

# DESIGNING GREENSPACE FOR HEALTH: THE FUTURE OF CITIES AND HOSPITALS

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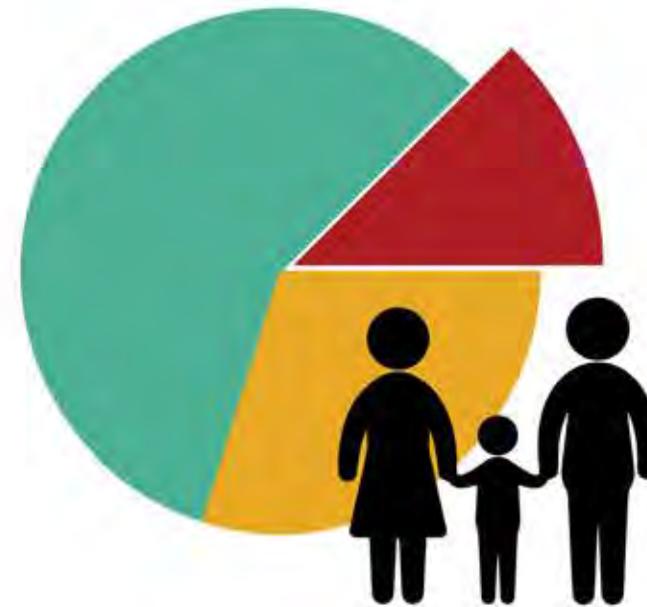
# ROYAL HOSPITAL FOR SICK CHILDREN AND DEPARTMENT OF NEUROSCIENCES, EDINBURGH



