



MESYUARAT KETUA DISIPLIN ARKITEK BERSAMA ARKITEK JKR MALAYSIA
2018

“ARCHI-REVIVE!- BUILDING THE NATION”

-DESIGNING A SAFE BUILT ENVIRONMENT-

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INTRODUCTION

URBANIZATION

3.5 billion people – lives in the cities today

By 2030 – increase to 5 billion
(U.N,2015)

90% of this increase will be in Asia & Africa

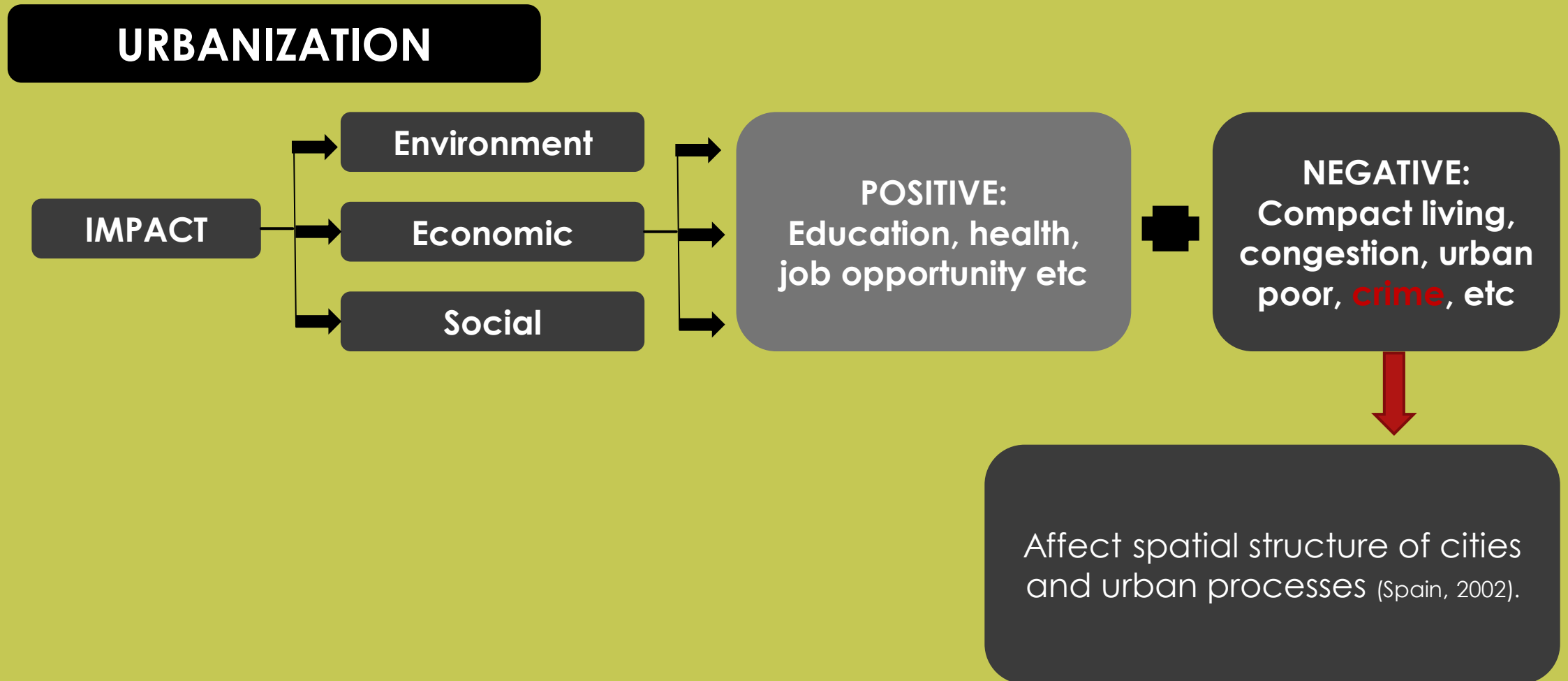


Map of Malaysia

(Source: www.geology.com)

Urbanization rate in Malaysia is increasing (World Bank, 2015 & Masron et al, 2012) and this will attract migration towards the city. In Malaysia, most major cities like Kuala Lumpur, Georgetown and Johor Bahru are urbanized (World Bank, 2015) and Malaysian society are morphing into urban society (Norhaslina, 2009 in Masron et al., 2012).

