikely to feel happy despite economic prosperity.



## 2. DAC at CSM

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# DAC Research Centre at the University of the Arts London aims to:

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1. To reduce the incidence and adverse consequences of crime through design of products, services, communications and environments that are 'fit for the purpose' and contextually appropriate in all other respects;
2. To equip design practitioners with the cognitive and practical tools and resources to design out crime; and
3. To prove and promote the social and commercial benefits of designing out crime to manufacturing and service industries, as well as to local and national government, and society at large.



## DAC's design and research process is:

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- \* Socially responsive
- \* Multi- disciplinary and consultative
- \* Iterative and User and Abuser focused
- \* Practice-led

## Socially Responsive

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We target crime problems that stand as a barrier to the progress of social and ethical agendas.

Our current focus is on **bag theft** (mobile property theft) that detracts from enjoyment of public spaces and public transport, and **bike theft** that detracts from cycle use.





# Multi-disciplinary

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We bring together researchers, designers, architects, planners, criminologists, engineers, manufacturers, anthropologists, the police and other stake holders to assess design tools and design proposals to ensure they are effective and appropriate.



**wetherspoon**



Transport  
for London

**BCSC**  
REPRESENTING THE RETAIL  
PROPERTY INDUSTRY

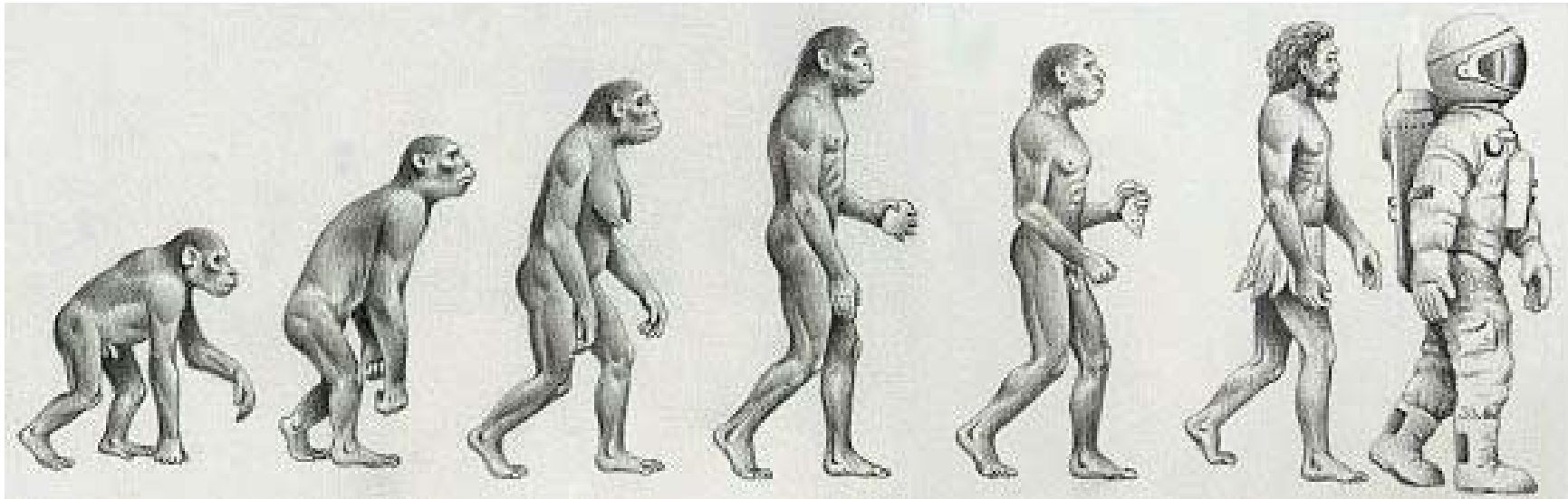




## Iterative and User and Abuser focused

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The iterative process is linked to a user-centred design model. It is constantly re-evaluating and improving design thinking based on user feedback and expert advice. We extend this model to address mis-use and abuse to ensure designs keep pace with 'adaptive criminals'.



**Ekblom, Paul (1997). 'Gearing up against Crime: a Dynamic Framework to Help Designers Keep up with the Adaptive Criminal in a Changing World', International Journal of Risk, Security and Crime Prevention, October, Vol 2/4:249-265**

## Practice-led

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Our practice-led research visualizes its outputs.

We try to show as well as tell what designing against crime can deliver by engaging with the public in exhibition spaces.



## 2000 Design Museum Exhibition

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## 2001 Don't Tempt Me: Milan

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## 2001 Don't Tempt Me: Barcelona

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## 2002 Stop Thief: RIBA and Designers Block





2003 Victoria, London



## 2005-06 Safe Exhibition, MoMA, New York



### 3. Introducing CPTED

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### 3. Introducing CPTED

Central to DAC's methodology is the idea of 'environmental complicity'. The proposition that 'Places' and 'Things' (the 'built environment'), as well as 'People' cause problems.



© Sybille Hunter



### 3. Introducing CPTED

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DAC draws upon the criminological discourses of **Situational Crime Prevention (SCP)** and **Crime Prevention Through Environmental Design (CPTED)**. Both understand 'opportunities' to be the 'root causes' of crime (linked to objects/environments and services as well as users and abusers).

**Design out criminal opportunities and you can design out crime.**

Felson & Clarke 'Opportunity Theory', 1998, Rutgers University, New Jersey

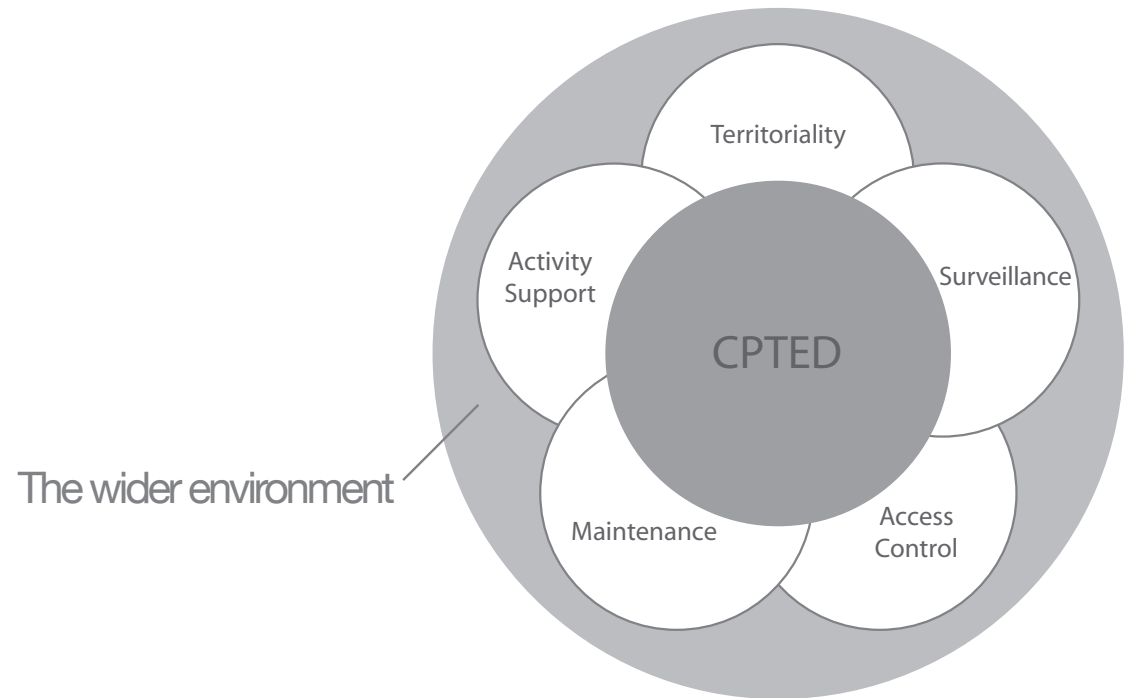


### 3. Introducing CPTED

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CPTED is a multi-disciplinary approach that relies upon the ability to influence offender decisions BEFORE criminal acts occur.

CPTED strategies aim to **increase the risk and effort** required to commit offences and **reduce the potential reward** to the offender.





## CPTED strategies: Territoriality: Defensible space

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Soft or hard, overt or covert, boundaries create symbolic and physical markers to help control territory and manage spaces.



Oscar Newman 1972: Focused on housing and layout: *Defensible Space: Crime Prevention Through Urban Design*.

## CPTED strategies: Surveillance: Natural / Electronic surveillance

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Offenders may be deterred if they feel they can be seen as it increases their risk of being caught. Natural surveillance occurs by designing the placement of physical features, activities and people in such a way as to maximise visibility and foster positive social interaction. Electronic surveillance is only as effective as those that monitor and respond.