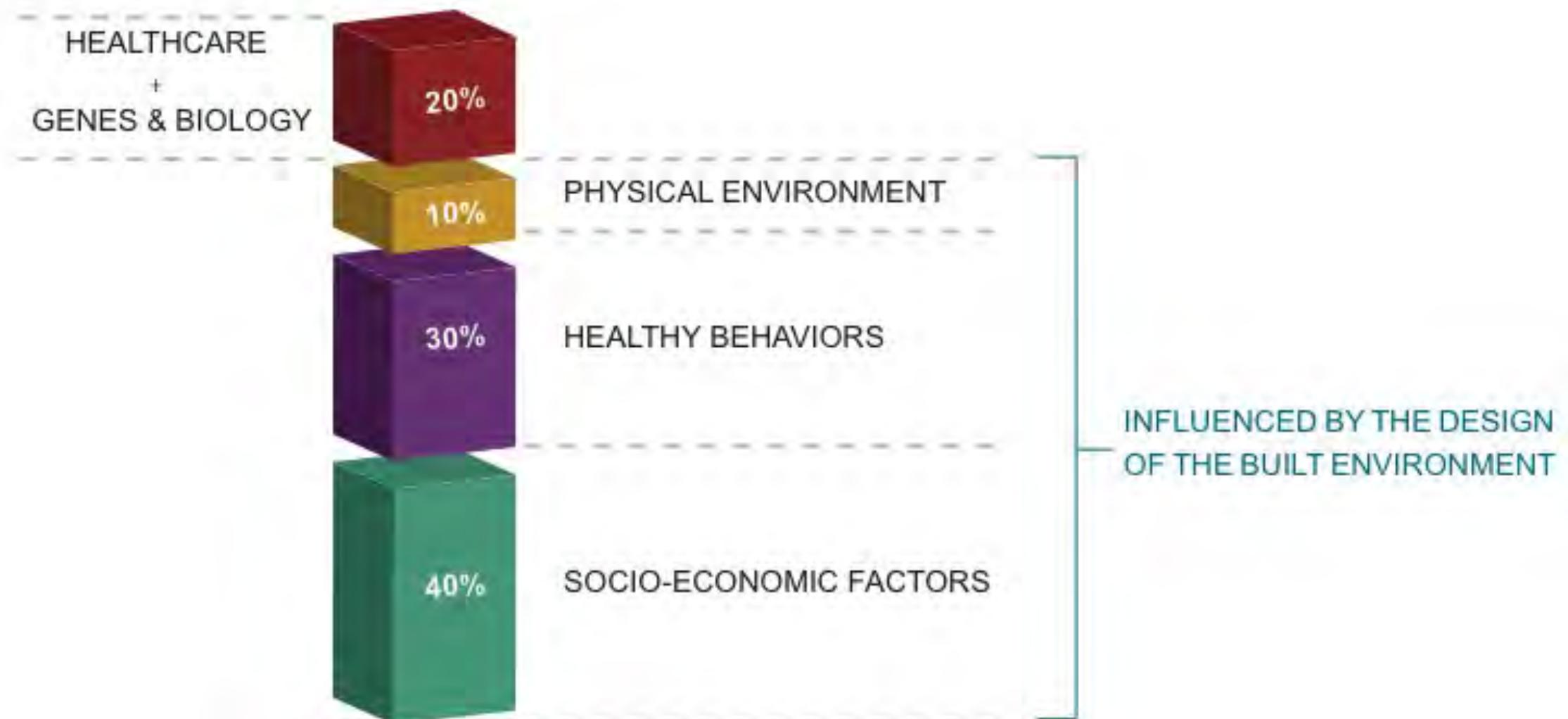
# TLEMSEN CENTRE HOSPITALIER UNIVERSITAIRE, ALGERIE



# 1 HEALTHCARE IS MOVING TOWARD **POPULATION HEALTH**



# WHAT MAKES US HEALTHY?

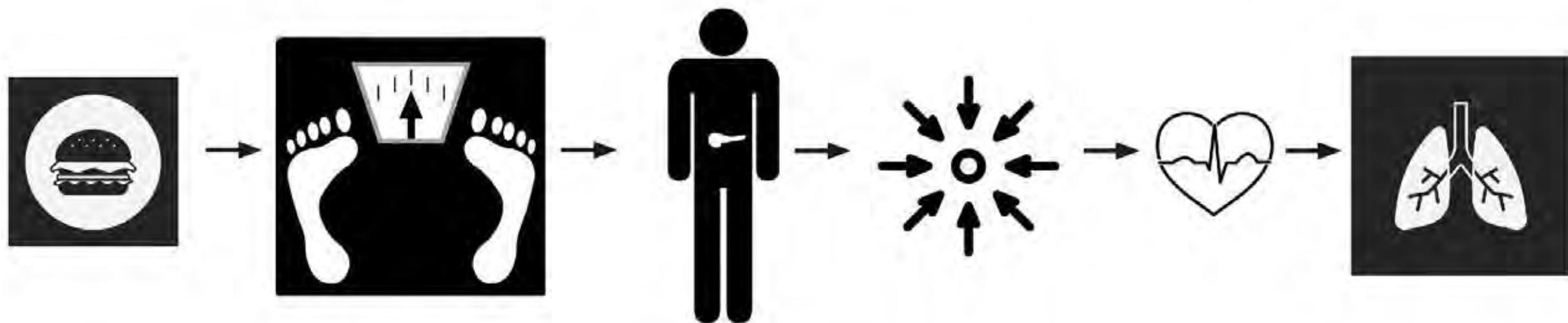


## **2 HEALTHCARE IS MOVING TOWARDS PREVENTION**



*“we are looking at a massive health problem. The National Health Service is not going to be able to cope financially unless we get a grip on the economics of **obesity** because obesity is the primary driver for the development of **Type 2 diabetes**. It is a massive promoter of **high blood pressure**. It actually increases the risk of **heart disease**. It’s now coming through as one of the bigger preventable causes of **cancer**. Enormous financial resources are now being put into this, and nobody is thinking sensibly about the economic benefits of going for a preventive strategy.”*

Dr Philip James, President of the International Association for the Study of Obesity



