



- Urban Planner
- Social Geographer
- Director Board International CPTED Association
www.cped.net
- European Designing Out Crime Association:
www.e-doca.eu
- Visiting professor Design Institute Salford University (Manchester UK)
- Chair Standardization Working group CEN/TR-14383-2 (Europe)
- DSP-groep Amsterdam (the Netherlands)

www.dsp-groep.nl

www.e-doca.eu

pvansoomeren@dsp-groep.nl

Paul
van
Soomeren





Urban Millennium

Kofi Anan:
"The world has entered
the Urban Millennium".





Urbanization: new problems

UN 'International Crime Victim Survey' (ICVS):
“urbanization is the strongest predictor
for crime and victimization”





Urbanization: three common trends

- Growth of cities



- Problems with integration
(e.g. Paris riots in banlieues)

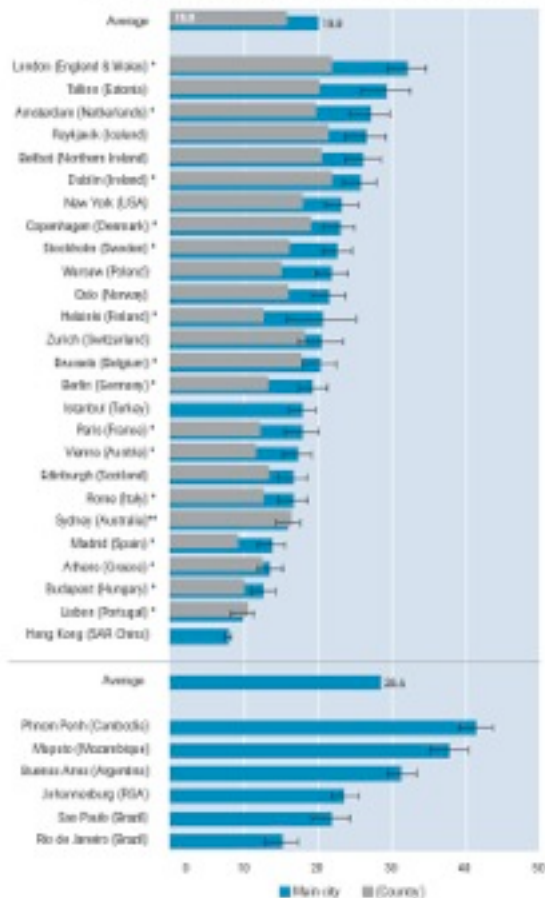


- Cities are a honey pot of criminal opportunities





Figure 5 Overall victimization for 10 crimes; one year prevalence rates in 2003/04 (percentages) of main cities and national populations of 28 countries. 2002-2005 ICVS and 2005 EU ICS*



* Source: European Survey of Crime and Safety (2005 EU ICS); Brussels, Gallup Europe.

Crime: diverse phenomenon

- city/country
- high/low

Overall victimization for 10 crimes; one year prevalence rates in 2003/2004 (%) of main cities and national populations of 28 countries. 2002-2005 ICVS and 2005 EU ICS



25 types of crime (EU, 2003)

Fraud Arson Homicide
Bribery GRAFFITI VANDALISM
Pickpocketing Corruption
Car Drug-trafficking BLACKMAIL SHOPLIFTING
Terrorism VIOLENCE-IN-(SEMI)PUBLIC-SPACES-AREAS/ASSAULT
WORKPLACE-CRIMES Violence-in-(semi)public-spaces-areas/assault
Sexual-offences ENVIRONMENTAL-CRIMES (Motor)cycles-theft
TRAFFIC-CRIMES Assault Domestic-violence
THREAT Assault KIDNAPPING Vandalism
Drugs Extortion BURGLARY
Theft Robbery Robbery theft



Opportunistic crimes: > 50%

Traffic-crimes
Terrorism
(Motor)cycles-theft
Arson
Pickpocketing
BURGLARY
vandalism
THEFT
Graffiti
Violence-in-(semi)public-spaces-areas/assault
Car ROBBERY
ASSAULT
Workplace-crimes



Besides crime also





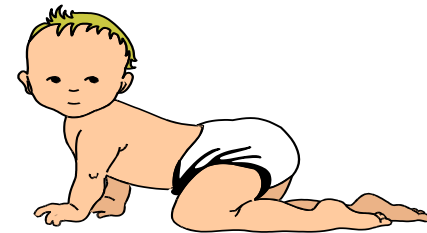
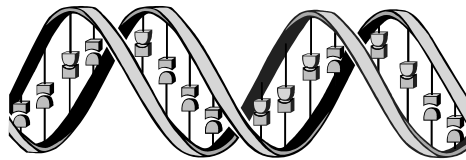
Tackling crime and fear of crime: From criminology towards crime science

The endless nature and nurture debate

Nature

or

Nurture



“what policy makers need most is not a scientific explanation of crime, but a manageable method for tackling it: crime science”¹⁰

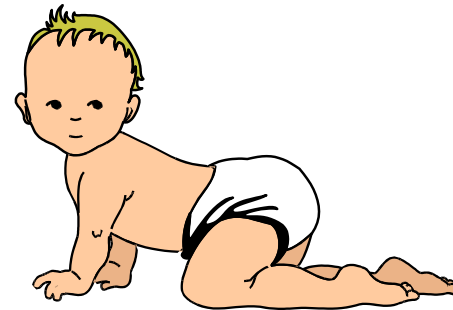
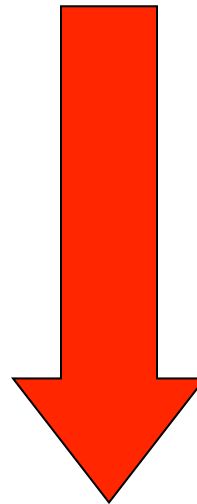
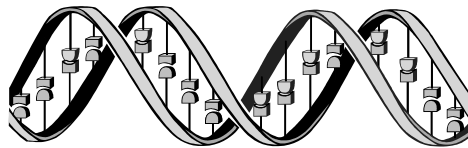


A pragmatic way out

Nature

or

Nurture



opportunity theory:

Crime Prevention Through Environmental Design (CPTED 1st & 2nd generation)