## CPTED strategies: Activity support

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Popular activities are placed into the heart of empty public spaces to claim the space for legitimate users. This increases natural surveillance and the risk of detection of criminal and undesirable activities. By putting the community back into public space, a sense of ownership and guardianship over the space will emerge.

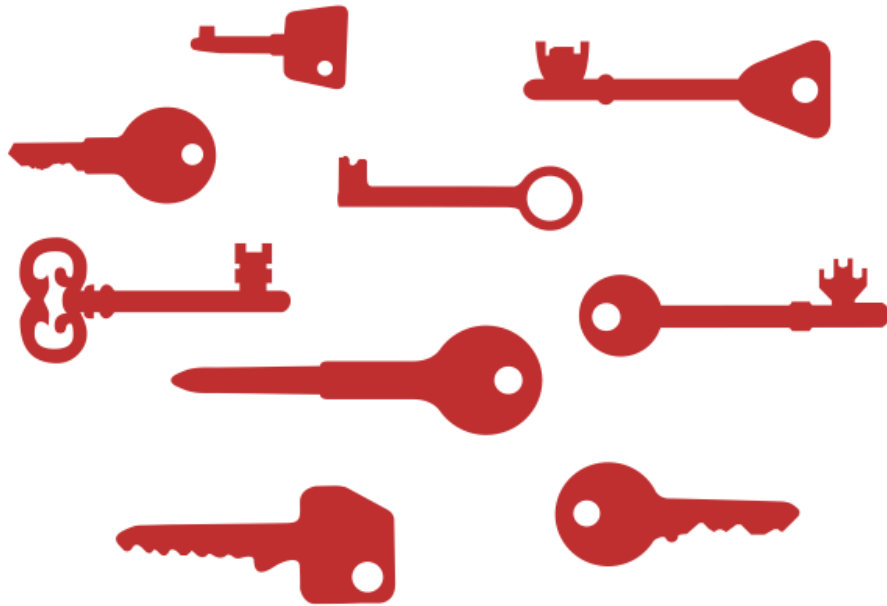


## CPTED strategies: Access control

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Control who goes in and out of spaces (physical access) to clearly define boundaries.

Placing entrances and exits, fencing, lighting and landscape, to limit access, controls the flow of people and provides a level of security without a overt security presence.





## CPTED strategies: Image & Maintenance: Broken Windows Syndrome

A poorly maintained and managed space informs abusers that risks associated with crime are low. Bad leads to worse. If users are deterred a 'Tipping Point' may be reached where abusers dominate the space.



## 4. DACRC Iterative Design Model and Methodology

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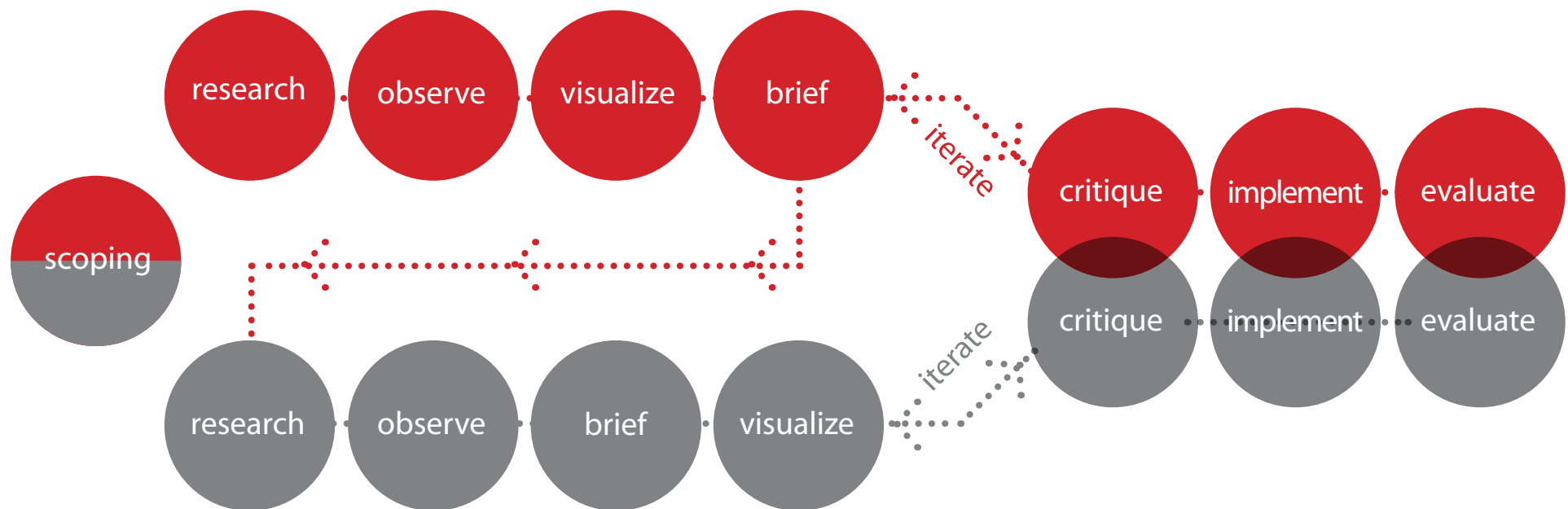


## 4. DACRC Iterative Design Model and Methodology

Our working process has 2 strands

Each strand has 7 stages to connect theory to practice

### Practice Led Research (Design Resources)



### Research Led Practice (DAC exemplars)

## 4. DACRC Iterative Design model and Methodology

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‘Twin track’ approach generates:

- \* Tested ‘design resources’ that are freely disseminated to stakeholders within design education and design practice with the aim of “equipping design practitioners with the cognitive and practical tools and resources to design out crime”.
- \* Tested ‘design exemplars’ that address industry and ‘the market’, providing the case for DAC as a tool for socially responsive innovation and “promoting the social and commercial benefits of designing against crime to manufacturing and service industries”. These exemplars are applied to afford social impact and create social change.

## 5. Bike theft - “Theory” to design “Practice” for public space

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## Theory into practice

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Our address to multiple agendas and design drivers aims to deliver both product innovation and social innovation.

Our Bikeoff initiative aims to design products, services and environments that increase cycle use by reducing bike theft.



## Theory into practice

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Cycle theft is one of the greatest detractors from bike use and the benefits that cycling has to offer the public:

- \* Quick (journeys under 5 miles)
- \* Healthy (obesity/heart disease)
- \* Affordable (inclusive)
- \* Non-polluting  
(zero CO<sub>2</sub> emissions)
- \* Low Hazard  
(less harmful than motor vehicles)
- \* Low consumption
- \* Quiet



## Theory into practice: Scoping

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UK: aims to increase cycle usage fourfold by 2012.

*DTR National Cycle Strategy 1996*

London: aims for 80% increase by 2012 and 200% increase by 2020.

*Mayors Office*

17% of cyclists' experience bicycle theft. Of these 24% stop cycling and 66% cycle less often.

*Transport Research Laboratory 1997*





## Theory into practice: Research

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UK: 1 bike stolen every minute (439,000 bikes stolen a year).

*British Crime Survey 2004-5*

London: 80,000 bikes stolen; < 5% returned to owners.

*Transport for London 2005-6*

Cycle theft is the second greatest deterrent to cycle use after road safety. Secure cycle parking is quoted as second greatest incentive to cycle after more bike lanes.



## Theory into practice: Research

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Not just a UK problem. Bike owners more likely to have their bikes stolen than car owners their car or motorcyclists their motorbike.