### **3** URBANISATION



# 50% TODAY



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# URBANISATION



**3 MILLION PEOPLE MOVE TO  
CITIES EVERY WEEK – UN HABITAT 09  
2.5 BILLION BY 2050**

# 70% BY 2050



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# URBANISATION

**RAPID &**

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**UNPRECEDENTED**





PAST

NOW

2050

# UNPRECEDENTED HEALTH CONSEQUENCES?



**BENEFITS**



**JOBS**



**EDUCATION**



**CULTURE**

**HEALTHCARE**

**NEGATIVE**



**MENTAL  
ILLNESS**



**OBESITY**



**HEART  
DISEASE**



**DIABETES**

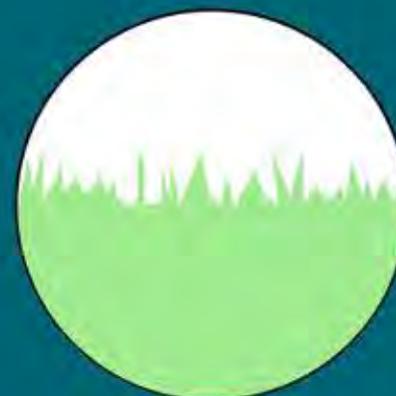
## URBANISATION AND OBESITY



**MORE HIGH  
CALORIE  
FOODS**



**MORE PASSIVE  
TRANSPORT**



**LESS OPEN  
SPACE**



**MORE MASS  
MEDIA**



**LESS WORK  
RELATED  
PHYSICAL  
ACTIVITY**



**THERE IS A GROWING BODY OF EVIDENCE LINKING THE CONDITION AND QUALITY OF OUR BUILT ENVIRONMENT TO OUR HEALTH AND TO THE CHOICES THAT WE MAKE THAT PROMOTE HEALTH**

**BUT IN THE DEVELOPING WORLD, THE DEMAND FOR LAND TO BUILD AND DEVELOP CAN OUTWEIGH PLANNING PROCESSES, POPULATION HEALTH, AND MORE MEASURED APPROACHES LEADING TO 'GREY CITIES'**



# GREY CITIES

## MAJOR BENEFITS

- ↓ Lower BMI, Overweight And Obesity Levels
- ↓ Lower Premature Mortality Due To Circulatory Disease
- ↓ Lower Rates Of Coronary Heart Disease And Diabetes
- ↓ Lower Metabolic Syndrome Rates
- ↑ Better Self- Rated Health
- ↑ Increased Longevity
- ↑ Better Fitness And Overall Health

It even seems to reduce the effect of inequality on health

**PREVENTION: OBESITY, DIABETES & HEART DISEASE**

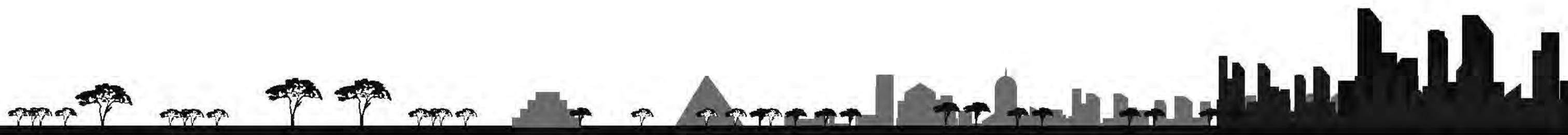
**GREENSPACE NEEDS TO BE  
PART OF THE STRATEGY**

An aerial, black and white photograph of a dense, historical city. The architecture is a mix of Gothic and classical styles, with numerous spires, domes, and large stone buildings. A prominent feature is a large, classical-style building with a portico of columns on the right side. In the foreground, there are several tall, pointed Gothic structures, likely churches or cathedrals. The city is surrounded by a hilly landscape. A semi-transparent rectangular box is overlaid in the center of the image, containing the text "150 YEARS AGO" in a bold, black, sans-serif font.