situation



offender

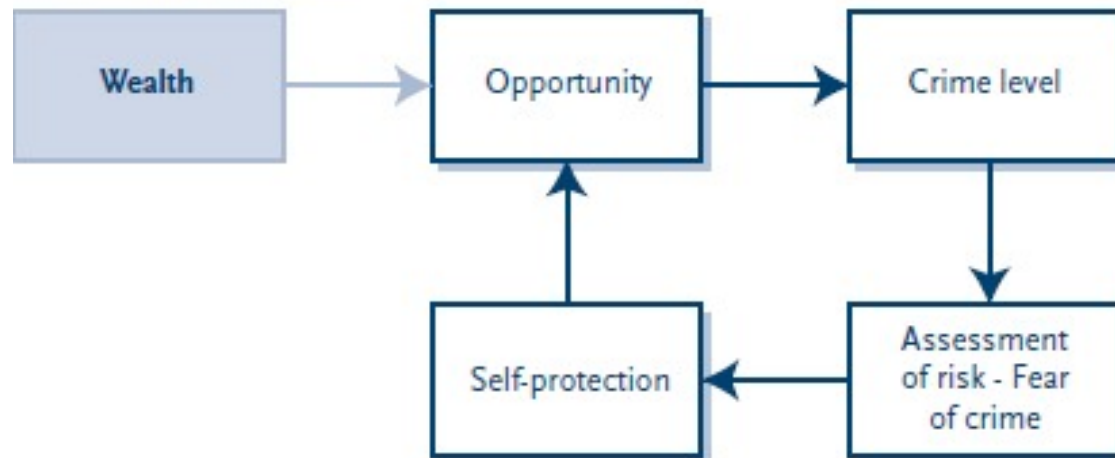


victim / target

Opportunity theory: crime triangle

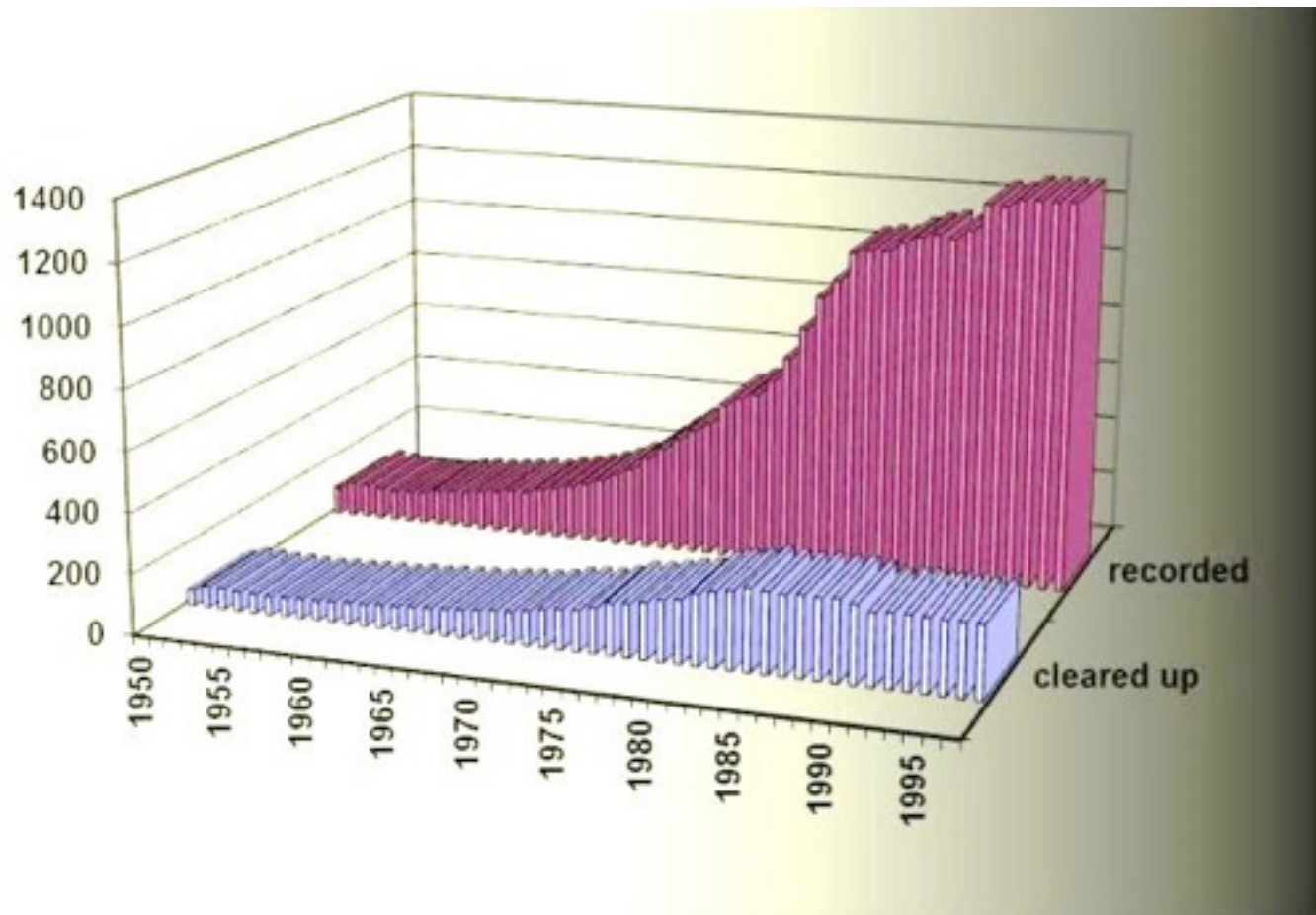


Jan van Dijk (2008): crime boom & bust cycle





The Netherlands: recorded crime 1950-1999





How much police do you need to prevent a burglary?



© Photo Armando Jongejan



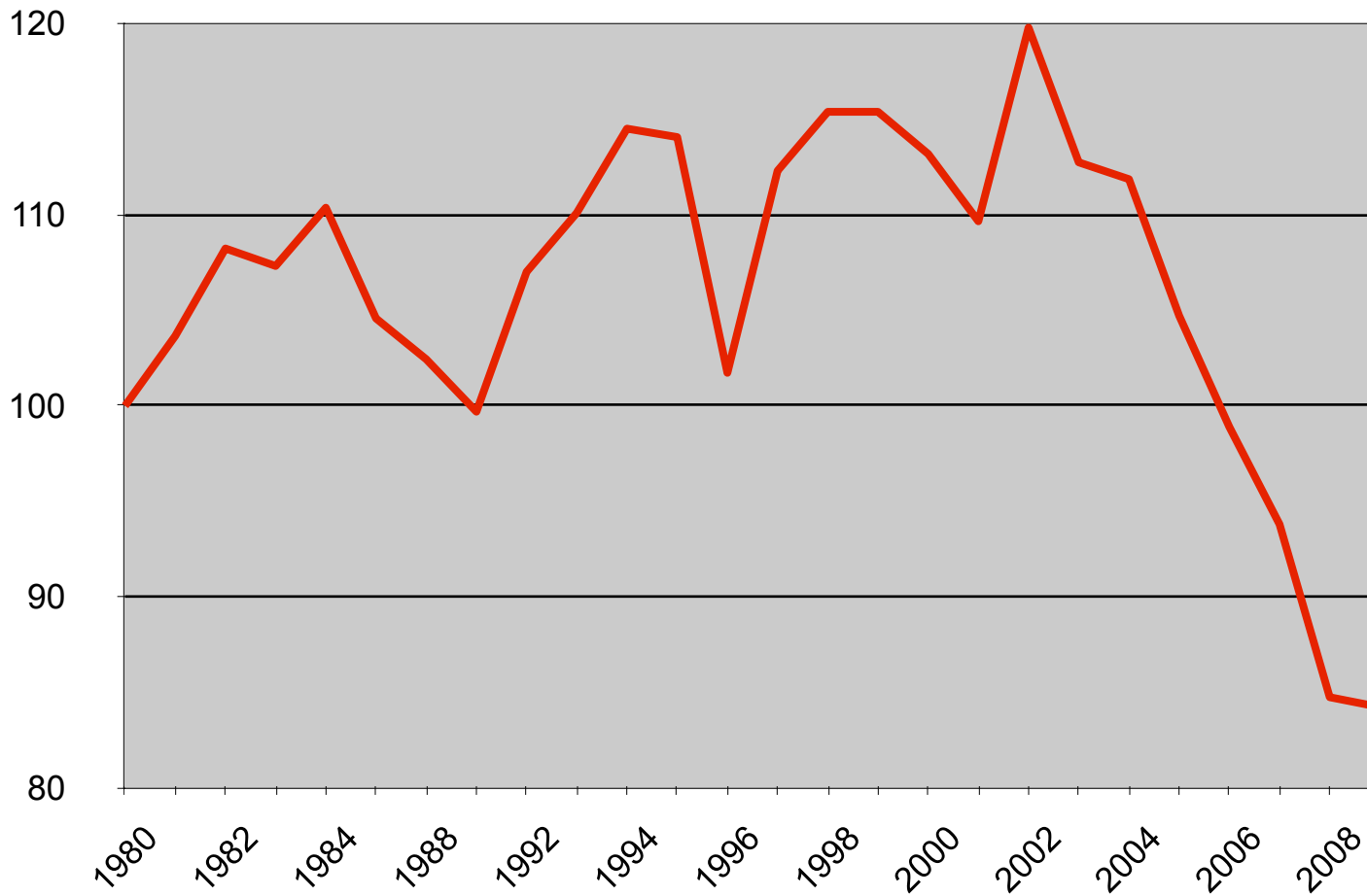
Old and New approach in Europe





Drop after 2000 (victim surveys)

Victimisation total (inhabitants > 15)





Urban safety and security strategies: three basic principles

Early intervention and planning

Invest in youth
Invest in early stages design/planning process

Integrated Partnership Approach

Include e.g. education, health, urban planning/housing,
economic development, employment, police, justice,
immigration, poverty, integration, etc.

Quality management: plan-do-check-act
(like the ISO 9001/14001 standards)



History shows: it works



History: experience in other disciplines

- **Health: designing out epidemics**

Huge progress thanks to engineers, technicians, city maintenance, architects and urban planners (clean water, good sewage systems)



- **Fire: designing out fire disasters**

From the 16th century onwards: standards, building codes, urban planning, architecture and engineering that did the trick



- **Traffic: designing in traffic safety**

Reductions of people killed by technical solutions (air bags, safer cars), urban planning and engineering/design: traffic flow, roundabouts, speed bumps, road closures, shared space, etc.

- **Sustainability**





In short: its always Planning & Design

- Standardization: one set of concepts, same terminology and process
- Evidence based working





Current situation in CPTED: a mess

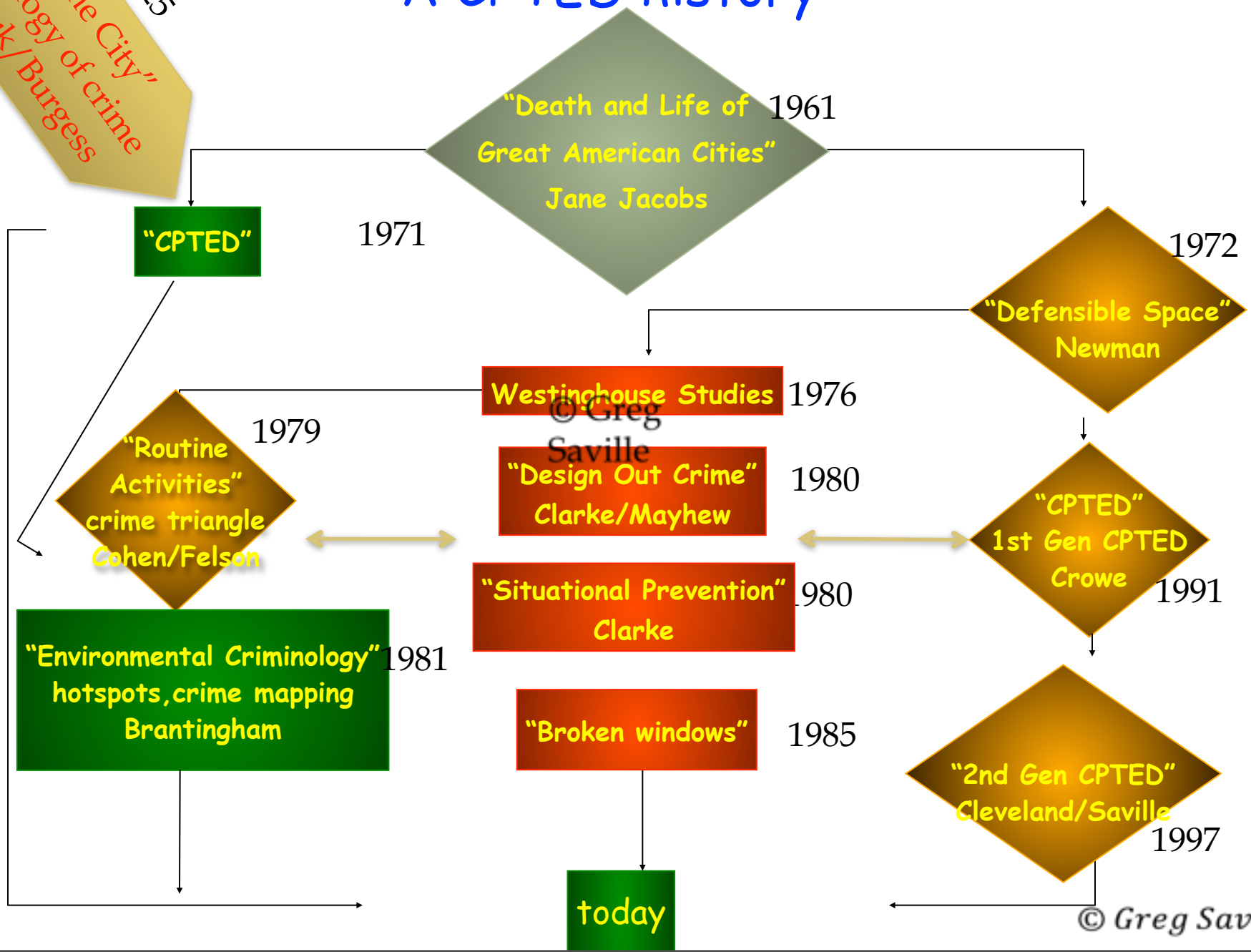
- Situational Approach
- Crime Prevention Through Environmental Design (CPTED)
- Defensible Space (DS)
- Designing Out Crime (DOC)
- Design Against Crime (DAC)
- Crime Prevention through Urban Design and Planning (CP-UDP)



Differences in terminology, approaches, schemes and processes, lack of evaluations/evidence based working ...