Bike stolen (4.7%)

Motorbike stolen (1.9%)

Car Stolen (1.2%)

International Crime Victim Survey (2000)

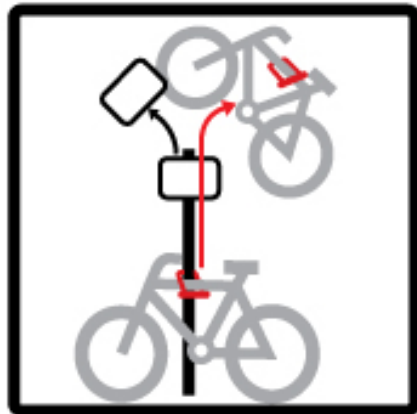


# Theory into practice: Research: Behaviour

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## Abusers - Theft perpetrator techniques

Lifting



Levering

## Theory into practice: Research: Behaviour

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### Abusers - Theft perpetrator techniques

Striking



Cutting



## Theory into practice: Research: Behaviour

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Abusers - Theft perpetrator techniques

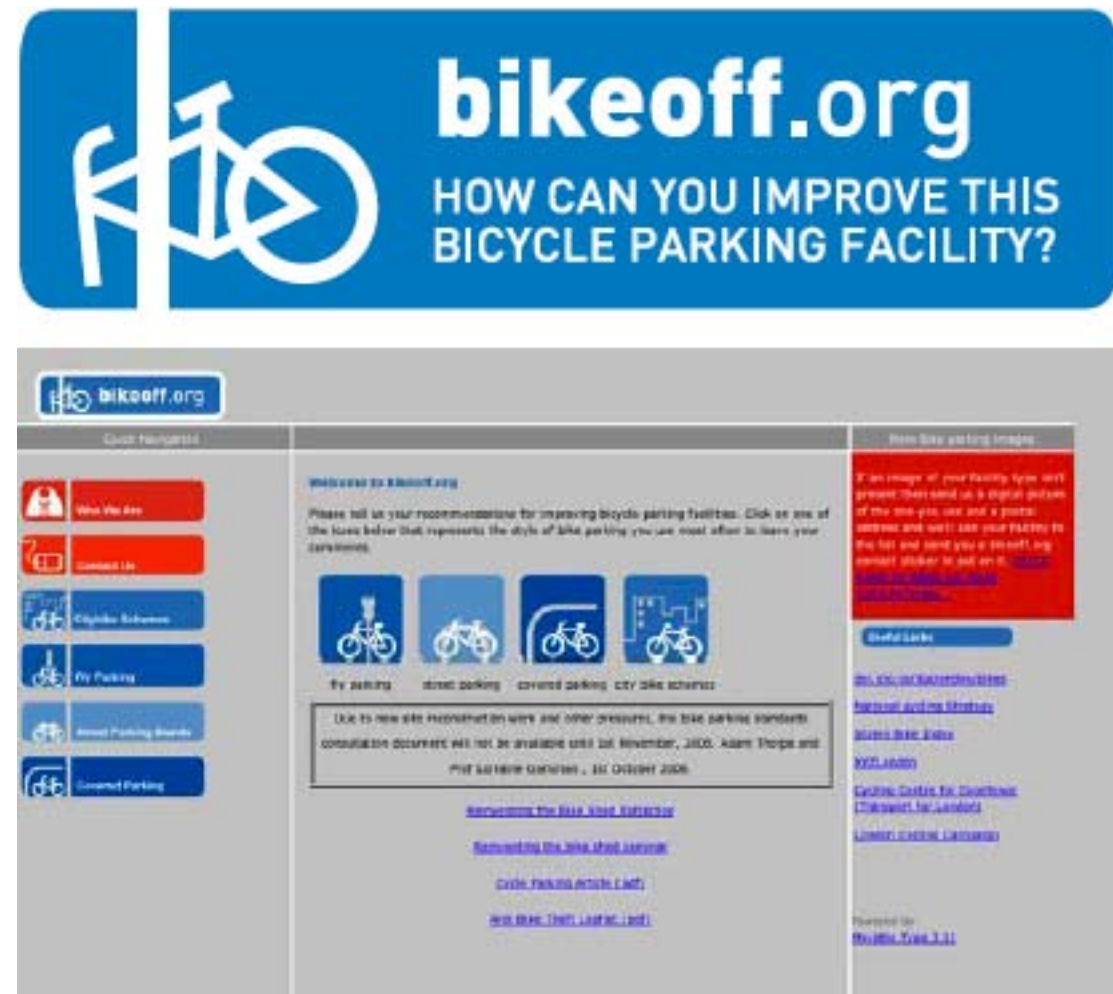
Unbolting



Picking

# Theory into practice: Research: Consultation

Users/Community  
Bikeoff Weblog

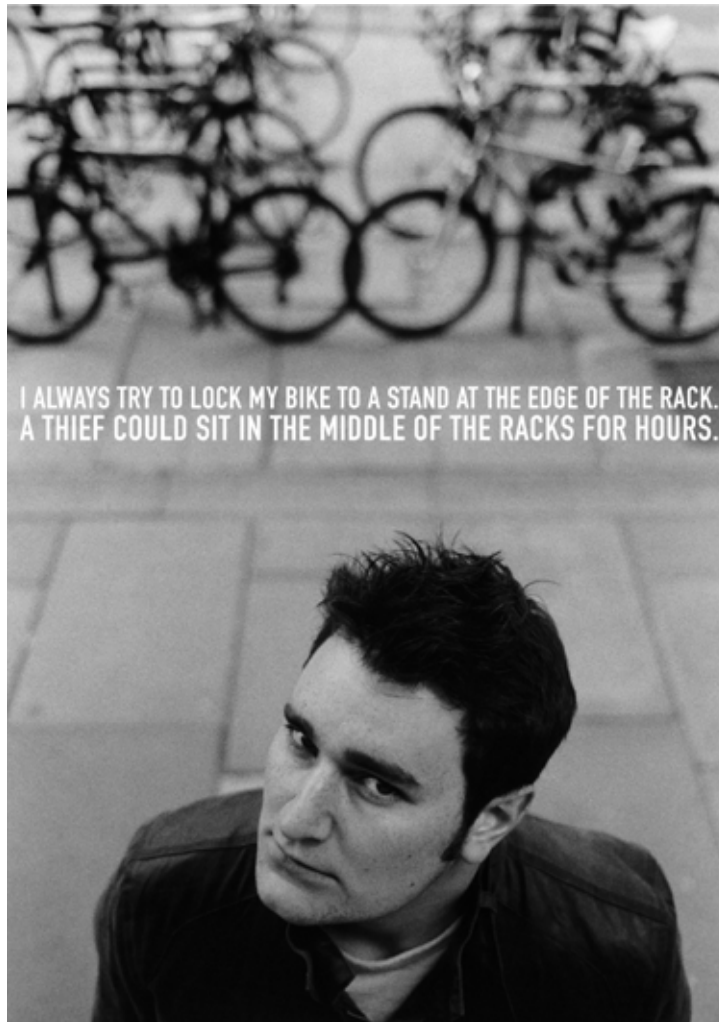




# Theory into practice: Research: Consultation

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Users  
Bikeoff  
Weblog

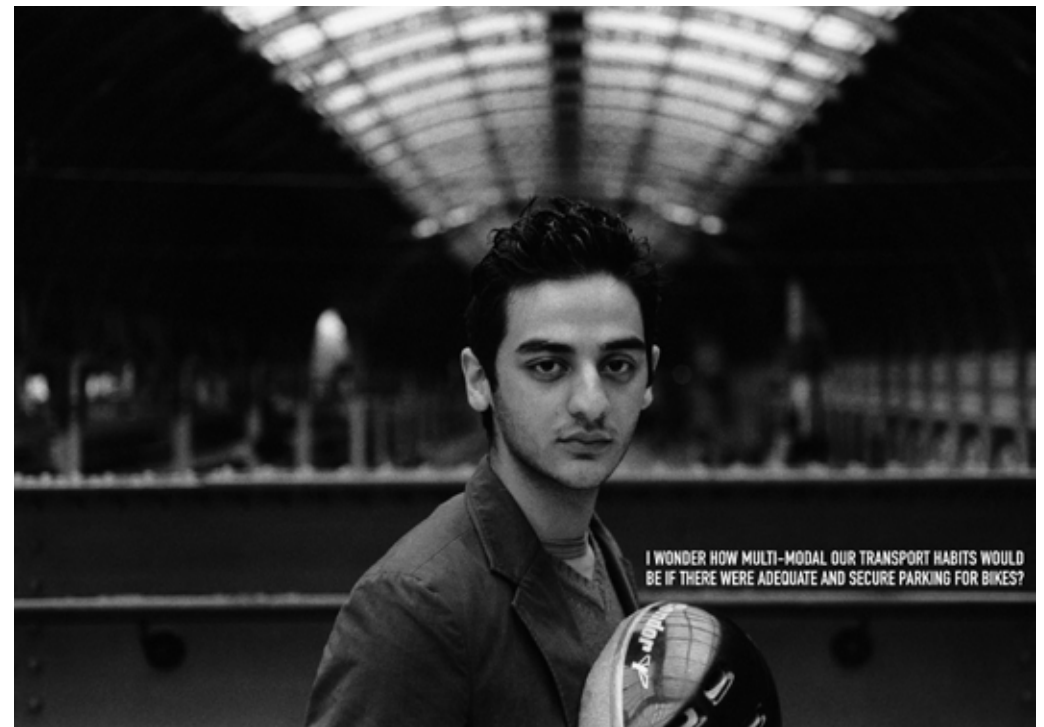


# Theory into practice: Research: Consultation

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Users

Bikeoff Weblog

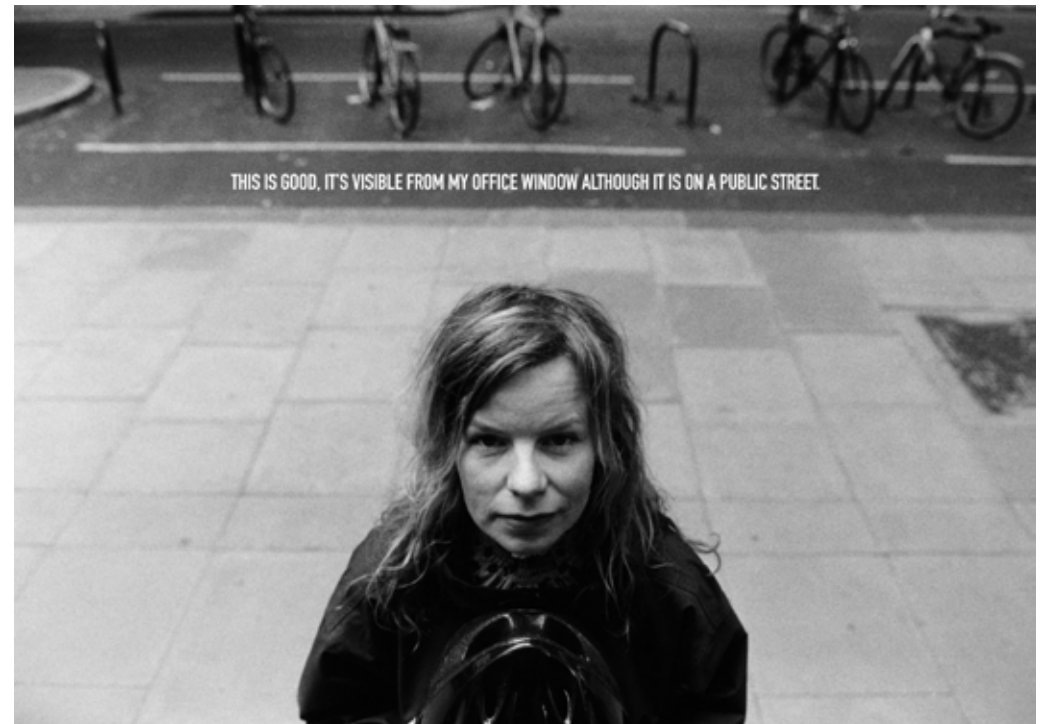


# Theory into practice: Research: Consultation

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Users

Bikeoff Weblog





# Theory into practice: Research: Consultation

Users/Community

LBFF

2005/06/07/08

October 1-5

EIGHTH ANNUAL  
**BICYCLE FILM FESTIVAL™ 2008**  
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**BFF News**

日本語ウェブサイトはこちらから！  
**TOKYO: SEPTEMBER 5-7, 2008**  
**SEE THE PROGRAM!!!**

The Bicycle Film Festival is a celebration of bicycles through film, art and music.

**TOKYO PROGRAM HIGHLIGHTS**

**FRIDAY SEPTEMBER 5 - 9月5日(金)**  
OPENING NIGHT PARTY  
**SATURDAY SEPTEMBER 6 - 9月6日(土)**  
11:30 | PROGRAM 1 - THE WAY BOBBY SEES IT  
13:30 | PROGRAM 2 - ROAD TO ROUBAIX



15:30 | PROGRAM 3 - LES NINJA DU JAPON  
17:30 | PROGRAM 4 - FUN BIKE SHORTS

**ORANGE BIKES TAKE MANHATTAN**

**Etc.**

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**Announcements**

SEE THE TOKYO PROGRAM SEPTEMBER 5-7!!!



**TOKYO**  
9月5日(金) OPENING PARTY  