**150 YEARS  
AGO**



# VICTORIAN HOSPITAL BUILDINGS



**HUMAN HISTORY**

**NOW**



# **NATURE DEPRIVATION**

## MENTAL HEALTH GLOBAL BURDEN

**10% → 15%**

**MENTAL HEALTH UK SPENDING HEALTH BUDGET**

**23%**



**COST OF TO GOVERNMENT/SOCIETY**

**£ 70 - 100 bn**

**4.5% GDP**

**NEGATIVE**



**STRESS**



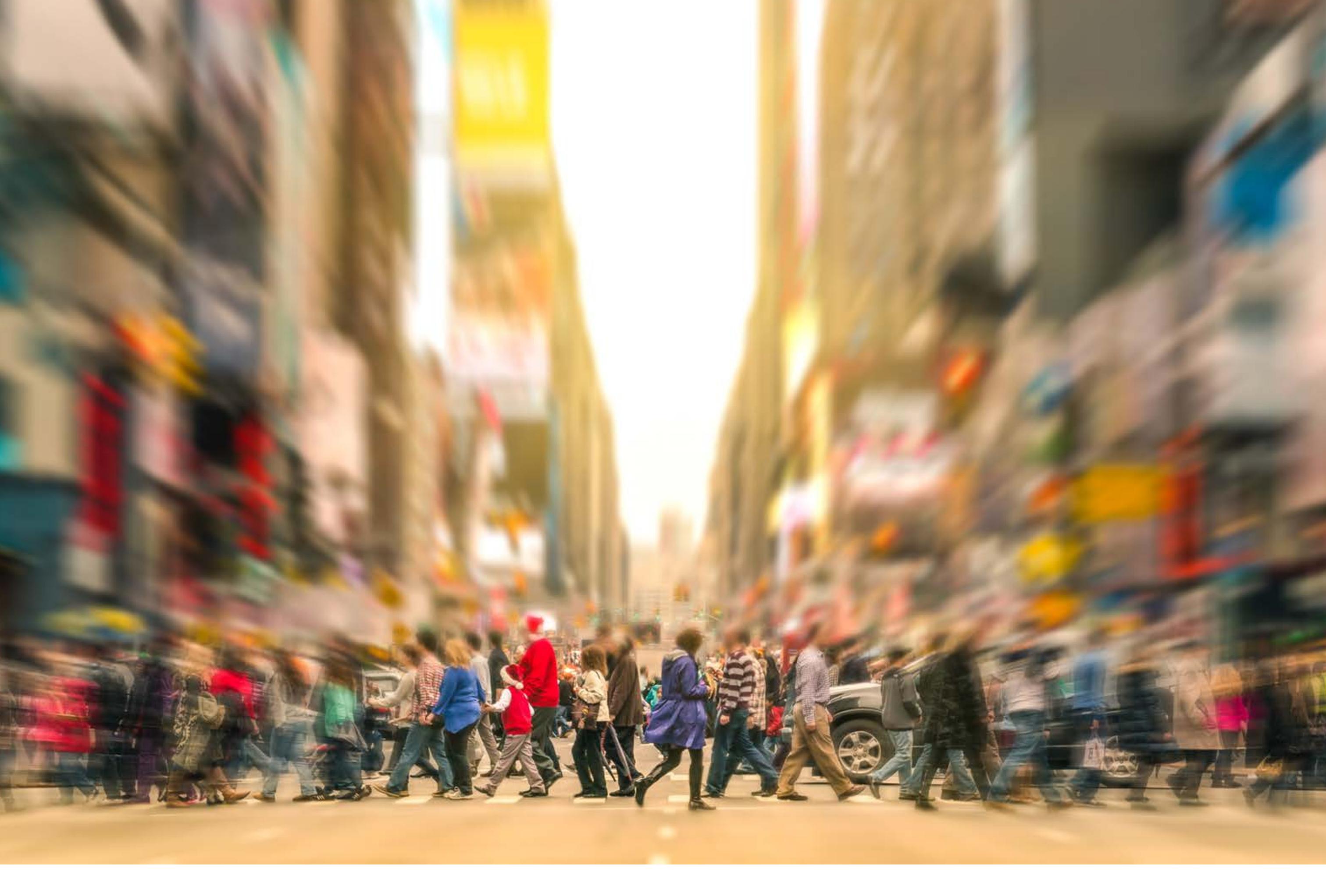