ISSUES IN BUILT ENVIRONMENT

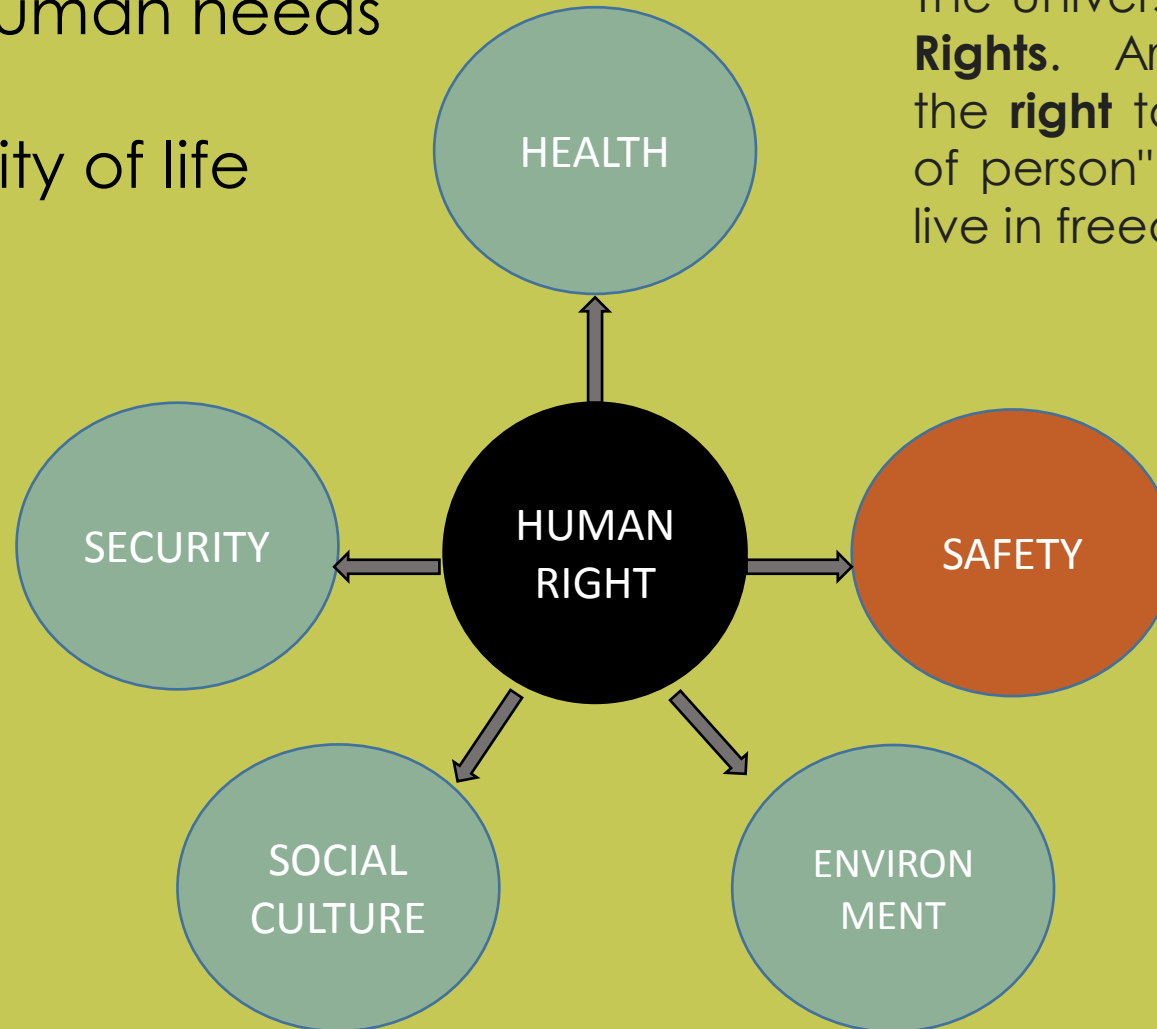


SAFETY

Safety is a basic human needs

Safety affect quality of life

The Universal Declaration of **Human Rights**. Article 3 "Everyone has the **right** to life, liberty and security of person" We all have the **right** to live in freedom and **safety**



SAFETY

Safety is now become a basic psychological need. Since the very beginning of human existence, people had to face tasks to ensure safety for themselves and their beloved ones through provision of safe shelter, food and cloths.

Built environment



Psychology



Behaviour

“We shape our buildings and afterwards our buildings shape us,” Winston Churchill (1943)



SAFETY

Architecture, interior design, and even **city** planning **can affect** human behaviors and mental processes, causing **psychological**, biophysical, and cognitive changes in people, often without them noticing. Mostly this influence happens by accident. But sometimes it happens on purpose. ... Design **affects** the brain



SAFETY

Psychological safety is a universal feeling and the concept has evolved recently (Preisler, 2013). It is people's perception of the consequences of taking interpersonal risk in a particular context (Edmondson et al, 2014). According to Bennis, psychological safety is essential for making people feel secure and capable of changing their behaviour.



ENVIRONMENTAL PERCEPTION

The way in which an individual perceives the environment; the **process of evaluating and storing information received about the environment**. Decision-makers cannot but base their judgements on the environment as they perceive it.