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# Theory into practice: Observation: Use and Abuse

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## 8500 observations of 'locking' events - practice and context

© DAC Research Centre, 12<sup>th</sup> September 2008, Design In Public Space Workshop, Ciesyn, Poland



## Theory into practice: Observation : Analysis

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Using 2 locks to secure a diamond frame bike to a Sheffield stand there are 180 potential locking combinations.



## Theory into practice: Visualise

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We rated locking practice as good, ok or bad.



✓ **Good locking practice**



✓ **OK locking practice**



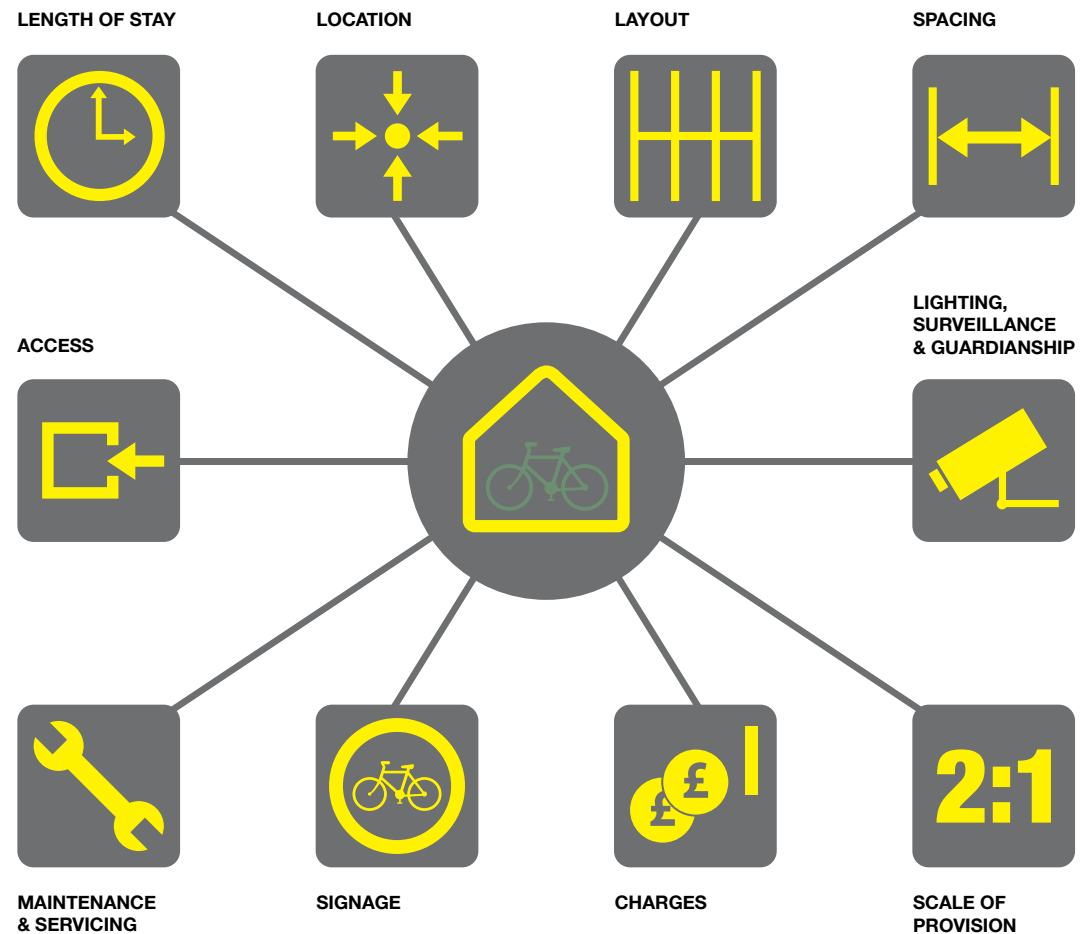
✓ **OK locking practice**



✗ **Bad locking practice**

# Theory into practice: Visualise

## Design Resources: Bikeoff design guidelines



# Theory into practice: Visualise

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## Design Resources: Exhibitions



# Theory into practice: Brief/Critique

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Design Resources: Stakeholder seminars





# Theory into practice: Implement

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Design Resources: Studio Projects

MA Industrial Design - Holborn Unlocked.

Unlocking the potential of cycle parking infrastructure to regenerate public space.



# Theory into practice: Implement

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## Design Exemplars: Puma bike



# Theory into practice: Implement

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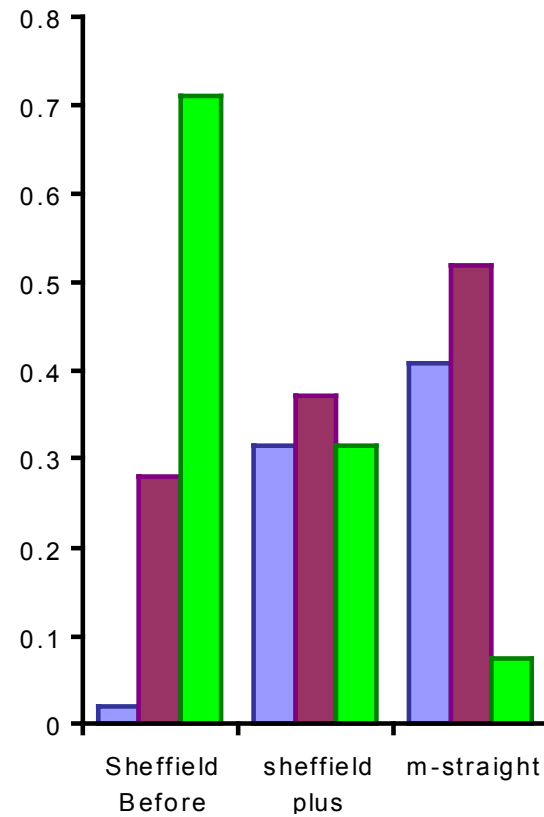
Design Exemplars: caMden stands



# Theory into practice: Evaluate

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JDI Crime Science, UCL



## Theory into practice: Implement

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## 6. Bag theft - “Theory” to design “Practice” for public space

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## Theory into practice: Research

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Did you know? Every minute in the UK another person becomes a victim of bag theft.