**ANXIETY**



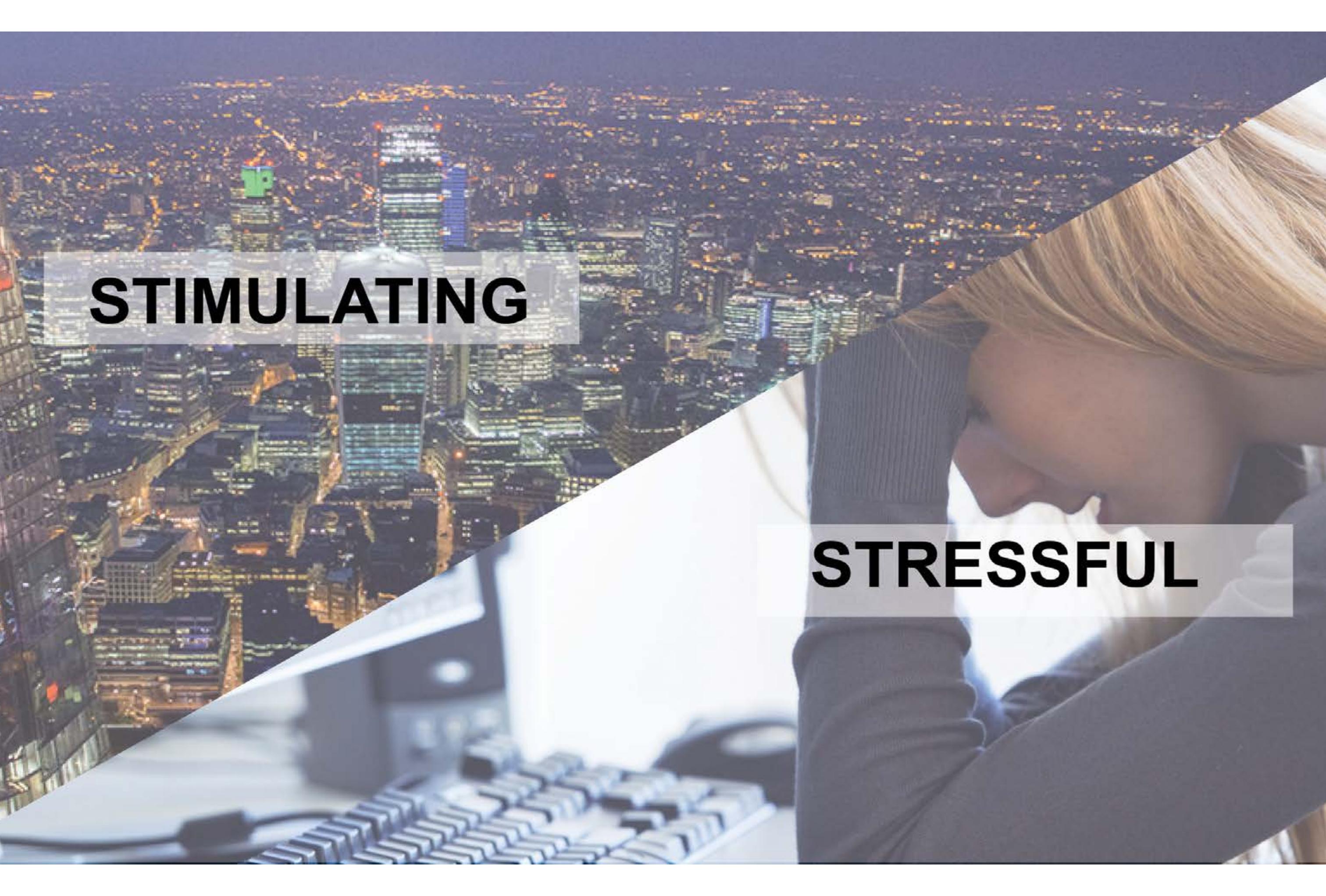
**DEPRESSION**



**SCHIZOPHRENIA**

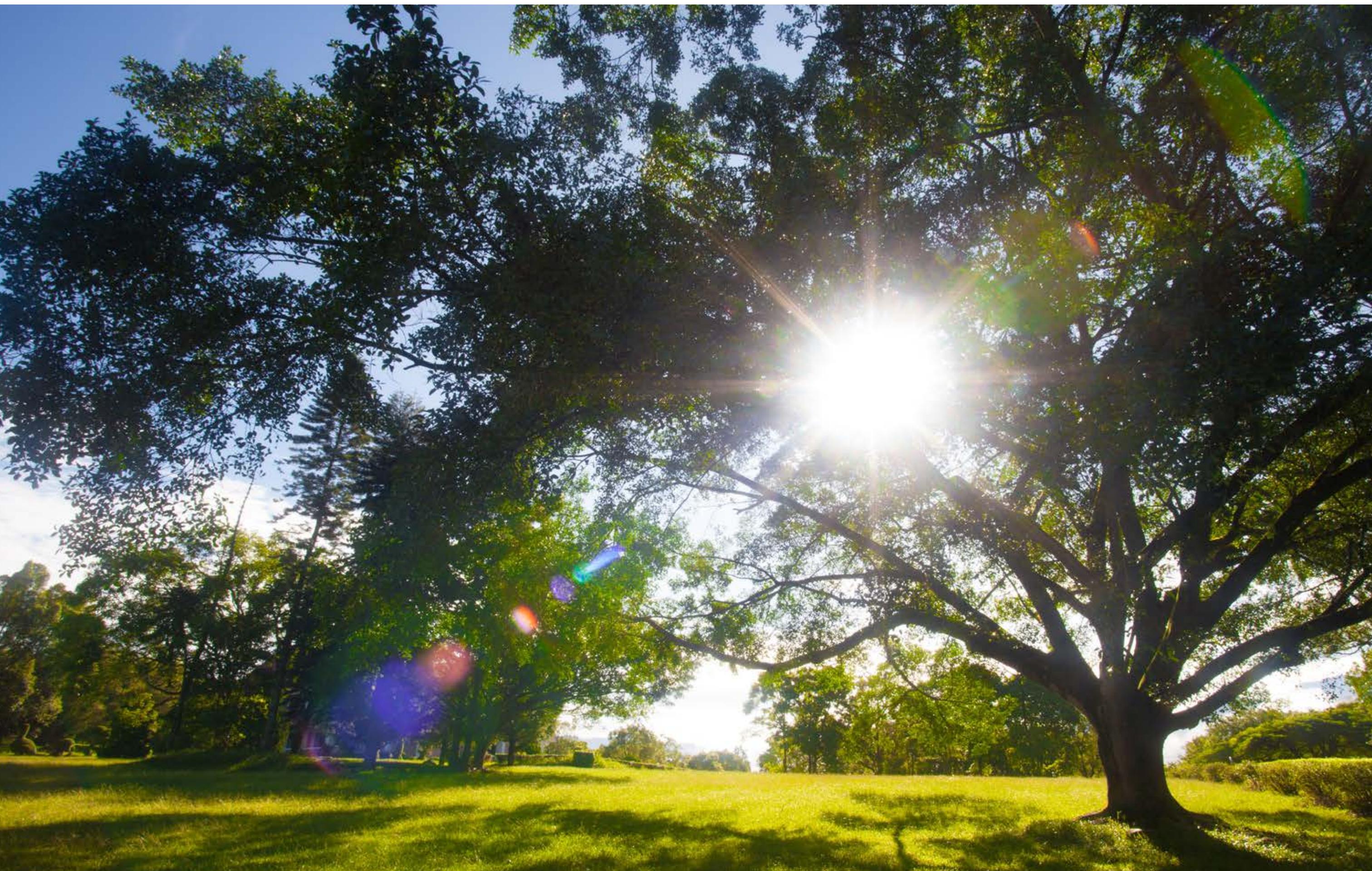




The image is a composite of two scenes. The left side shows a high-angle, night-time view of a city with many lit-up buildings and streets. A small green icon of a person is visible in the upper left of this section. The right side shows a close-up of a person with blonde hair, wearing a grey sweater, sitting at a desk and looking down at a computer keyboard. The person's head is resting on their hand, suggesting stress or fatigue. A diagonal line separates the two scenes.