SENSES

Hearing

Sight

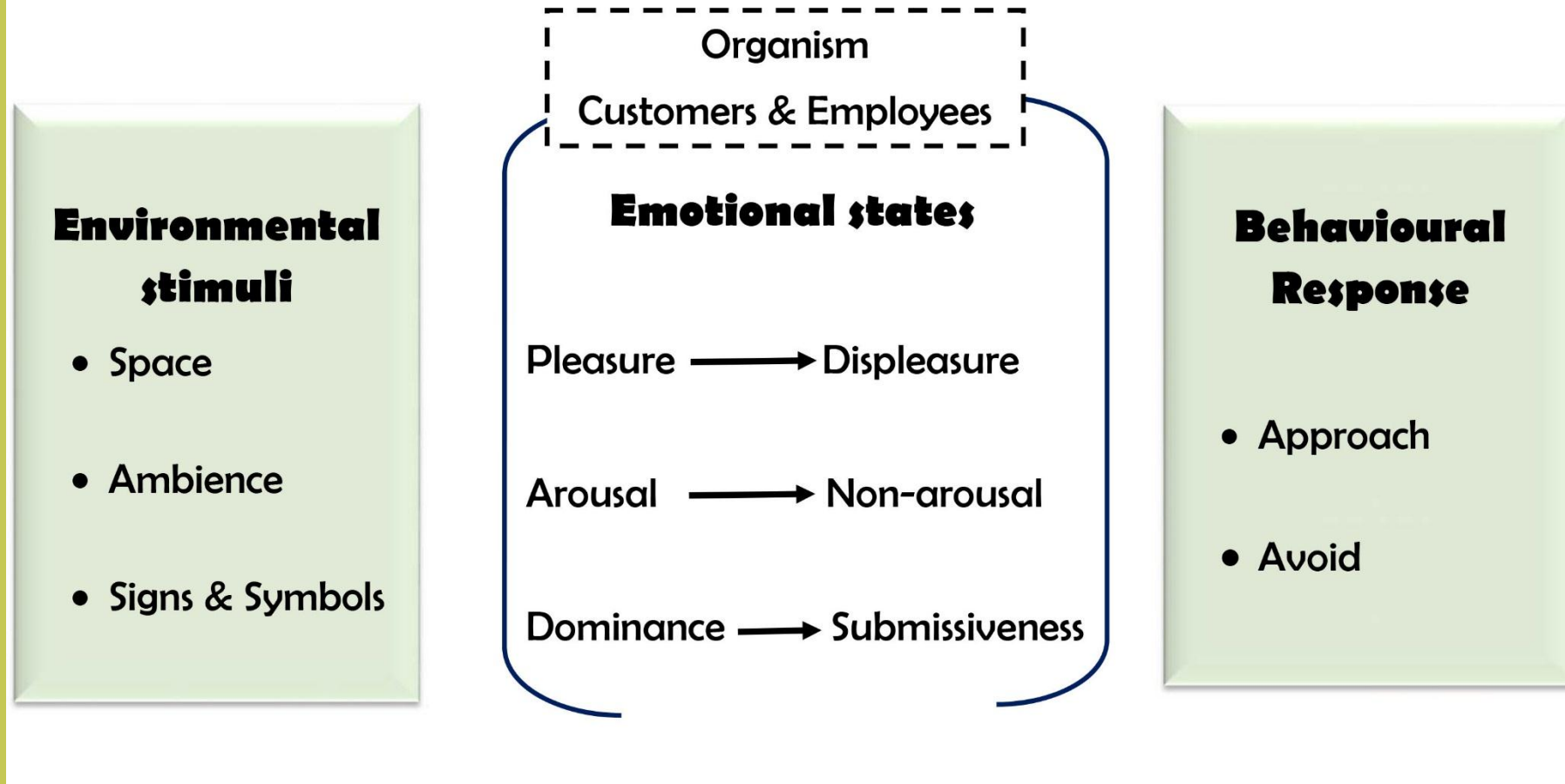
Touch

Taste

Smell

Six+h sense

A Basic Environmental Psychology Model



FEAR

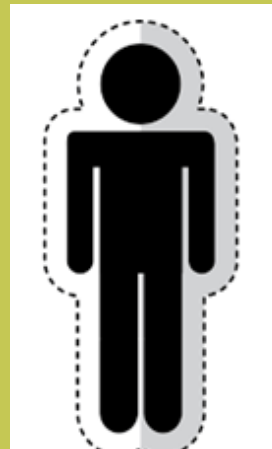


Anxiety about fear of crime saturates debates about how public spaces and personal safety are understood. The difficulty of defining and measuring fear of crime is well recognized (Fanghanel, 2016).

According to Yazuv and Welch (2010), even with the decline of actual crime, studies have identified various behavioural consequences of fear of crime, such as avoiding places that are perceived to be dangerous, not going out at night and not travelling alone in certain areas. These behaviours have been shown to be especially prevalent among women

MODIFIER OF FEAR

| Socio-psychological | Socio-demographic | Environmental |
|---|--|---|
| Experiences and memories Prior victimisation Familiarity with setting Media stories Admonitions | Gender Race/ethnicity Age Poverty Disability | Geographic setting Physical incivilities Social incivilities Boundedness Surveillance opportunity Lighting level |



DEFENSIBLE SPACE

Defensible space is "a residential environment whose physical characteristics—building layout and site plan—function to allow inhabitants themselves to become key agents in ensuring their security. (Oscar Newman, 1972)