[ Source: Home Office - British Crime Survey 2003/04. Table 2.01 in HO Stats Bulletin 10/04. Calculations worked out by DAC staff as incidents estimated 2003/04, comprising both snatch and stealth thefts yields one in every 0.85 minutes on average. ]

## Theory into practice: Research

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The acronym **C.R.A.V.E.D.** has been used to describe the characteristics of items most likely to be stolen in public space - 'hot products' because they are:

**C**oncealable

**R**emovable

**A**vailable

**V**aluable

**E**njoyable

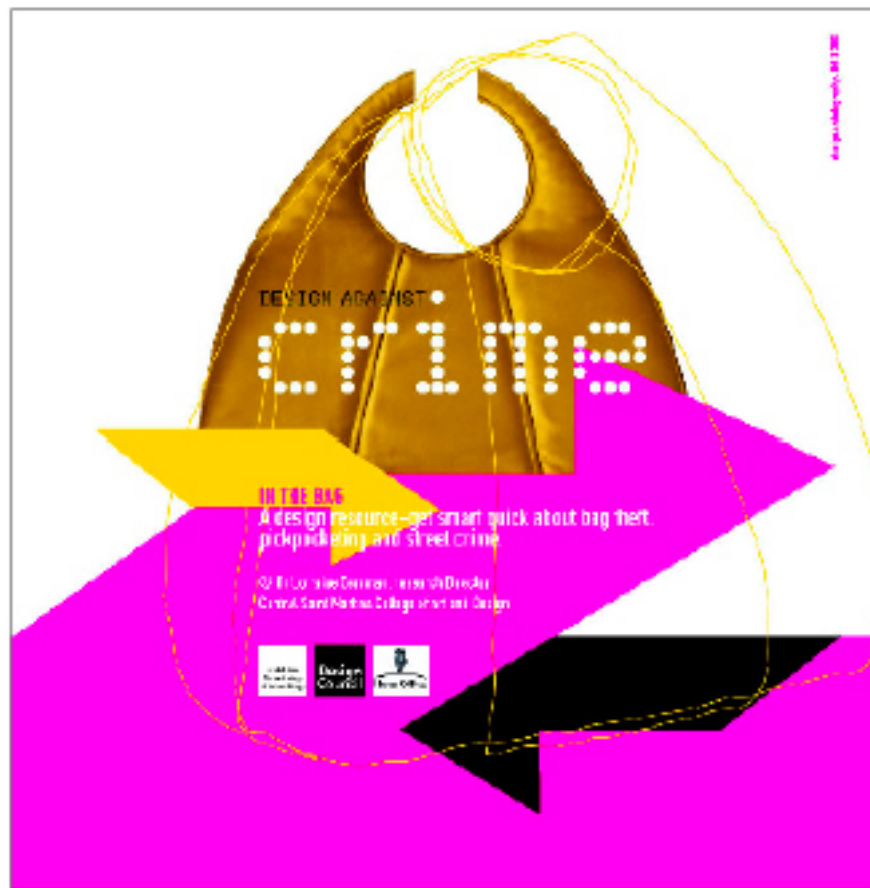
**D**isposable

## Theory into practice: Research / Visualise

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'In the Bag' Research CD ROM locates this theory.

Please see [www.inthebag.org.uk](http://www.inthebag.org.uk)



# Theory into practice: Research

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## Hot Products



# Theory into practice: Research

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## Perpetrator Techniques



## Theory into practice: Visualise

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**Dip:** Removal of articles from a bag without the owner's awareness





## Theory into practice: Visualise

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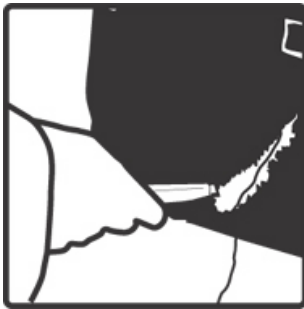
**Lift:** Removal of bag and contents without owner's awareness



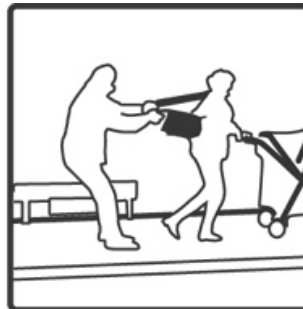
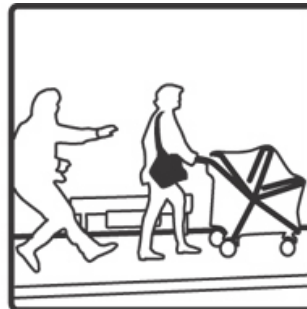
## Theory into practice: Visualise

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**Slash:** Removal of articles from a bag, without the owner's awareness by cutting the fabric.



**Grab:** Removal of bag and contents by grabbing it away from the owner's grasp.



## Theory into practice: Implement

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Theory into practice: Personal Products. MA Industrial Design, CSM



## Theory into practice: Implement

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Karrysafe - Anti theft bags and accessories. Commissioned and researched by DAC, designed and produced by Vexed Generation.





## Theory into practice: Implement

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Karrysafe was funded by the Design Council / UAL. The results were a series of smartly designed crime-resistant bags.



## Theory into practice: Implement

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## Theory into practice: Implement

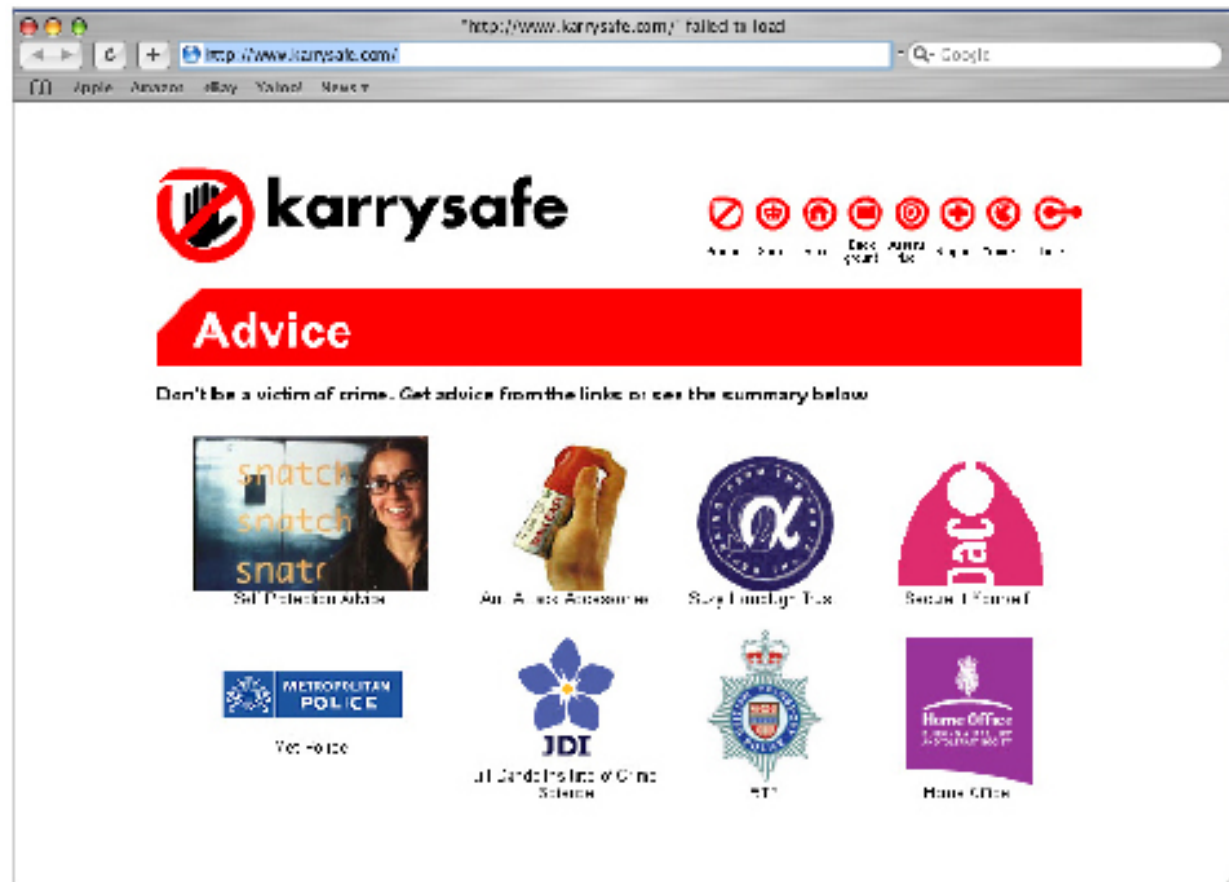
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Locking features allow the user to attach the bag to chairs, tables, posts and more.