**STIMULATING**

**STRESSFUL**

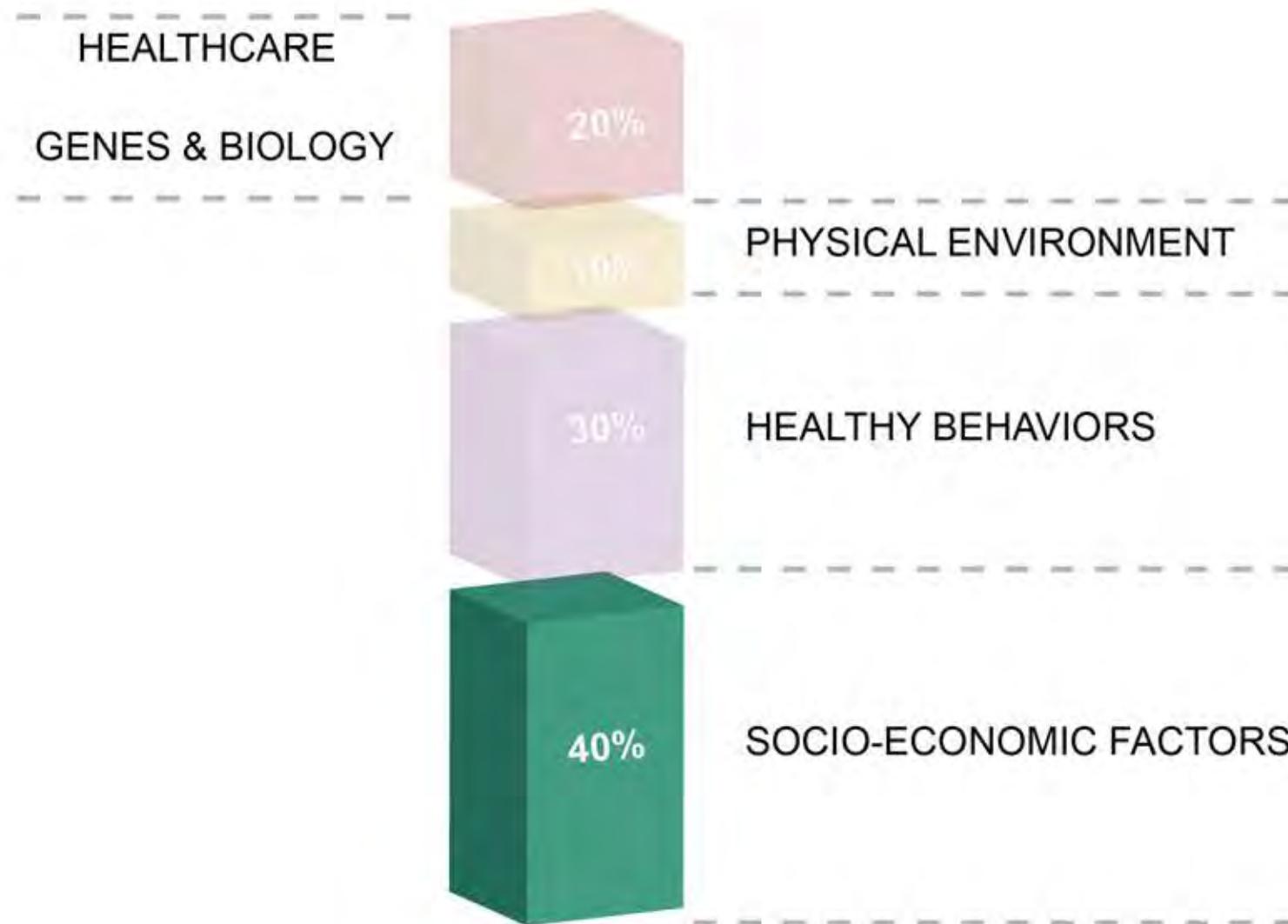


# WHEN WALKING IN NATURAL ENVIRONMENTS, SUCH AS FORESTS OR PARKS..

- + HEART RATE LOWERS
- + PULSE RATE LOWERS
- + CORTISOL LEVELS DECREASE
- + LOWER SYMPATHETIC NERVE ACTIVITY
- + ACTIVITY IN THE SUB-GENUAL PRE-FRONTAL CORTEX LOWERS
- + WE FEEL CALMER AND MORE RELAXED
- + IMMUNE SYSTEM FUNCTIONING IS BOOSTED: THERE IS AN INCREASE IN BODY'S NATURAL KILLER CELLS
- + OUR ATTENTION IS RESTORED

The effect extends to healthcare - in hospitals, views to natural environments lead to lower medication doses, decreased hospital stays, happier and healthier patients and staff and lower staff turnover

# WHAT MAKES US HEALTHY?







A photograph of a field of tall, green grasses blowing in the wind. The grasses are dense and have a vibrant green color. A semi-transparent, light-colored rectangular box is centered horizontally across the middle of the image, containing the word "BIOPHILIA" in bold, black, uppercase letters.