A CPTED history

1925
"The City"
ecology of crime
Park/Burgess



today

© Greg Saville



STANDARDS

- Standardization facilitates communication between different **participants** working on one process or project, e.g. a crime prevention project
- Standards facilitate cooperation and collaboration making **processes** more transparent
- Standards facilitate exchange between countries/states: (one 'language' & one market for products & services)



Types of standards

Products



Processes

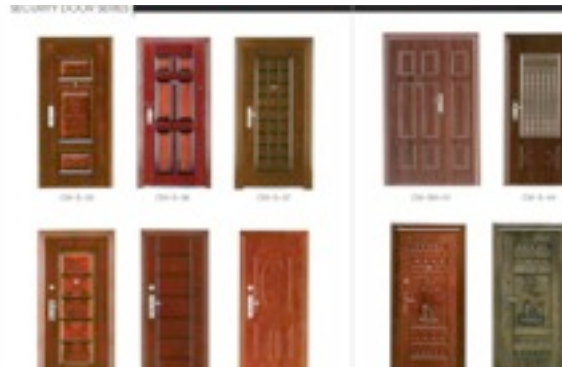
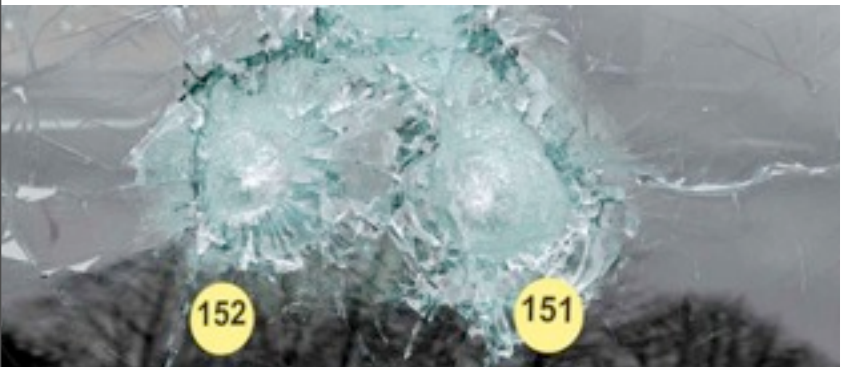


Services





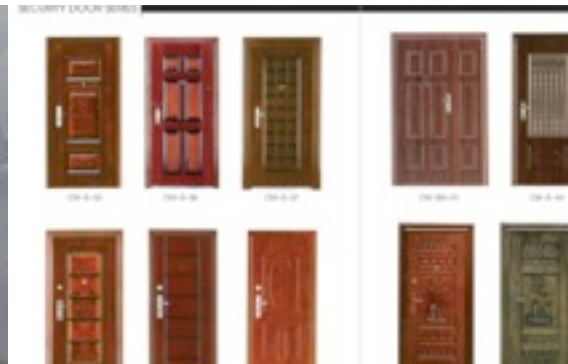
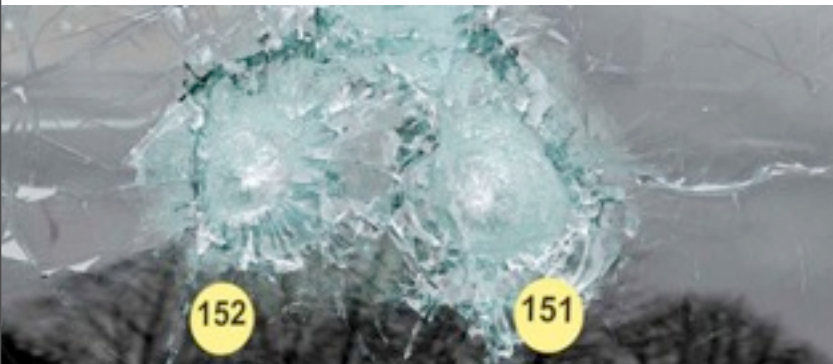
EU standards on crime prevention products





EU standards on crime prevention products

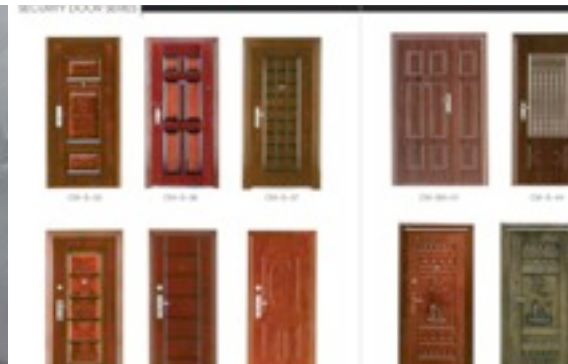
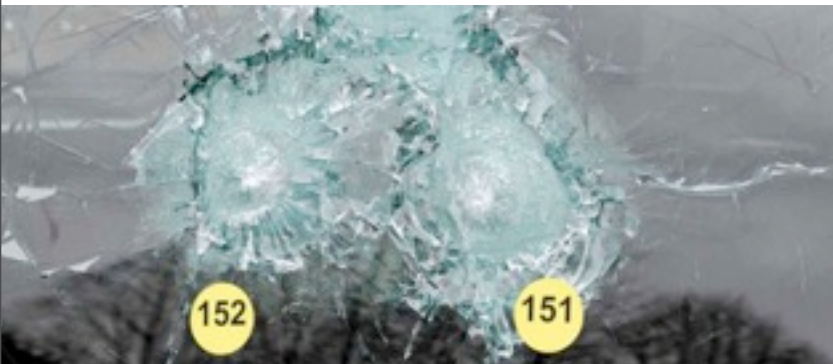
- EN 50130-501136: alarm systems





EU standards on crime prevention products

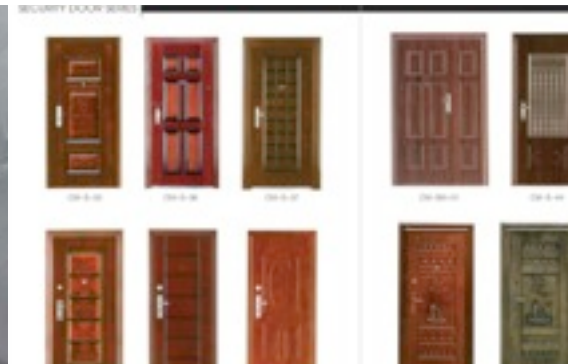
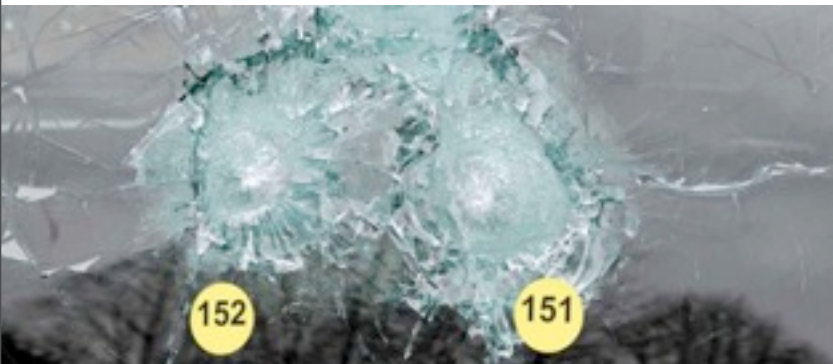
- EN 50130-501136: alarm systems
- EN 1522/1523: bullet resistance of doors and windows





EU standards on crime prevention products

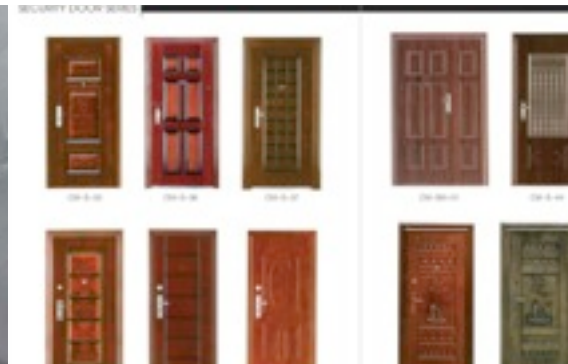
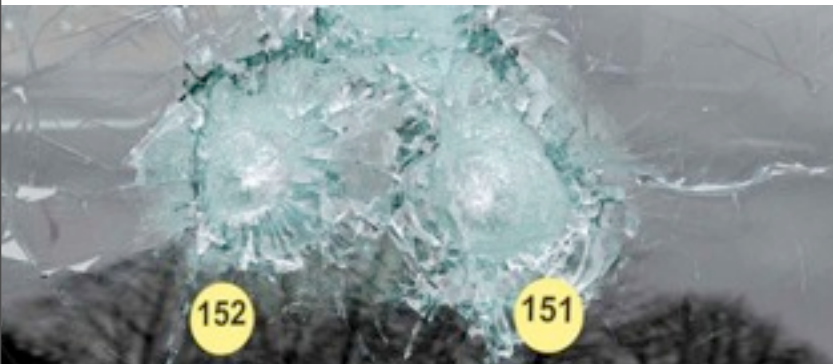
- EN 50130-501136: alarm systems
- EN 1522/1523: bullet resistance of doors and windows
- ENV 1627-1629: burglary resistance of windows, doors and shutters