# Theory into practice: Implement

Karrysafe started advice site: [www.karrysafe.com](http://www.karrysafe.com)



*but DAC has also delivered...*

# Theory into practice: Implement

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Power Pizza, Human Beans



## Theory into practice: Implement

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### Stop Thief Chairs

Customisation and user-testing of market leading public furniture.



## Theory into practice: Research

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Question: What other anti-theft bags are out there since Karrysafe appeared in 2001?

# Theory into practice: Research/ Visualise

Answer: [www.inthebag.org.uk](http://www.inthebag.org.uk)

The screenshot shows the homepage of the 'inthebag' website. The header features the 'inthebag' logo with a black bag icon containing a pink arrow, followed by the tagline 'get smart quick about pick pocketing, bag theft and street crime'. Navigation links for 'Home', 'Credits', 'Links', and 'Contact' are present, along with a search bar. The main content area is divided into three columns. The left column, titled 'Who we are', introduces the 'DESIGN AGAINST CRIME RESEARCH CENTRE' (DaC) and its location at Central Saint Martins College of Art and Design, University of the Arts London. The middle column, titled 'What's In The Bag?', features a graphic of a brown bag with the word 'crime' in white dots and the text 'IN THE BAG A DESIGN RESOURCE'. Below this, a welcome message states that this is the first iteration of 'In the Bag' and that comments are appreciated as more edits will be made. It describes 'In the bag' as a Design Against Crime (DAC) research resource aimed at designers to help them get smart quick about pick-pocketing, bag theft and loss of personal products. It also mentions that the resource visually animates statistical and criminological data and combines it with contextual information directly relevant to design. The right column contains two green headers: 'About bag theft' and 'What you can do'. Under 'About bag theft', there is a list of topics: 'Why prevent bag theft?', 'Bag theft environments', 'Evolution of pockets / bags and pick-pockets', 'What are hot products?', 'The perpetrator', 'Perpetrator techniques', 'The victim', and 'Crime in the future'. Under 'What you can do', there is a list of topics: 'Techniques of theft prevention', 'Protect your stuff', 'Designs against bag theft', 'Best Anti-Theft Designs for Urban Mobility', and 'Market Review: Bag-holding clips'. At the bottom left, there are logos for 'Design Council' and 'Home Office'. A footer at the very bottom of the page reads: '© DAC Research Centre, 12<sup>th</sup> September 2008, Design In Public Space Workshop, Ciesyn, Poland'.

**Who we are**

**DESIGN AGAINST CRIME RESEARCH CENTRE**

Design Against Crime (DAC) is a socially responsive, practice-led research centre located at Central Saint Martins College of Art and Design, University of the Arts London.

**Home**

**What's In The Bag?**

DESIGN AGAINST CRIME

IN THE BAG A DESIGN RESOURCE

Welcome. This is the first iteration of "In the Bag". Your comments are appreciated as several more edits will take place before it is finalised. *In the bag* is a Design Against Crime (DAC) research resource aimed at designers to help them get smart quick about pick-pocketing, bag theft and loss of personal products. It visually animates statistical and criminological data and combines it with contextual information directly relevant to design.

It also offers a thoroughly referenced research resource for those who want to address the subject at an *academic* level.

Designing out crime poses many challenges for the design profession. Its

**About bag theft**

Why prevent bag theft?  
Bag theft environments  
Evolution of pockets / bags and pick-pockets  
► What are hot products?  
The perpetrator  
Perpetrator techniques  
The victim  
Crime in the future

**What you can do**

► Techniques of theft prevention  
► Protect your stuff  
► Designs against bag theft  
Best Anti-Theft Designs for Urban Mobility  
► Market Review: Bag-holding clips

**Design archive**

Design Council

Home Office

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# Theory into practice: Research

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Scottevest/ SeV<sup>®</sup>  
Evolution Jacket

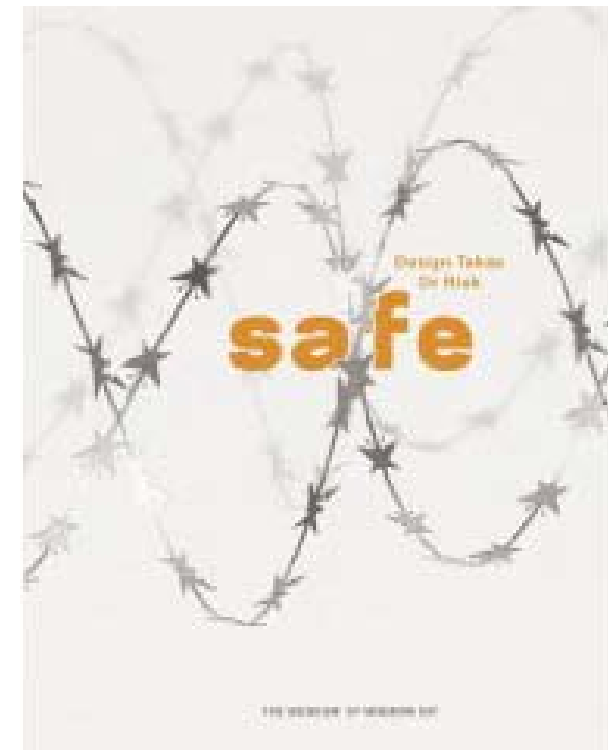


## Theory into practice: Research

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MOMA, New York, USA

Safe: Design Takes on Risk



# Theory into practice: Implement

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License to Dan Form, Denmark

Stop Thief



# Theory into practice: Implement

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Interest from Starbucks



# Theory into practice: Research

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## Question:

What anti bag theft personal products are out there?

## Answer:

Chelsea Clip and Secure Clip

## Theory into practice: Research

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### Chelsea Clip and Secure Clip

1. Under table location means they are unseen and unused
2. Low aesthetic quality / compatibility





## Theory into practice: Research

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Chelsea Clip and Secure Clip

3. Poor material choice - they break easily



Also “personal products” such as:

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Hangbag



Bagboy



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## E-Shape Hanger



## ToteGuard



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## PurseHook



But none are really effective - hence . . .

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## Grippa Research Project :

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- \* 2004-2006 - with All Bar One
- \* 2006-2010 - with JD Wetherspoons



## Theory into practice: Visualise

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Grippa Research Project 1.

Grippa furniture, All Bar One (ABO), London, 2005



## Theory into practice: Visualise

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Grippa Clips (ABO)

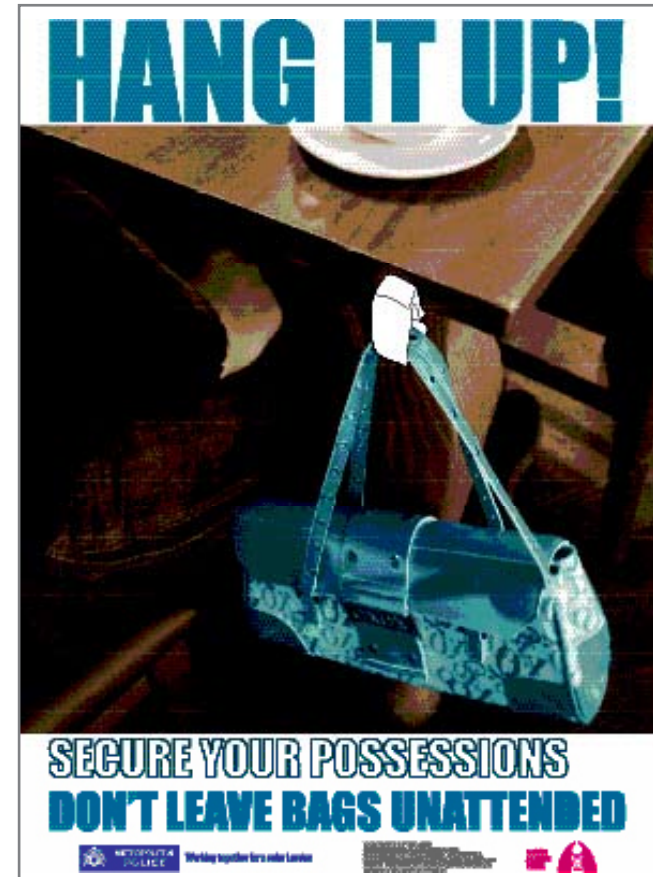
Selected sites only, London, 2005



## Theory into practice: Visualise / Implement

Grippa Communication (AB0)