There are **five factors** that make a defensible space

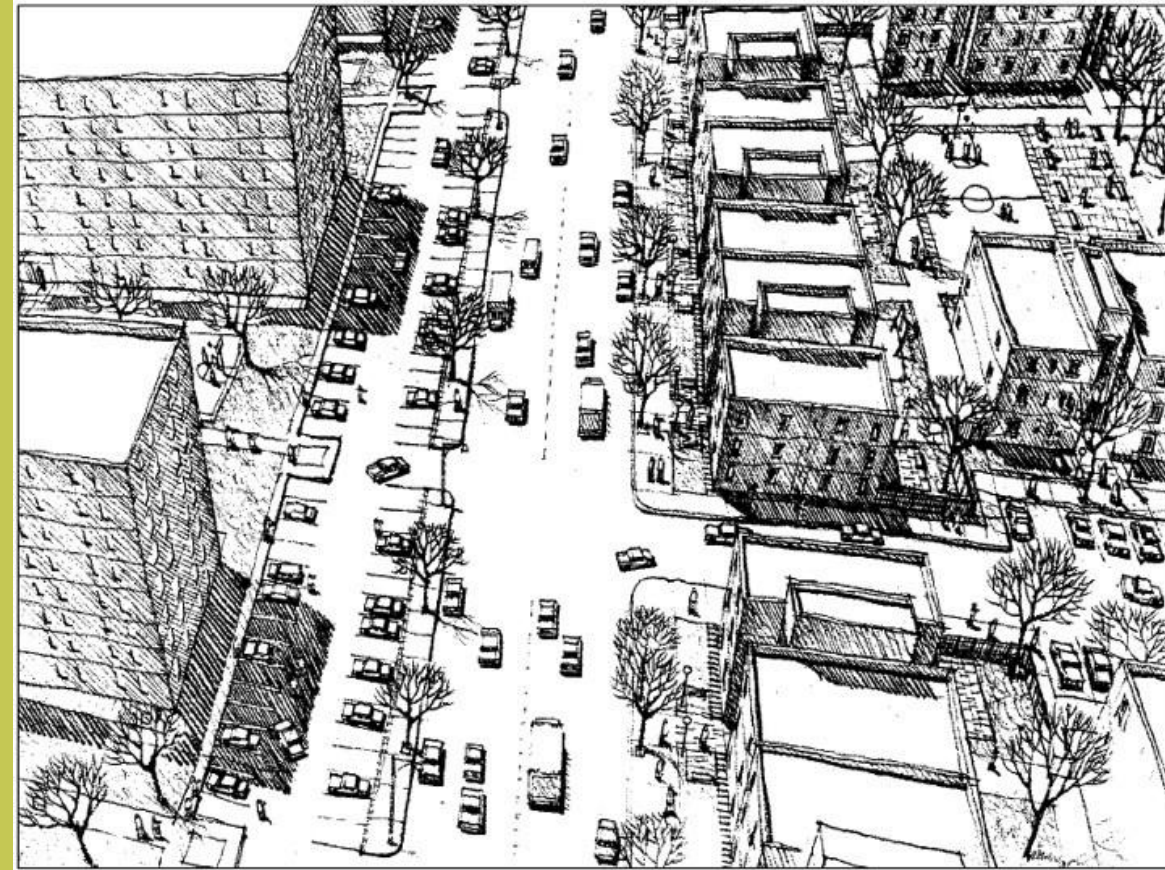
1.Territoriality – the idea that one's home is sacred

2.Natural surveillance – the link between an area's physical characteristics and the residents' ability to see what is happening

3.Image – the capacity of the physical design to impart a sense of security

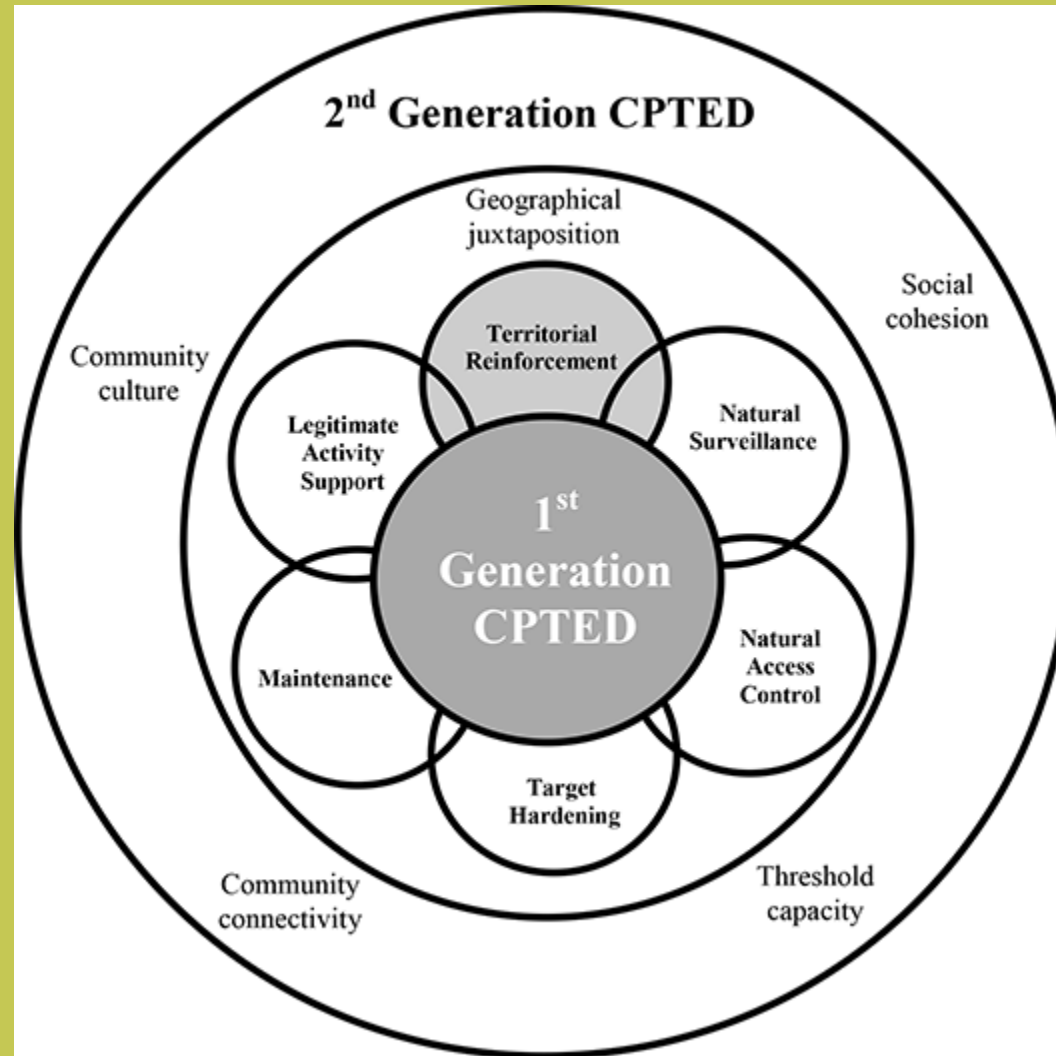
4.Milieu – other features that may affect security, such as proximity to a police substation or busy commercial area