EU standards on crime prevention products

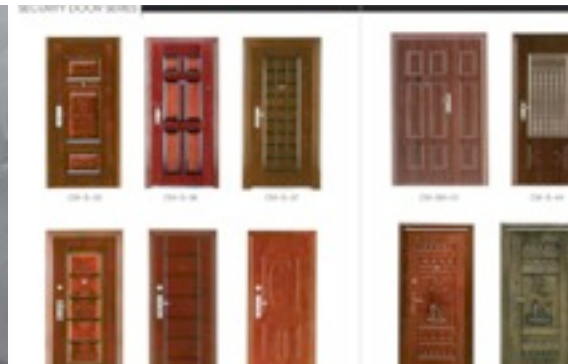
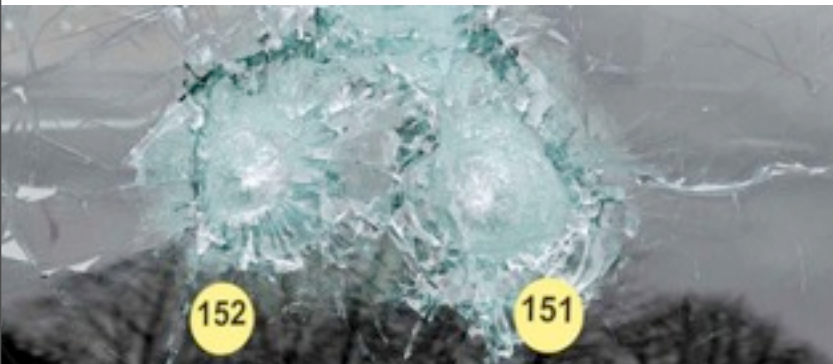
- EN 50130-501136: alarm systems
- EN 1522/1523: bullet resistance of doors and windows
- ENV 1627-1629: burglary resistance of windows, doors and shutters
- EN/ISO 12543: glass in windows





EU standards on crime prevention products

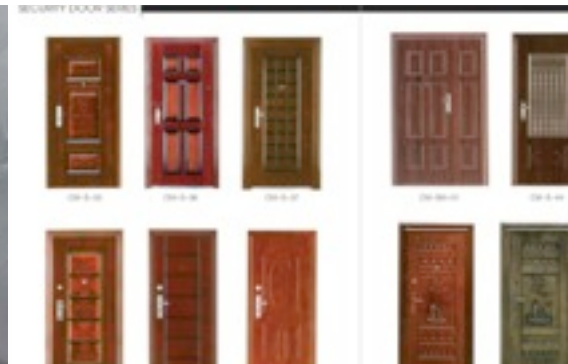
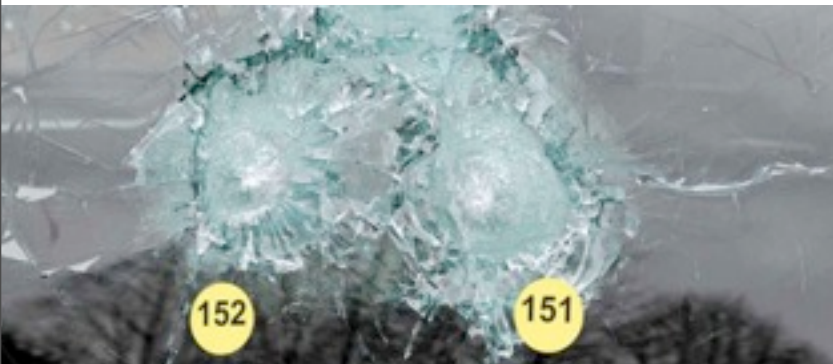
- EN 50130-501136: alarm systems
- EN 1522/1523: bullet resistance of doors and windows
- ENV 1627-1629: burglary resistance of windows, doors and shutters
- EN/ISO 12543: glass in windows
- EN 1143: secure storage





EU standards on crime prevention products

- EN 50130-501136: alarm systems
- EN 1522/1523: bullet resistance of doors and windows
- ENV 1627-1629: burglary resistance of windows, doors and shutters
- EN/ISO 12543: glass in windows
- EN 1143: secure storage
- Etc.





Standardizing services

- Certifications schemes (e.g. ICA, universities)
- Proof that a person or organization is well educated and works state of the art
- Certified CPTED practitioner®

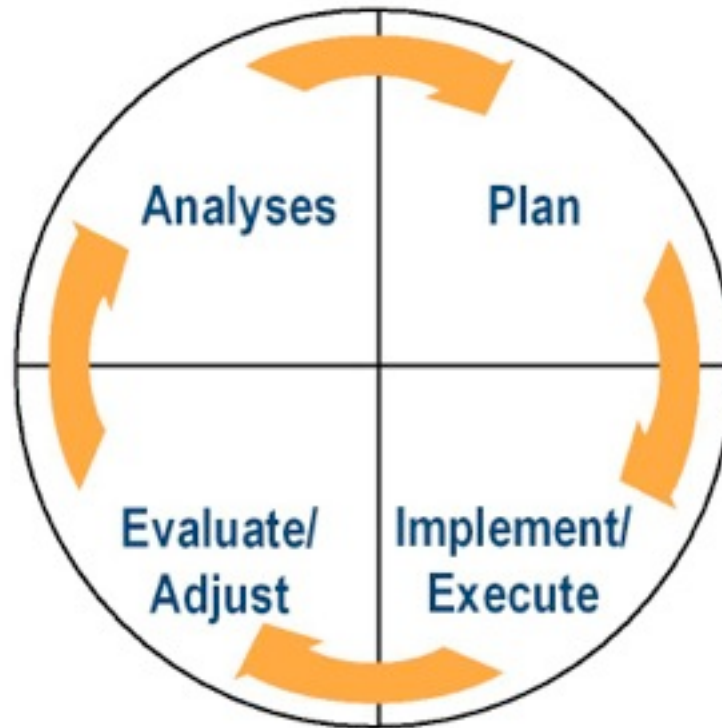
Umbrella organizations (ICA, E-DOCA) make this type of standards (and/or Universities).





Standardizing a process

examples ISO 9001 (quality) & ISO 14001 (sustainability)



Plan
Do
Check
Act



European Urban Charter:

Basic right:

“a secure and safe town free (...) from crime, delinquency and aggression”





European Standard on crime prevention by urban planning and building design: a European CPTED standard!



European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Nederlandse voornoms
NVN-ENV 14383-2 (en)
Criminaliteitspreventie - Stedenbouwkundig en
bouwkundig ontwerp - Deel 2: Stedenbouwkundig
ontwerp
Prevention of crime - Urban planning and design - Part 2:
Urban planning
EN 14383-2
januari 2014



CEN: European Committee for Standardization

A **standard**: technical document to be used as a **rule, guideline or definition**

It is a **consensus-built, repeatable way of doing something**

It's no law, not obligatory ... it's all about **consensus!**



European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung



European CPTED standard on:

Urban Planning	+	Building Design
	for	
Prevention of crime	+	Fear of crime
	in	
New environments	+	Existing environments