London, 2005





# Theory into practice: Visualise / Implement

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Anti Bag Theft Evaluation

Phase One



## Theory into practice: Visualise / Implement

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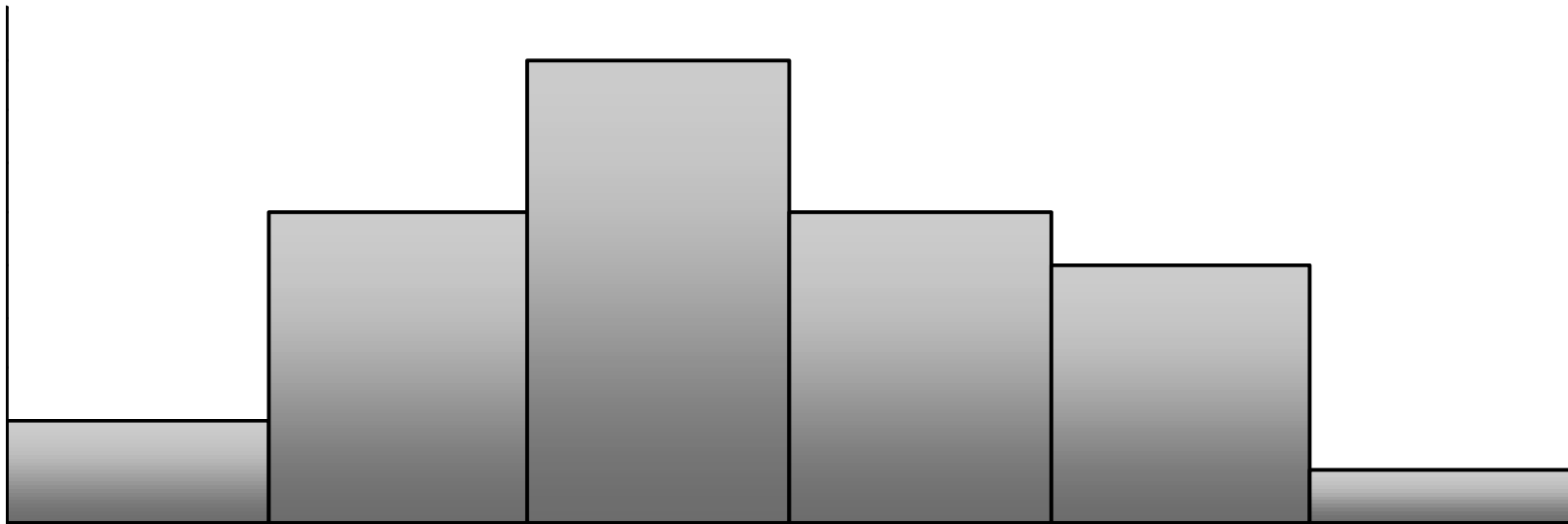
Evaluating the ‘anti-theft’ clips should allow us to answer questions such as . . .

- \* Do they work?  
If so, how do they work?
- \* When do they work?
- \* Where do they work?
- \* Are design modifications necessary?

## Theory into practice: Research / Evaluation

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Self-reported theft: When did the incident occur?