5.Safe Adjoining Areas - for better security, residents obtain higher ability of surveillance of adjoining area through designing the adjoining area



CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

The issues, problems, and contexts associated with CPTED are highly complex. Every CPTED intervention or design change has multiple effects, and some are beneficial in crime prevention terms. However, in spite of widespread international support for CPTED, outcomes are not always positive. Some aspects of CPTED interventions may facilitate crime or reduce quality of life in some other manner.



CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

Activity Support



Encouraging legitimate linger opportunities creating ambience that unsettles criminals and nuisance – it will support natural surveillance by increasing ‘eyes on the street’



Territoriality & Image Maintenance



Permissive but space-defined and the boundaries are clear (unconscious rule-setting)



CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

Target Hardening



Hardening the streetscape, potential conflict zones modified and increasing technical security density (e.g. CCTV) where needed

Image Maintenance



Selecting materials, furniture, planting schemes and other space treatments that resist nuisance and crime (e.g. easily cleaned and searched)

ENVIRONMENTAL DESIGN

Example of environmental/ built environment:
Blank wall at back lane of HSBC Bank, Jalan Benteng, Kuala Lumpur



Condition of Jalan Benteng in 2013 where less priority were given to pedestrian, lack natural surveillance

Current condition of Jalan Benteng where more pedestrian friendly but still lack of surveillance from inside of the building

(source: field work ,2013)

(source: google earth)

ENVIRONMENTAL DESIGN

Example of environmental/ built environment:
Street width, blocked view, social incivilities (Jalan Melayu, Kuala Lumpur)



(source: google earth)

ENVIRONMENTAL DESIGN

Example of environmental/ built environment:

Blank wall, no eyes on the street- lack surveillance (Jalan Tun Perak, Kuala Lumpur)



(source: google earth)

ENVIRONMENTAL DESIGN

Example of environmental/ built environment:
Landscape- height of trees (Jalan Tunku Abdul Rahman, Kuala Lumpur)



(source: google earth)

ENVIRONMENTAL DESIGN

Example of environmental/ built environment:
Linkages and lighting (Bank Negara KTM and IP JKR , Kuala Lumpur)



Road leading to Block G



Road leading to Bank Negara KTM Station

(source: google earth)

ENVIRONMENTAL DESIGN

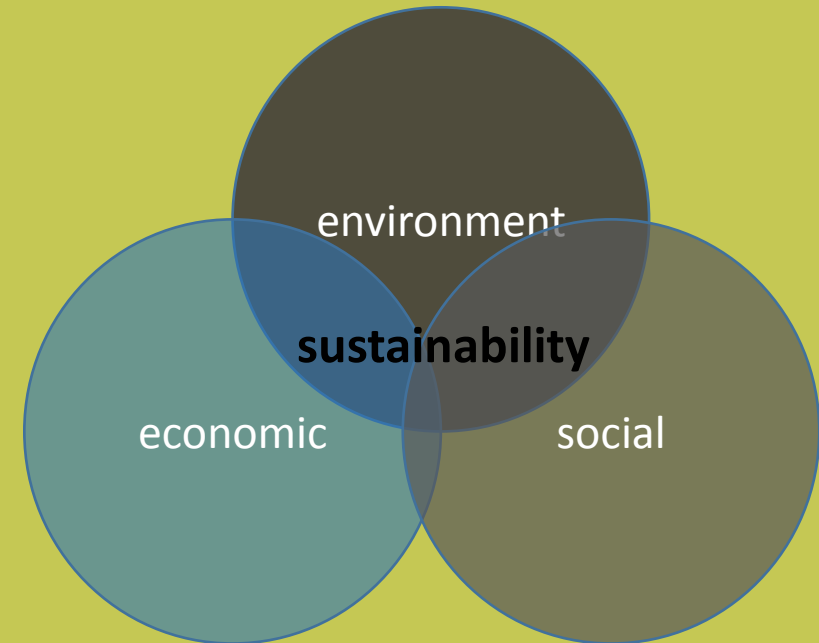
Example of environmental/ built environment:
Visual linkages and surveillance (SMKA Jerlun, Kedah)



(source: google earth)

SUSTAINABLE DEVELOPMENT

- 'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (Brundtland Commission, 1987)
- Sustainable development is maintaining a delicate balance between the human need to improve lifestyles and feeling of well-being on one hand, and preserving natural resources and ecosystems, on which we and future generations depend.
- Enduring and Balance approach



POLICIES/PLAN

As result of this changes or evolution and rapid progress, it does also affect social pattern where crime increases and affect safety and increases fear. Policies and strategies were developed in order to create and control urban development towards a better and sustainable living.

There is a recognition that a good governance and urban framework needed in order to manage the expansion of urbanisation (OECD, 2016). National Urban Policy was developed as a long term and evolving process and its objective is to structuring a broader framework (OECD, 2016). UN Habitat (2012) recognised the important of National Urban Policy as an important step for reasserting urban space and territoriality.