CEN 14383 series

Building products + security devices are excluded



Working groups of Technical Committee 325





Working groups of Technical Committee 325

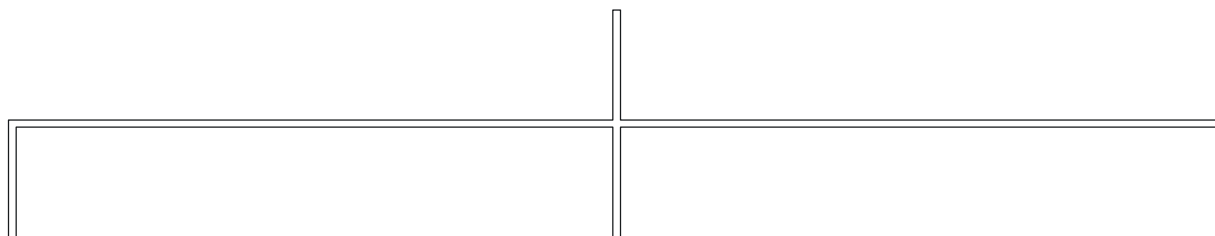
TC325





Working groups of Technical Committee 325

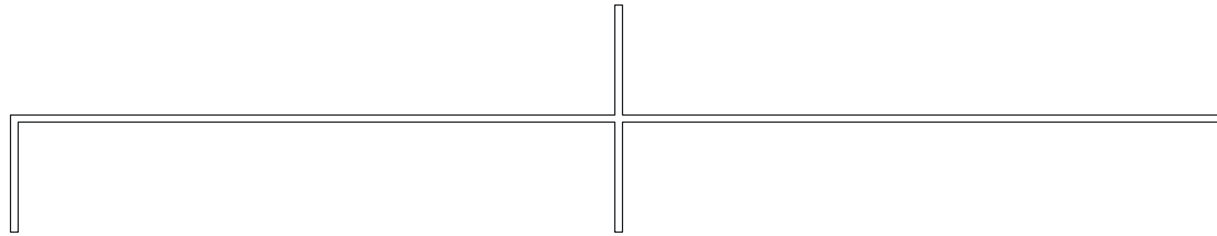
TC325





Working groups of Technical Committee 325

TC325



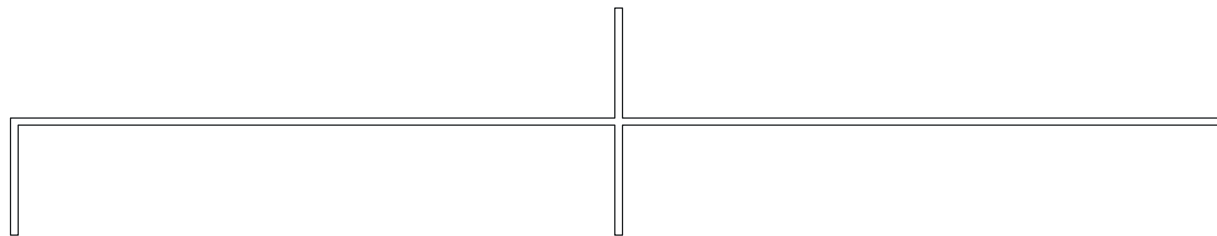
WG1
Terminology
EN 14383-1





Working groups of Technical Committee 325

TC325



WG1
Terminology

EN 14383-1

WG2
Urban Planning

ENV 14383-2

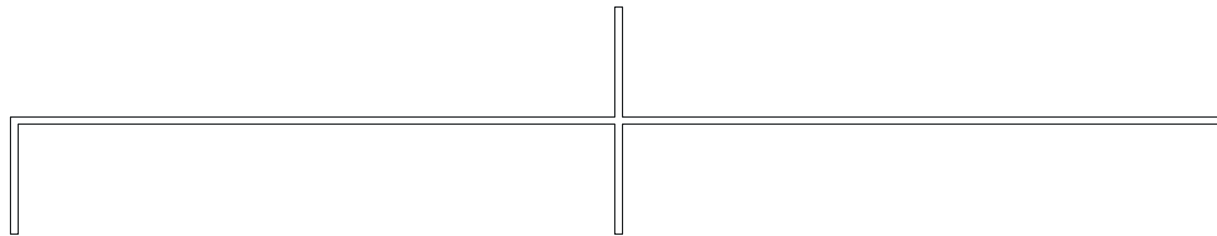
TR 14383-2





Working groups of Technical Committee 325

TC325



WG1
Terminology

EN 14383-1

WG2
Urban Planning

ENV 14383-2

TR 14383-2



WG3
Building Design

- Dwellings
- Shops/offices
- Petrol station
- Public transport facilities
- Schools
- Etc.



A very simple set of standards: basics only

1. Terminology
2. Urban planning
 - 3 simple questions: where, what, who
 - Basic principles for CPTED
 - Standardized CPTED working process
3. Set of sub standards on building design of specific buildings
 - Dwellings
 - Shops and Offices
 - Schools
 - Etc.



I'll focus on the European urban planning standard: TR 14383-2

Note:

- Only 20 pages text
- Appendixes 20 pages
- Start 1997/finish 2003
- Re-edit 2003-2007
- 10 years!
- But ok: 26 countries consensus





Contents European Standard

Foreword	4
Introduction	5
1 Scope	9
2 Normative references	9
3 Terms and definitions	9
4 Preliminary questions: the area, its crime problems and the stakeholders	9
5 Urban Planning and Design Guidelines	18
6 Process to prevent and reduce crime and fear of crime by urban planning and management	22
Annex A (informative) Crime Assessment – Examples of elements to take into account	29
A.1 Introduction	29
A.2 Risk assessment: three general aspects	29
A.3 Specific risk assessment factors for six types of crime and for fear of crime	30
Annex B (informative) Crime review - Problem identification in an existing area	34
Annex C (informative) Fear of crime	36
C.1 Introduction	36
C.2 Factors which characterise an "unsafe location":	36
C.2.1 Fear generating activities	36
C.2.2 Vandalism and bad maintenance	36
C.3 Problematic urban design	37
C.3.1 Lack of control	37
C.3.2 Isolation - lack of visibility by others	37
C.3.3 Lack of orientation and alternative routes	37
Annex D (informative) Safety audit framework of an urban project	38



Urban planning: 3 decisions to make

■ **Where?**

Location, boundaries, postal codes
Define the area/neighbourhood



■ **What?**

What is the crime problem?



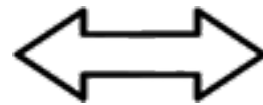
■ **Who?**

Stakeholders. Who is involved?





Process



Responsible body decides: **where** (area), **what** (types of problems), **who** (stakeholders)

Mission statement: objectives, working group start, audits

1. Crime review/assessment: what is – will be – the problem?
2. Requirements that have to be met
3. Plan, Scenarios, Strategies, Costs, Anticipated effects
4. Decision Responsible Body (go/no go)
5. Action and implementation
6. Audit & evaluation
7. Monitor & Corrective Action





Four annexes (informative)

- A. Crime assessment (new environments) = assess risks
 - Offender, guardian and victim/target
 - Burglary, vandalism, street violence, car crime, theft, arson and ... fear of crime
- B. Crime review (existent environment) = show risks
 - Physical info, socio-demographic info, crime data, safety audit data (safety audit walks)
- C. Fear of crime (explanation)
- D. Basic design principles



Basic principles presented in the standard

Urban planning strategies

Social/physical structures,
Guarantee accessibility,
Avoiding enclaves,
Creating vitality,
Mixed status,
Adequate urban density,
Avoiding physical barriers
and waste land,
Etc.

Urban design strategies

Layout, specific
location of
activities, natural
surveillance,
Visibility,
Accessibility,
Territoriality,
Attractiveness,
Robustness.

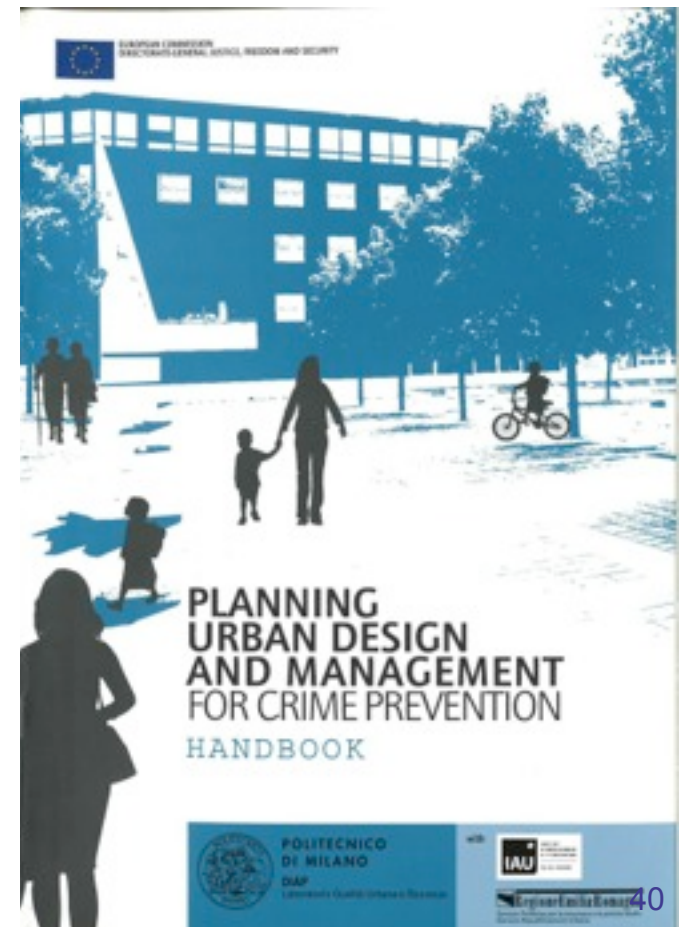
Management strategies

Target hardening/removal,
Maintenance,
Surveillance (patrolling,
camera monitoring),
Rules (for conduct of the
public in public spaces),
Providing infrastructures,
Communication.



A handbook/manual to explain the standard (2007)

- General introduction
- Three chapters on strategies
 - Urban Planning
 - Urban Design
 - Management





EUROPEAN COMMISSION
DIRECTION-GENERAL JUSTICE, FREEDOM AND SECURITY



PLANNING URBAN DESIGN AND MANAGEMENT FOR CRIME PREVENTION HANDBOOK



POLITECNICO
DI MILANO
DIAP
Laboratorio Qualità Urbana e Sicurezza

with



Regione Emilia Romagna
Servizio Politiche per la Sicurezza e la Prevenzione
Dipartimento Regionale di Polizia



Visibility

The issue

Visibility allows people to see their way (and thus avoid dangerous situations) as well as to be seen as they use public spaces, thus making spontaneous surveillance possible. Visibility also facilitates the task of police or other forms of surveillance.

Everybody has experienced feeling uncomfortable or scared by having to walk along a blind wall, or for having to wait for a bus where one cannot be seen. Moreover, offenders know where they can be seen and recognised, and therefore avoid visible places.

For the purpose of safety, public spaces should be designed with visibility in mind: be visible from adjoining buildings (windows and storefronts), have clear sightlines, not have visual obstacles and closed views (solid parapets, sharp corners, screens, bushes etc.). Although total permeability is not always possible or desirable, its relevance in terms of personal safety should always be considered.



Windows and transparent parapets foster spontaneous surveillance of public space

Views from buildings on public spaces

Public spaces and sidewalks should be visible from upper floors of buildings (wide windows, balconies with transparent parapets), from shop windows, from building entrances and doorways (where existing). Blind walls and buildings with empty ground floor should be systematically avoided. Where direct visibility is not possible, specific hardware (security mirrors, reflecting panels, etc.) can provide indirect visibility.

Landscaping, vegetation and sightlines

Landscaping should not reduce visibility in order to allow surveillance. All high-contrast landscaping and grade differences (bumps and retaining walls) are often proposed for aesthetic reasons, they should be checked in respect of their impact on personal safety. Vegetation should have high permeability. Trees and planting should be selected and maintained so that they allow visibility from streets, do not block sightlines, do not hinder natural surveillance, do not provide cover for offenders and do not create entrapment spots.

Tall trees allow wide visibility and do not offer places to hide



Uniformly good lighting of sidewalks makes pedestrians feel safe

Lighting

Good lighting reduces fear of crime. Individuals feel safer if they can easily see and evaluate other people in the street. Lighting is considered adequate if a face can be easily recognised at a distance of 15 m.