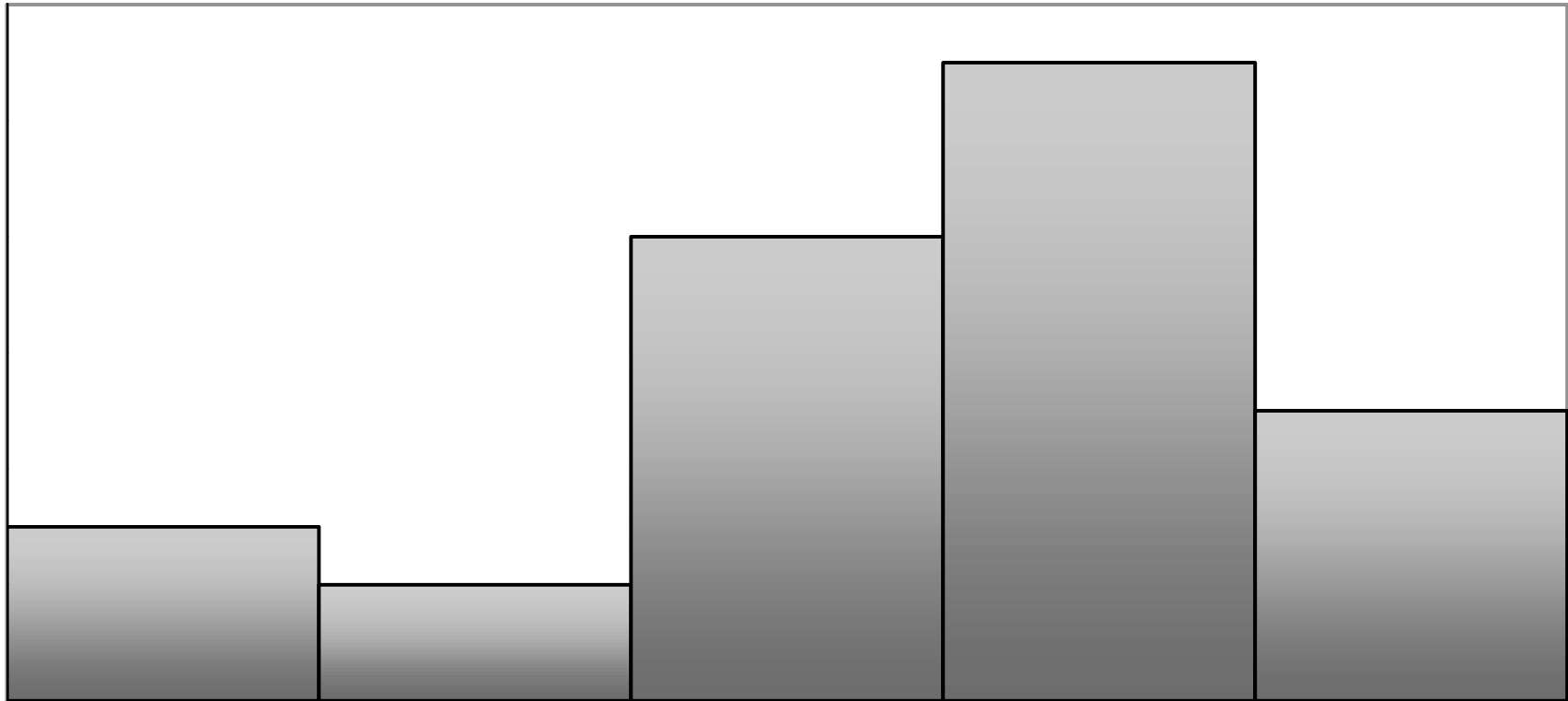




## Theory into practice: Research / Evaluation

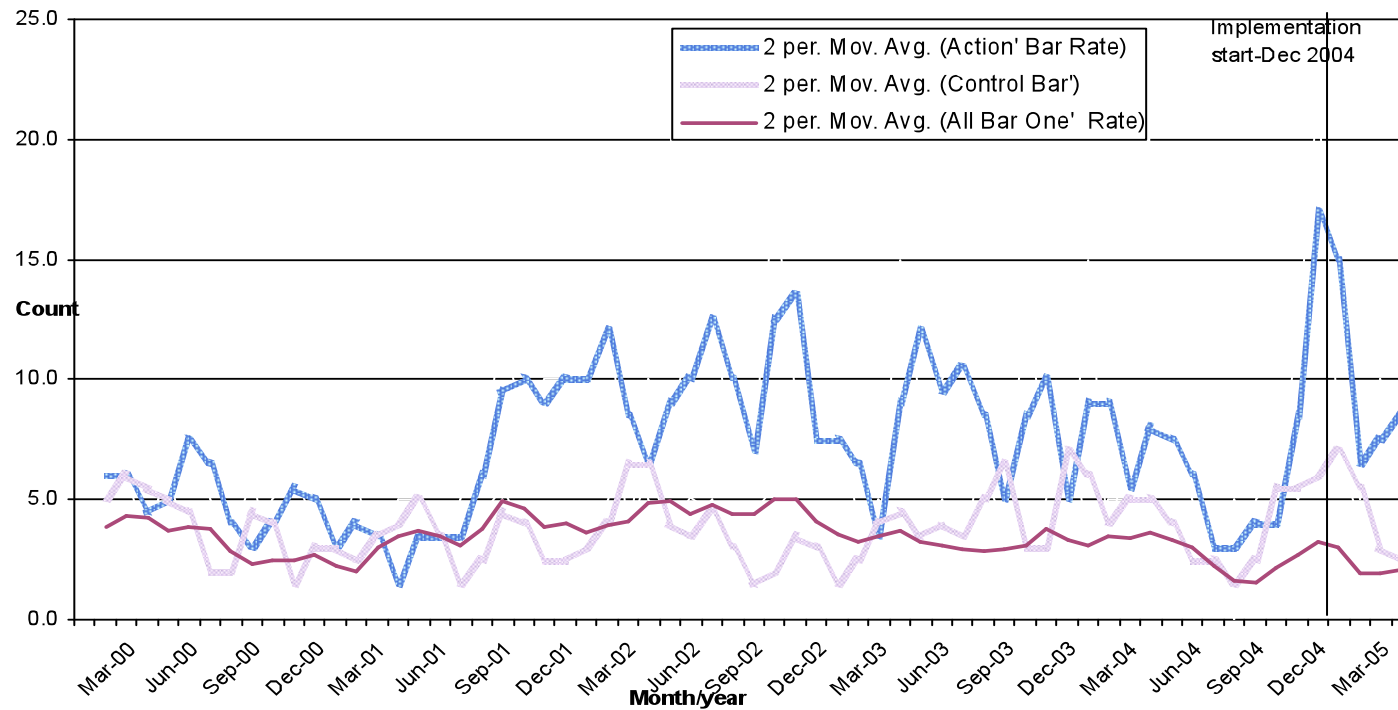
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Self-reported theft: How busy was the bar?



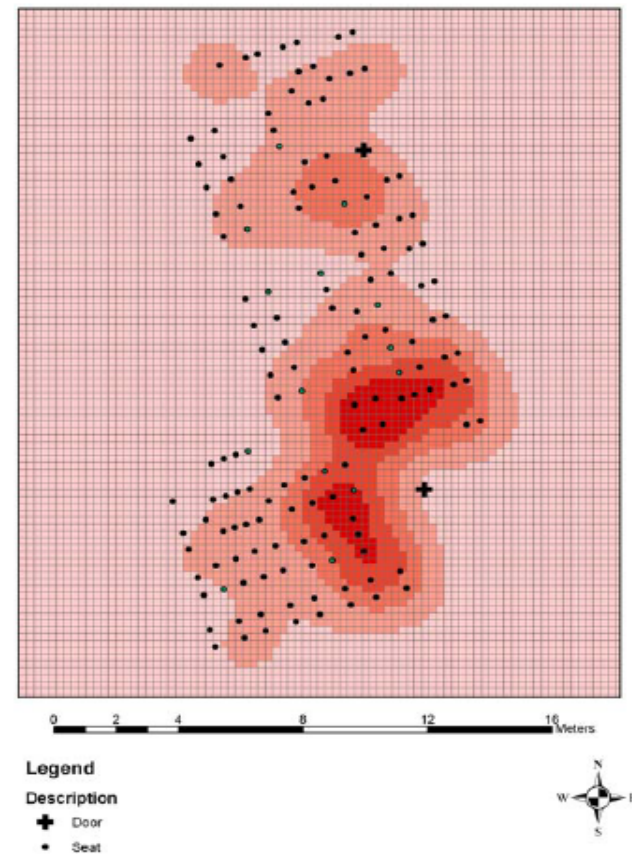
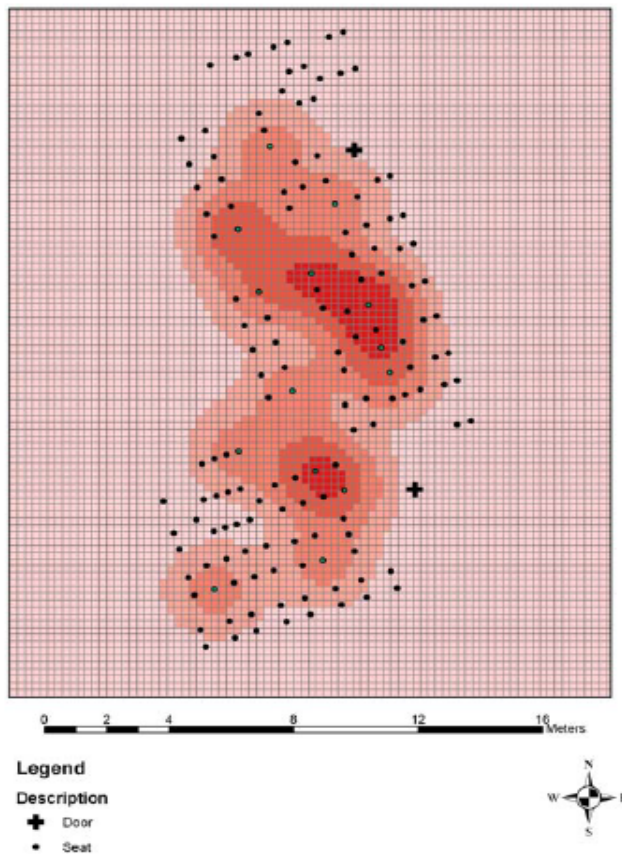
## Theory into practice: Research / Evaluation

Recorded crime rate per month for action bar, control bar and chain average.



# Theory into practice: Research / Evaluation

Customer Survey: Actual & perceived risks of crime.



## Theory into practice: Research / Evaluation

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Customer Survey: Explanations for what drew customers' attention to the clips.

<b>Alert method</b>	<b>Frequency</b>	<b>Percentage</b>
Just saw them	35	63.6
Publicity within the bar	10	18.2
Bar staff pointed them out	2	3.6
Other	8	14.5
Total	97	100

## Theory into practice: Research / Evaluation

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Customer Survey: Reasons customers gave for not using the clips.

Reason for not using the clips	Frequency
Didn't see the clip	20
No clip available	10
Strap too big for clip	10
Bag too big for clip	8
There is space for bag next to them	5
Habit	4
Prefer to have bag where they can see it	3
Not enough clips	2
Bag is too heavy	2
Bag is too small	1
<b>Total</b>	<b>68</b>

## Further research (2006-2010)

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- \* The Arts & Humanities Research Council awarded £343k jointly to DAC and the JDI.
- \* 3-year research project focussing on the prevention of theft of customers' bags in bars and cafes using sophisticated table clips and associated publicity.
- \* Strategic objectives are to:
  - Provide hard proof of principle that DAC can reduce crime, based on worthwhile, rigorous but fair evaluation;
  - Build designers' capacity to out-innovate criminals, by devising a procedure which:
    - a) generates designs that follow crime prevention principles and match the crime problem and context;
    - b) draws together design and evaluation processes; and
    - c) controls the many risks in evaluation to ensure the tests meet the desired standards.



# Theory into practice: Visualise

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New Designs Generated

Barcelona



## Theory into practice: Evaluate

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New Designs Generated  
Islington, London



## 7. Conclusion

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## Conclusion: Socially Responsive Design

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“Design which takes as its primary driver social issues, its main consideration social impact and its main objective social change.”

or simply

“Design that responds to social issues and context in pursuit of social change.”

## Conclusion: Drivers

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Our work shows that consideration of multiple drivers and a consultative approach can create products, environments and services that have a positive impact upon:

- \* society - less crime and less people criminalised
- \* environment - less cars - more cyclists
- \* economy - innovative products that add value

We would like to work with others to develop this approach through practice and consideration of different drivers and contexts.

## Conclusion: The problems with CPTED

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There are five primary barriers to the international adoption of CPTED - even though it is already informing initiatives like The Project for Publicspace in America ([www.pps.org](http://www.pps.org)), and DOCA in Australia and Europe ([www.e-doca.net](http://www.e-doca.net)).

1. Lack of Education
2. Resistance to change by significant stakeholders.
3. Costs of retrofit implementation is expensive, and politically difficult.
4. Not a panacea - should not displace other ways of reducing offender behaviour - drug rehabilitation programmes for example.
5. Insensitive implementation causes problems e.g. Defensability v Mixed Use/ Banning Graffiti - rather than banning tagging.



## Questions for Poland:

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- \* Is crime detracting from achievement of social objectives in Poland?
- \* Are you considering crime prevention in design for public space?
- \* How are you responding to this issue?
- \* Can you show us how you are addressing it?

Thank You

[www.designagainstcrime.com](http://www.designagainstcrime.com)

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

[www.inthebag.com](http://www.inthebag.com)