Some of the policies are a continuation from international concern such as Local Agenda 21 which is initiated by United Nation in Rio Earth Summit in 1992 and it led to changes in local act such as Town and Country Planning Act (Act 172) (Shamsuddin et al, 2013).

POLICIES/PLAN

National Urbanisation Policy (NUP)

Philosophy: Emphasize safety aspect in town
NUP 23: Safer Urban Environment shall be provided

National Physical Plan (NPP-2)

Objective no.4: To enhance spatial and environmental quality, diversity and safety for a high quality of life and liveability.

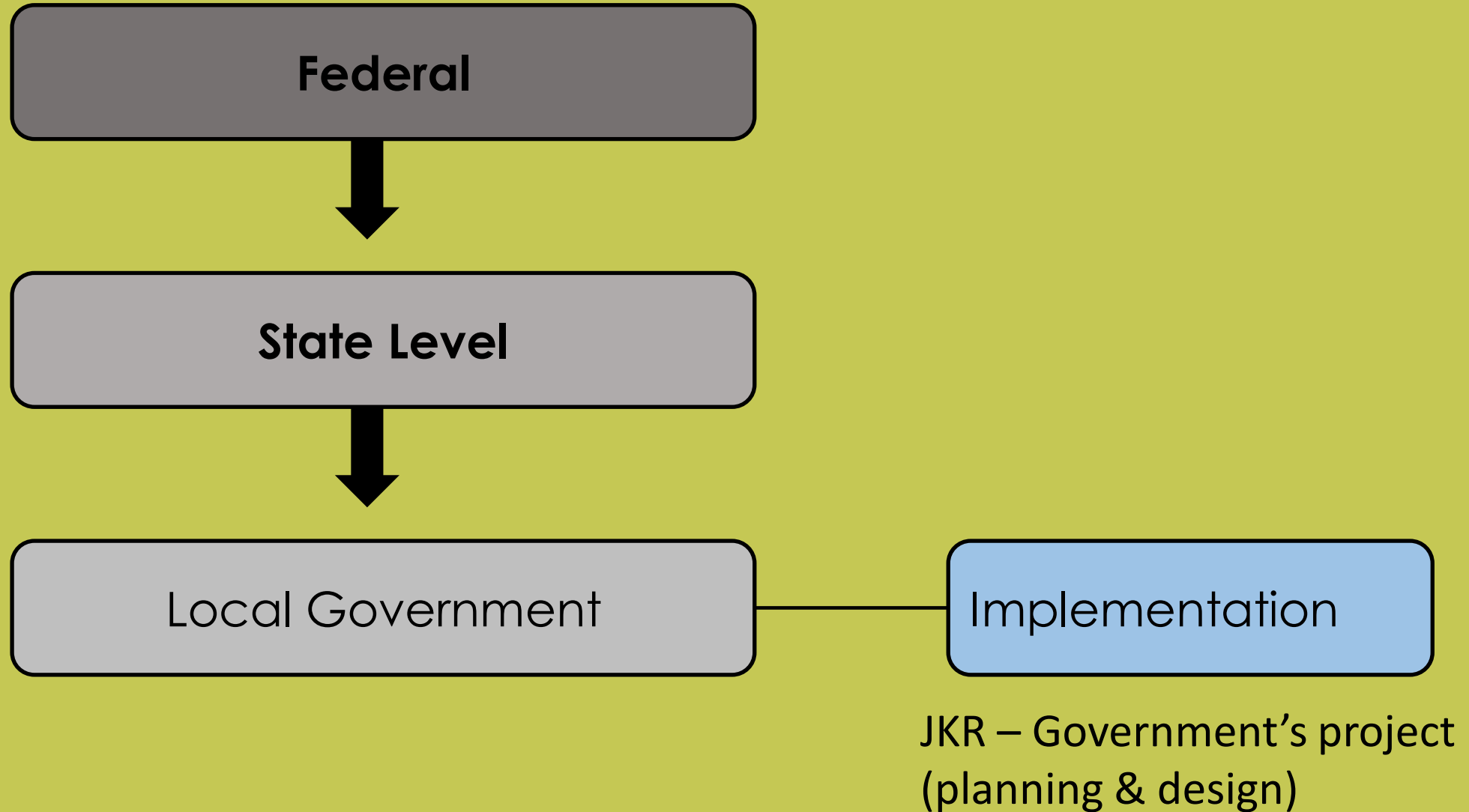
11th Malaysia Plan

Strategy C1: Enhancing crime prevention by enforcement agencies, private players, and the public to elevate perception of feeling safe.

Safe City Programme

S1: Environmental Design Initiatives
S2: Target Hardening
S3: Social Activities/Society Education /Public Awareness