To obtain good visibility, a high level of lighting is not enough. The distribution, the position and design of fixtures are also very important. Lighting should be homogeneous along sidewalks, there should be lit more than cartways, thus avoiding the use of low high-intensity lamps that may create blinding effect and dark/shadow zones. Lights from shop windows, commercial signs, private buildings, can also provide a good contribution to public lighting.

Bus stops, entrances to parking facilities and metro stations

Entrances to parking structures and metro stations as well as bus stops should be located in places well visible from the surroundings. This because access points to public transport and parking facilities are places that everybody needs to use, therefore they should not be unsafe places. Stops of public transport in each direction should be facing, so that persons waiting can see each others, shelters should be transparent and located far from entrapment spots, CCTV of metro stations and parking structures should cover also their entrances and surrounding spaces.

Bus stops located in front of shops and entrances provide a safe environment for people waiting



Transparency of shop fronts and visibility of building entrances

Shops are a valuable eye on the street. Their fronts must be transparent, without obstacles, to allow surveillance on public spaces and to enable persons to call for help. Windows of shops and supermarkets should not be obstructed by shelves, opaque films or other visual barriers. Building entrances should be well lit and highly visible from the surroundings, because many persons are attracted just when they are opening the house door. Even slight recessions of the building fronts can create dangerous situations.

The entrance positioned between shops and clearly visible from the street is a fairly safe place





Standard + manual = great combination

- Handbook = English
- Manuale = Italiano
- Manuel = Français
- Manual = Español





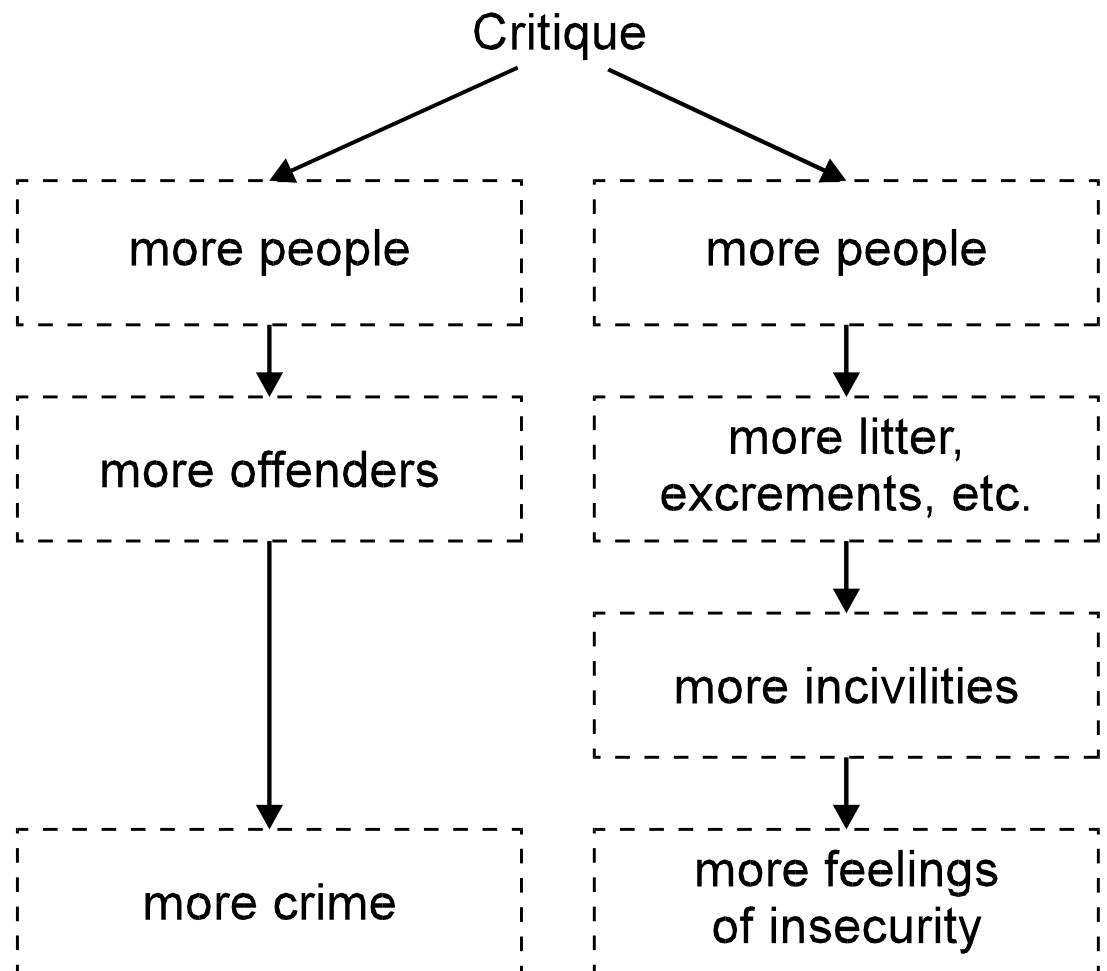
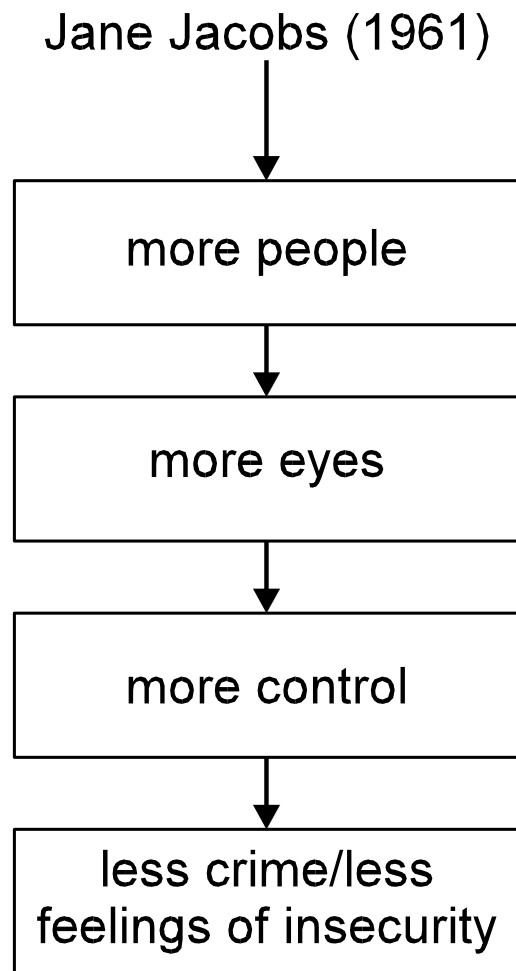
Check & download: www.e-doca.eu

- Standards available from EVERY standardization institute (everywhere in the world)
- Handbook: google 'safepolis' (www.e-doca.eu)



Critique

- Basic principles are not always correct: in specific environments, specific crimes need other approaches
- Basic principles are often ‘to much Jane Jacobs’





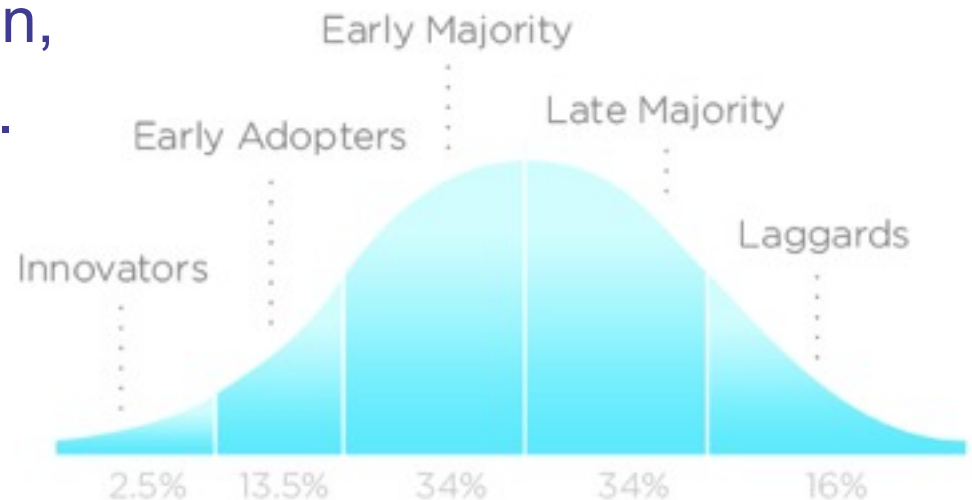
But all-in-all: useful set of standards





Effect/impact of the European standard

- Also implemented outside Europe (e.g. Korea)
- Within Europe first NO impact whatsoever ...
but after a while 'new' CPTED countries took an interest; spread from UK/Netherlands to France, Italy, Germany, Spain, Eastern Europe, etc.
- Distribution of an innovation ...



INNOVATION ADOPTION LIFECYCLE








Assessment tools: the comparison



Assessment tools: the comparison

	Characteristics	Strengths	Weaknesses
	<ul style="list-style-type: none"> • Unique tool for the country • Initial planning phase • Creation of detailed technical report • Departmental Commission evaluation • Compliant with CEN-Standard 	<ul style="list-style-type: none"> • Clear or detailed scheme for designers • Integration freedom for the local entities • Lyon: municipality commission 	<ul style="list-style-type: none"> • Lack of technical training • Lack of support to designers (not for the Lyon case) • Absence of municipality autonomy • Model rigidity • Costs.
	<ul style="list-style-type: none"> • Evaluation by the Police with the ad hoc office • Process defined by the office • Documents editing by the office • Design support as an essential step 	<ul style="list-style-type: none"> • Reduced obligation threshold level • Research center as a support • Limited costs • Lightness of the Assessment tool 	<ul style="list-style-type: none"> • High technicality of assessment tool • Absence of prevention experts in the commission
	<ul style="list-style-type: none"> • Voluntary evaluation • In depth exploratory phase • Support to the design phase • Complex product, compliant with CEN-Standard 	<ul style="list-style-type: none"> • Scientific accuracy and flexibility • Consensus and support • Coherence with CEN-Standard 	<ul style="list-style-type: none"> • Lack of institutional reference • High costs • Non obligatory indications



Crime Prevention – Capability Maturity Model

Four maturity levels of crime prevention in urban development





A valuable Standard on Safe and Secure Cities!





But ...
Does standardization works?

We want proof!



And remember:
CPTED evidence base is
weak
(see also Ekblom 2011)



Does CPTED standardization work?

- Secured by Design UK
Rachel Armitage & Leanne Monchuk, 2010
- Politie Keurmerk Veilig Wonen® Netherlands
Oberon Nauta DSP-groep, 2004
- Étude de sûreté et de sécurité publique (ESSP) France
First evaluation available?
- Several other evaluations



It is working, but there is more proof:



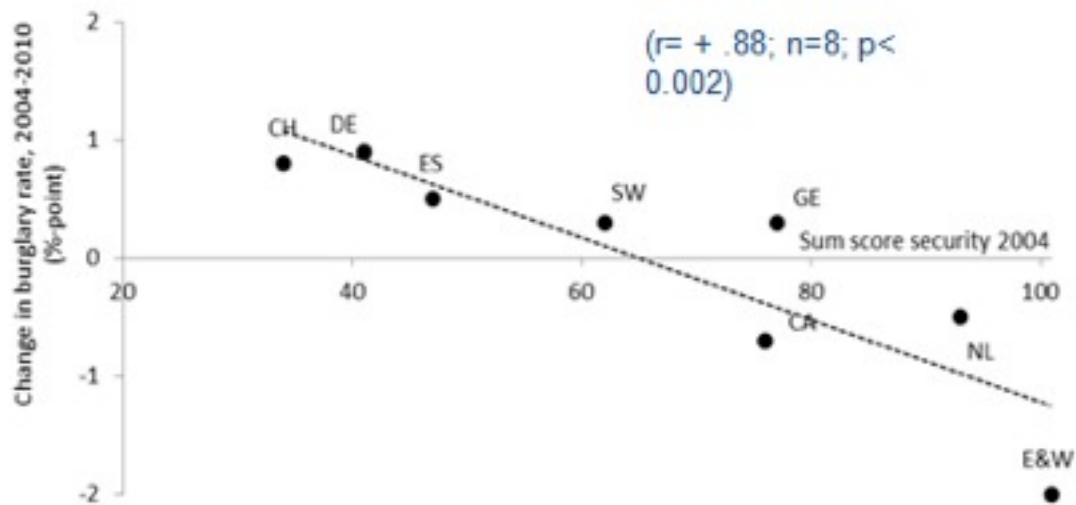
Security and risk (Burglary; Van Dijk 07-12-2012) Compare UK/Netherlands and Denmark

	High-grade door locks, 2004 (%)	Burglar alarm, 2004 (%)	Burglary rate, 2004 (%)	Burglary rate, 2010 (%)	Change burglary rate (%-point)
England and Wales	60	41	3.5	1.5	- 2.0
Netherlands	78	15	1.3	0.8	- 0.5
Canada	48	28	2.0	1.3	- 0.7
Germany	63	14	0.9	1.2	+0.3
Sweden	46	16	0.7	1.0	+0.3
Estonia	40	7	2.5	3.0	+0.5
Switzerland ¹	29	5	1.1	1.9	+0.8
Denmark	32	9	2.7	3.6	+0.9



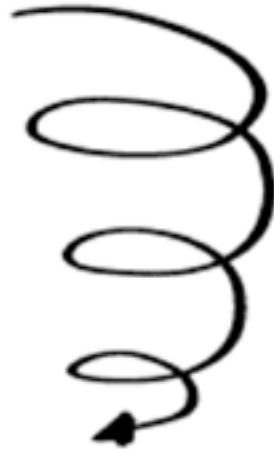
Widening the picture: Europe & burglary

Figure 14 Levels of household security in 2004 (sum of high grade locks and alarms) and changes in burglary rates between 2004 and 2010