IMPLEMENTATION OF POLICIES/PLAN



SUSTAINABLE DEVELOPMENT

THE GLOBAL GOALS For Sustainable Development





Cities for All: Implementing the New Urban Agenda

Global, regional, national and local implementation frameworks

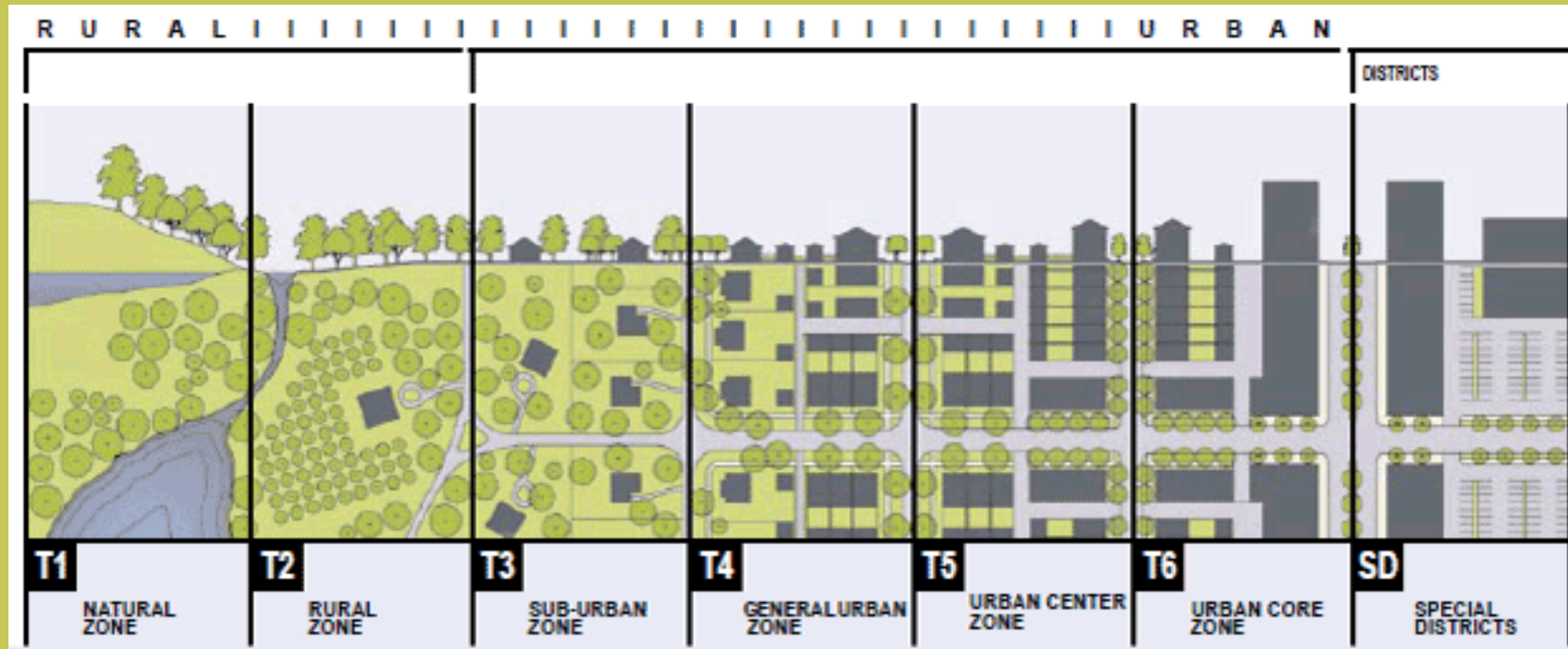
Innovative solutions

7. Foster a culture of creativity and innovation to be embedded in the way cities and human settlements operate.

8. Develop monitoring and data collection mechanisms, including community generated data, to enhance availability of information and disaggregated and comparable data at city, functional urban areas and community levels. This would promote informed and evidence-based decision making and policy formulation, assessing progress and impact at all levels.

(source: wuf9.org)