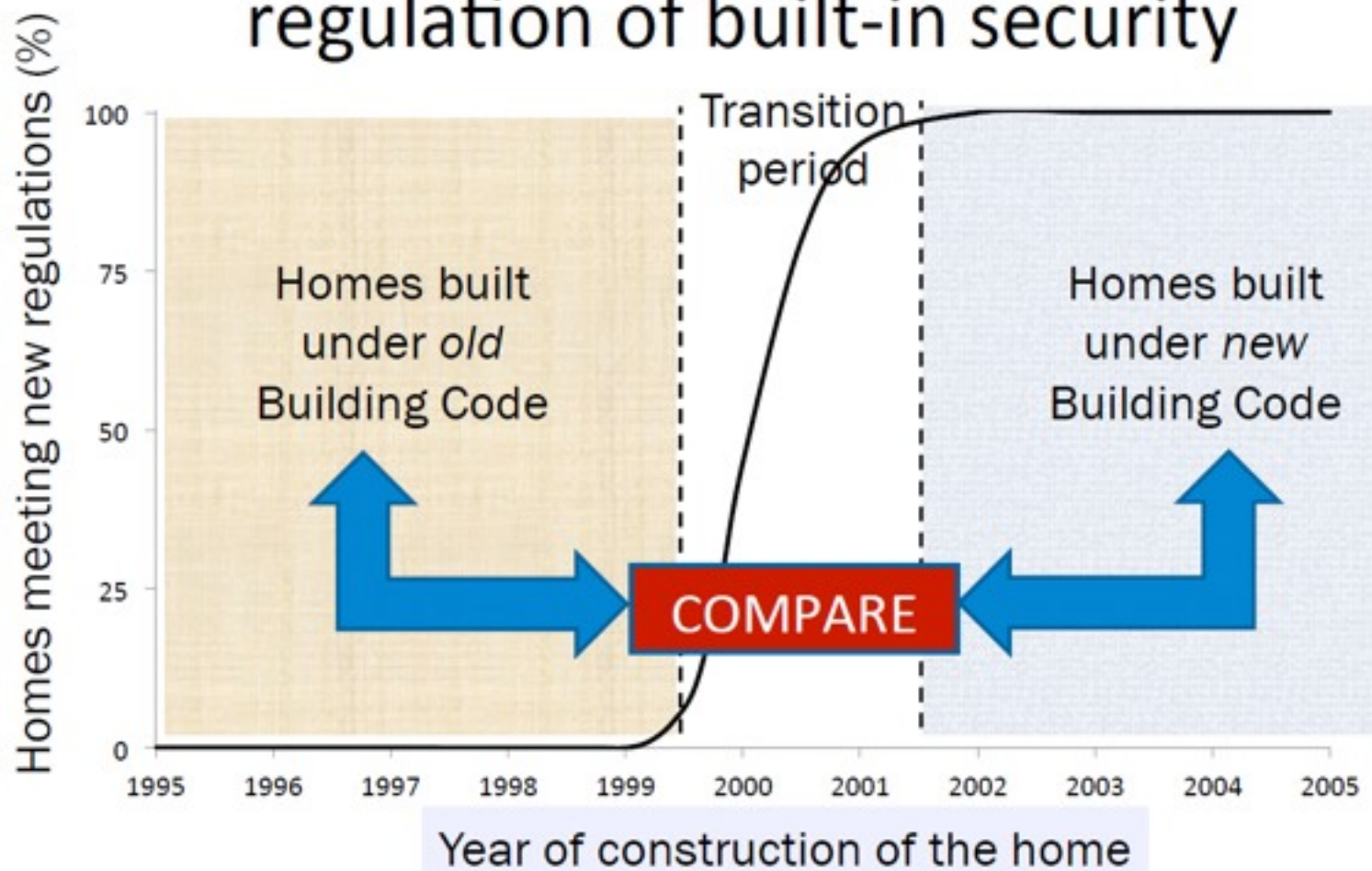


Higher security rate
=
Lower risk



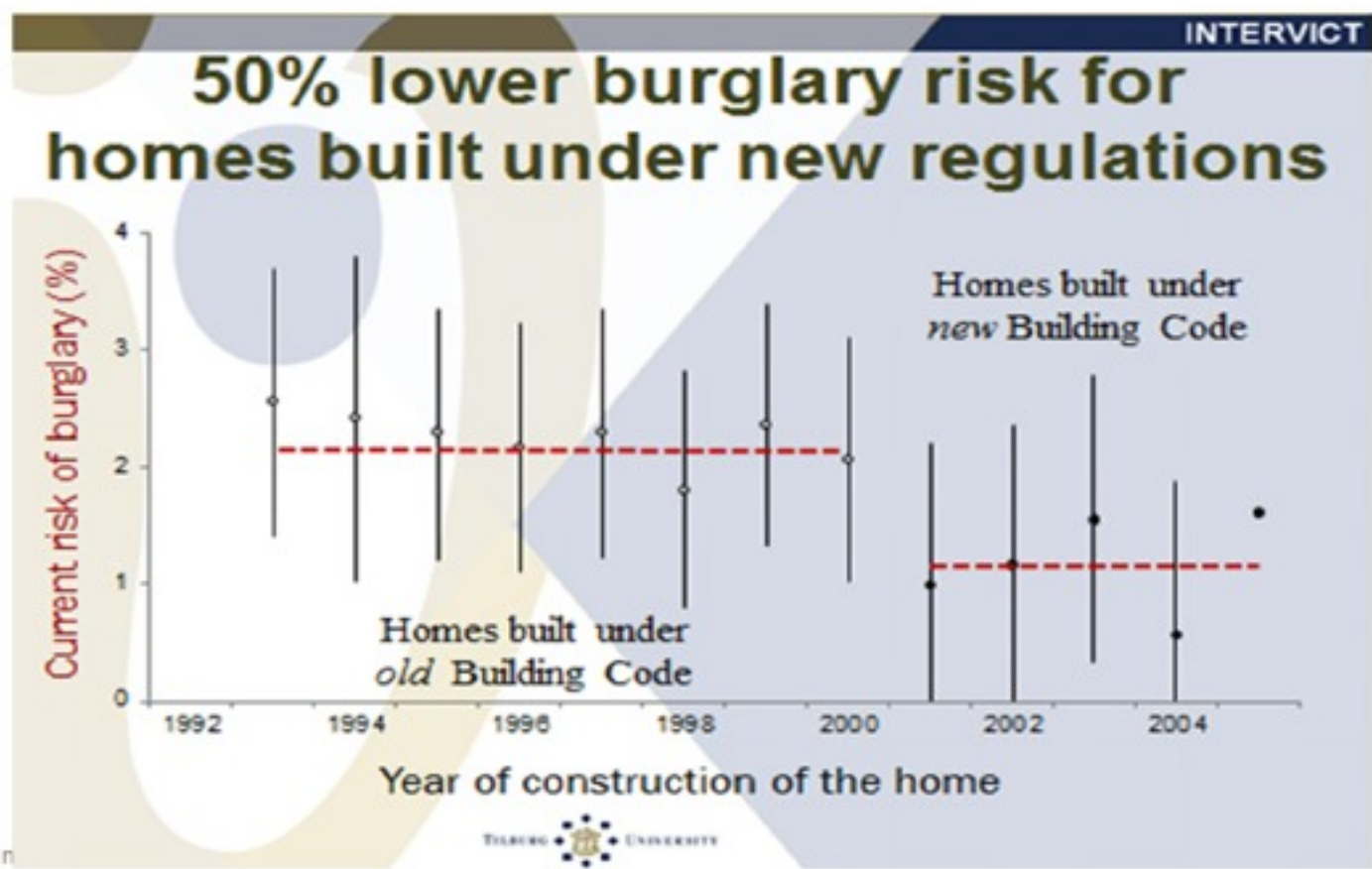


Natural experiment in regulation of built-in security





The impact of mandatory security on domestic burglary in NL;
source: Vollaard & Van Ours, 2010





Burglary risk and building code

(Vollaard and van Ours 2011)

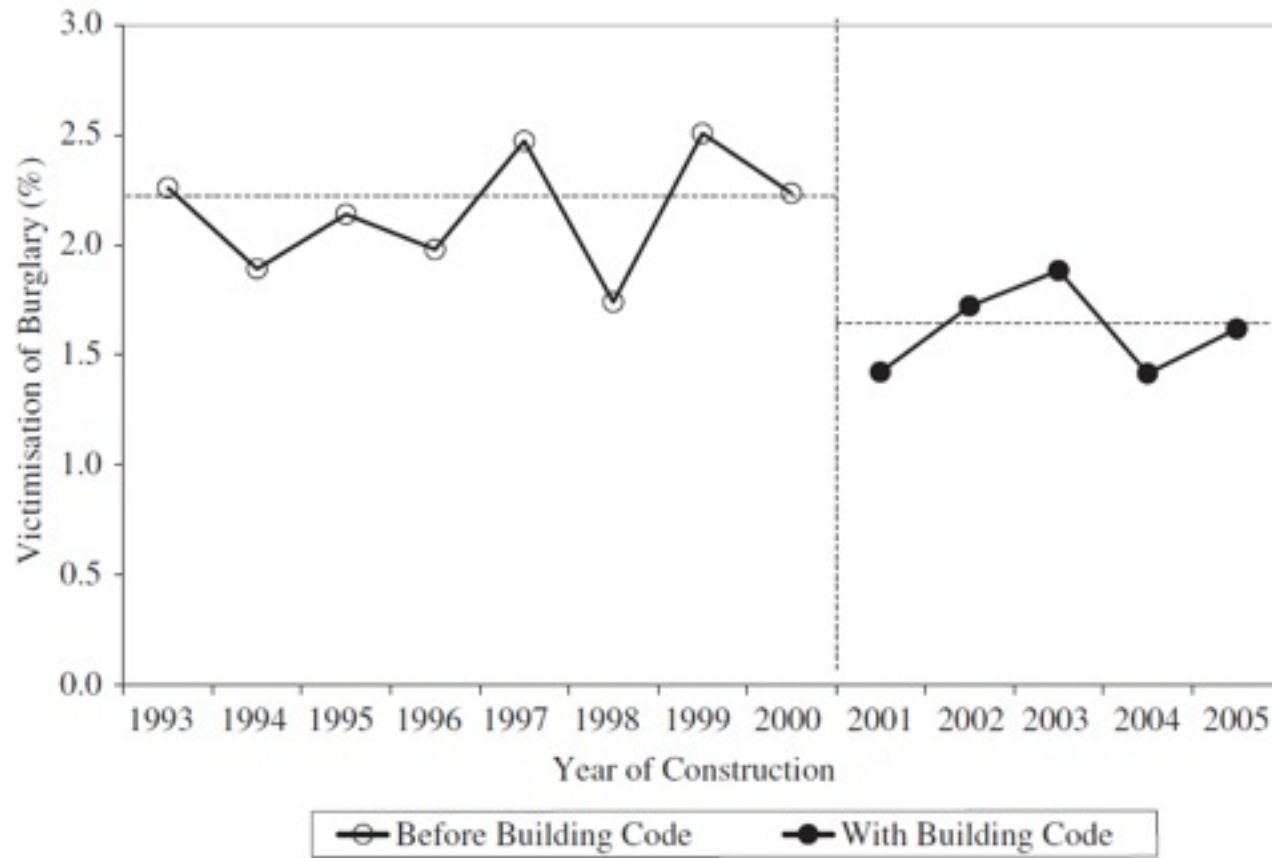
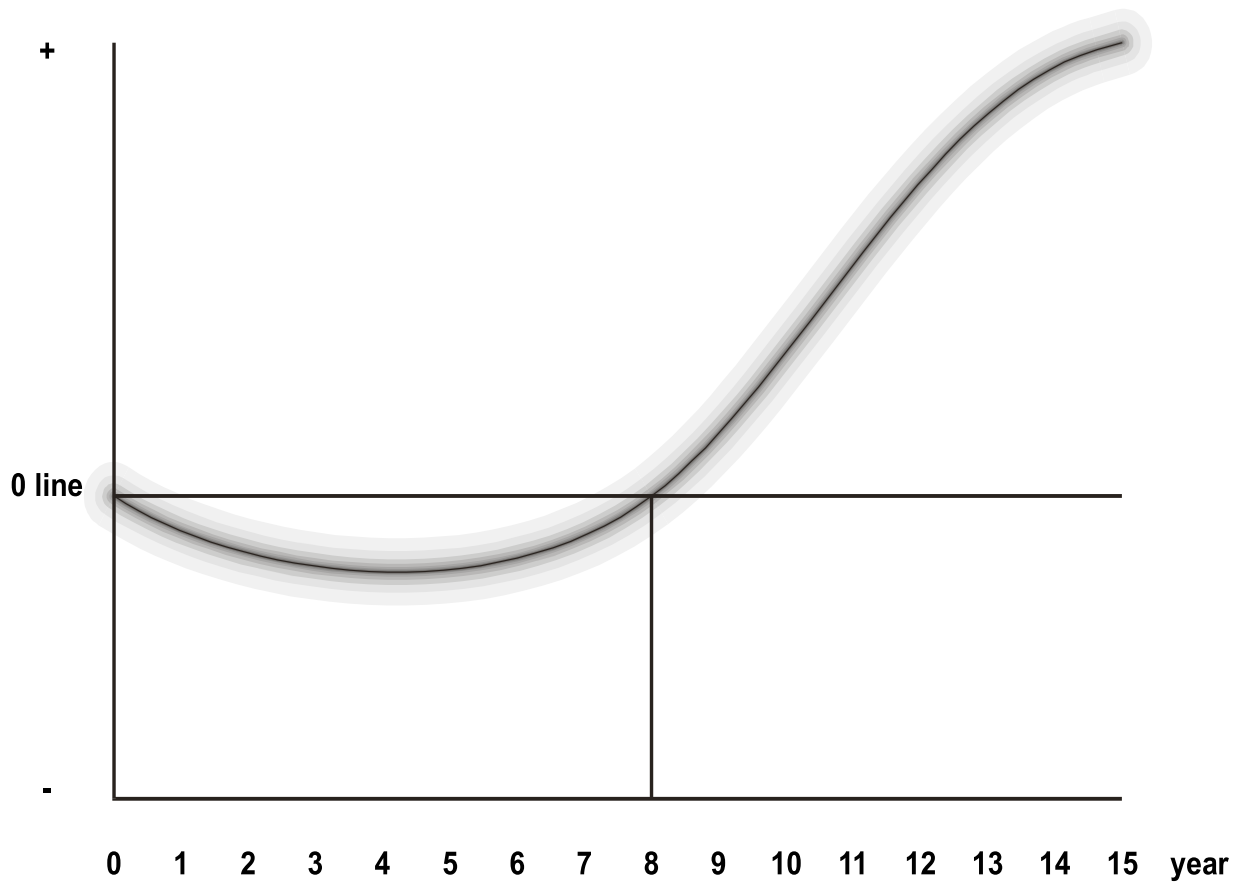


Fig. 3. *Victimisation of Burglary by Year of Construction of the Home (% in Past 24 Months)*



Cost/benefit: Return on investment





Standardisation of Crime Prevention by opportunity reduction works!





But please note ...

- Most research is done on burglary
- ... and security on a dwelling (locks & bolts & alarms)
- More research needed on other themes like visibility, territoriality, cohesion, accessibility, attractiveness, connectivity, community culture, etc.



CPTED needs a better knowledge base,
a better evidence base

Problem is also: terminology is a mess





ICA agenda 2013-2020

1. A better evidence base for CPTED

Do as many evaluation/research studies as possible on CPTED showing what works and what doesn't
Effect/impact + Cost/Benefit studies

2. Start working on a world wide CPTED standard including definitions of terminology (see also Ekblom, 2011)



Thank you!



Paul van Soomeren, Amsterdam, The Netherlands. Calgary July 2013

DSP-groep: www.dsp-groep.nl

European Designing Out Crime Association: www.e-doca.eu