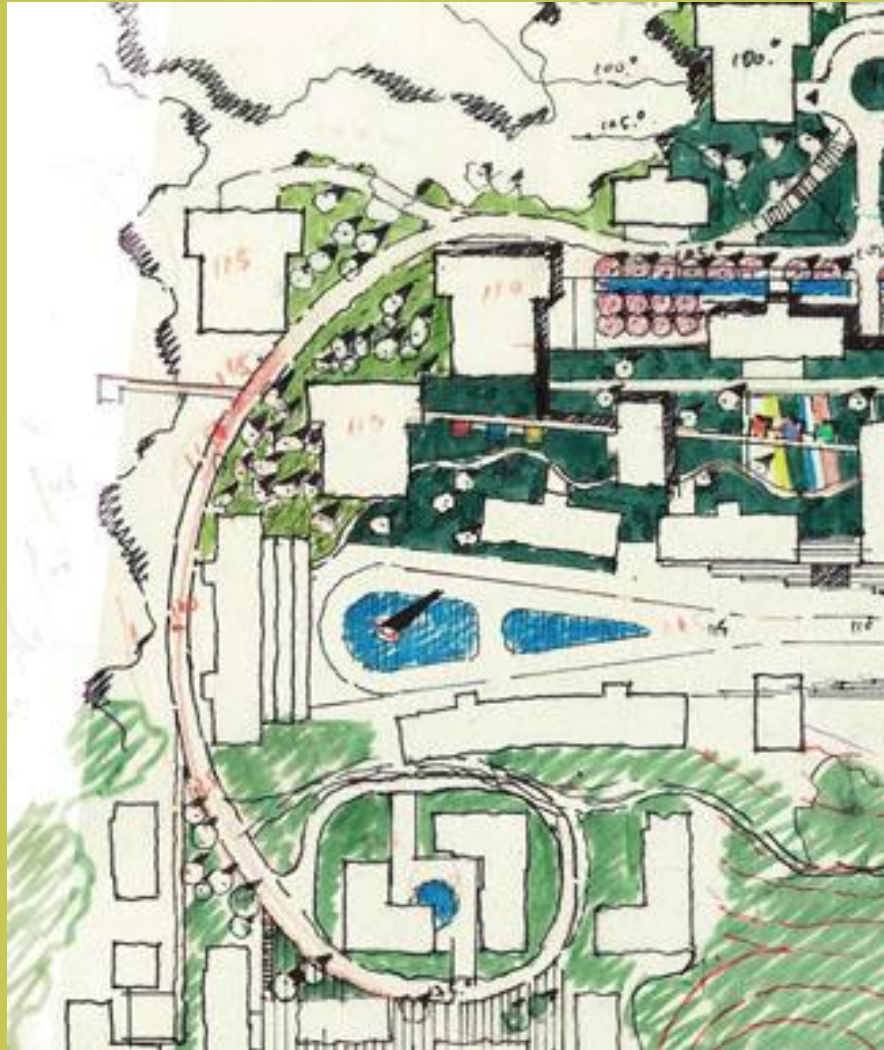
IMPLEMENTATION OF POLICIES/PLAN



(source: thinkofwim.com)

IMPLEMENTATION

Physical elements



Design

Street pattern
Accessibility
Enclosure
Human scale

Visual

Connectivity
Legibility

Building

Orientation
Mixture of building
Maintenance
Incivilities

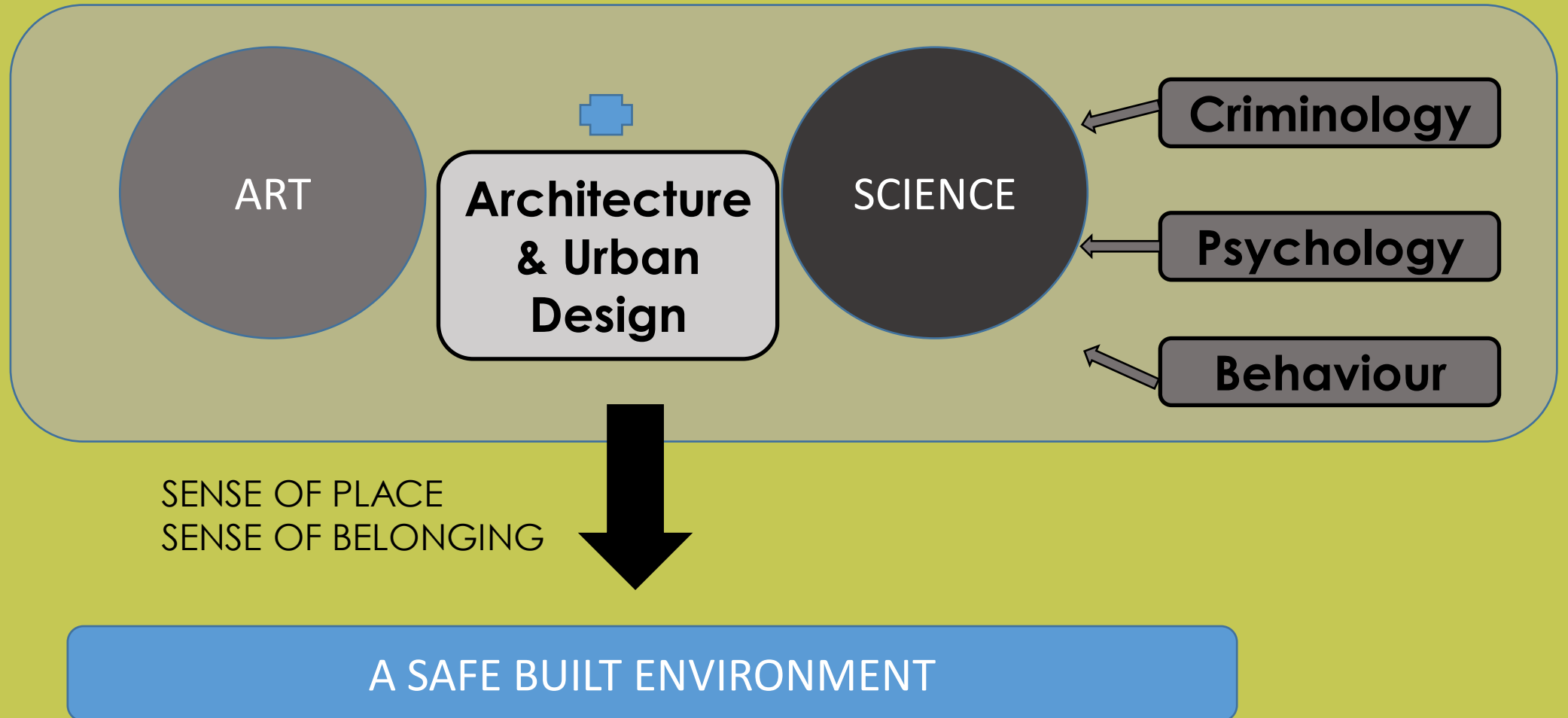
Landscape

Lighting
Trees
Street furniture



CONCLUSION

ART AND SCIENCE



CONCLUSION

ART AND SCIENCE

Design affects the brain. Scientists and designers are starting to understand how and why.

"We actually know enough to change our lighting or acoustics to do no harm or to do less harm, and to enhance our mental and physiological and health outcomes."—Dr. Eve Edelstein

A subset of neuroscientists and psychologists are now working with architects and designers to understand how and why spaces, from city sidewalks to buildings to individual rooms, have such strong cognitive and psychological impacts. How these spaces are designed can affect the way people think, feel, learn, and comprehend the world around them. And because we spend so much time in these spaces, how they are designed can have significant impacts on our lives.



THANK YOU