**BIOPHILIA**

# AS MUCH AS POSSIBLE – THERE'S NO UPPER LIMIT

But as a planning principle: access to green space should be within a 5-10 minute walk







# DEVELOPING AREAS IN TLEMCEN, ALGERIA



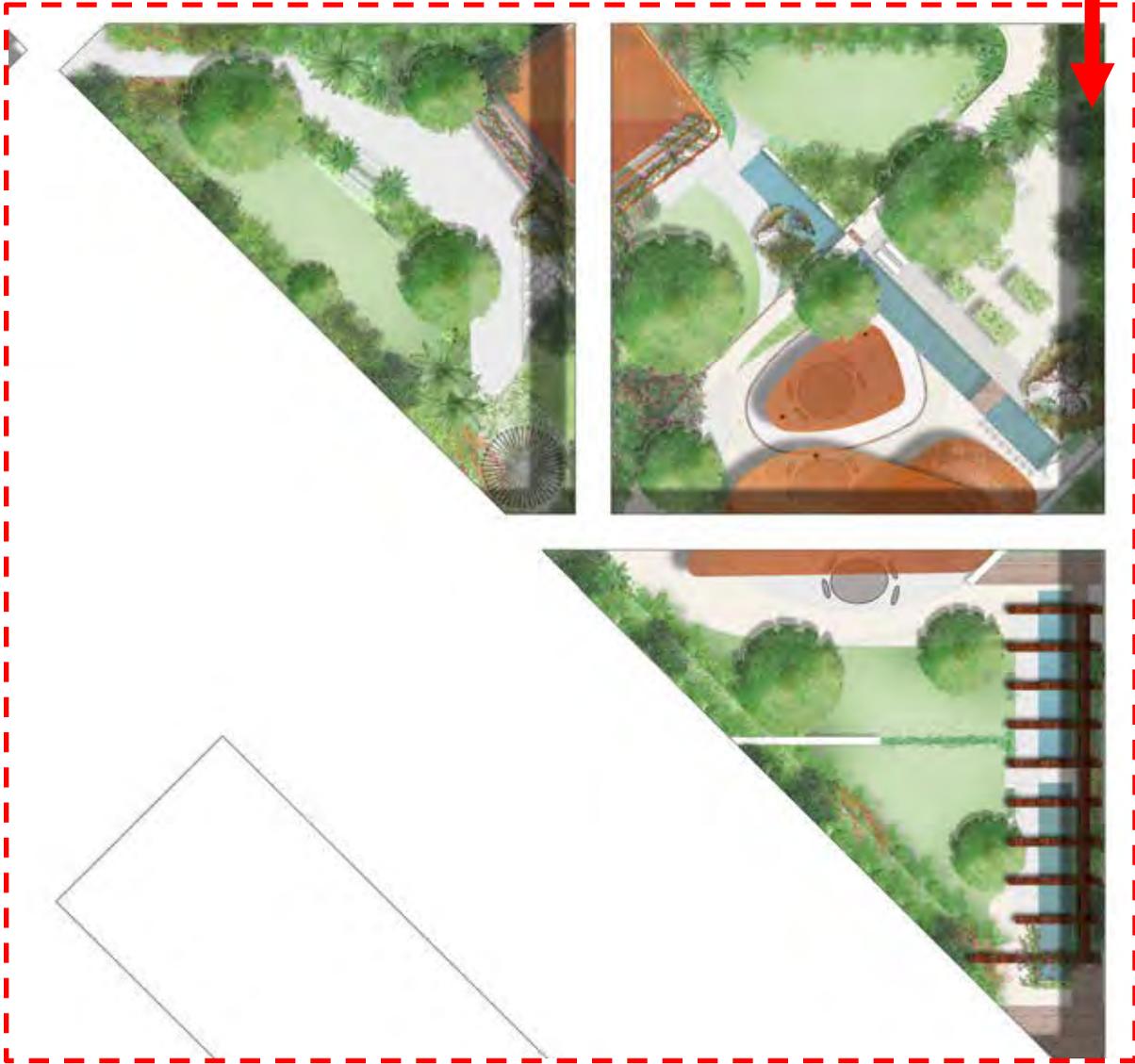
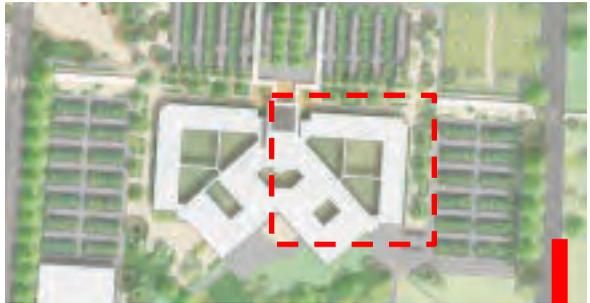
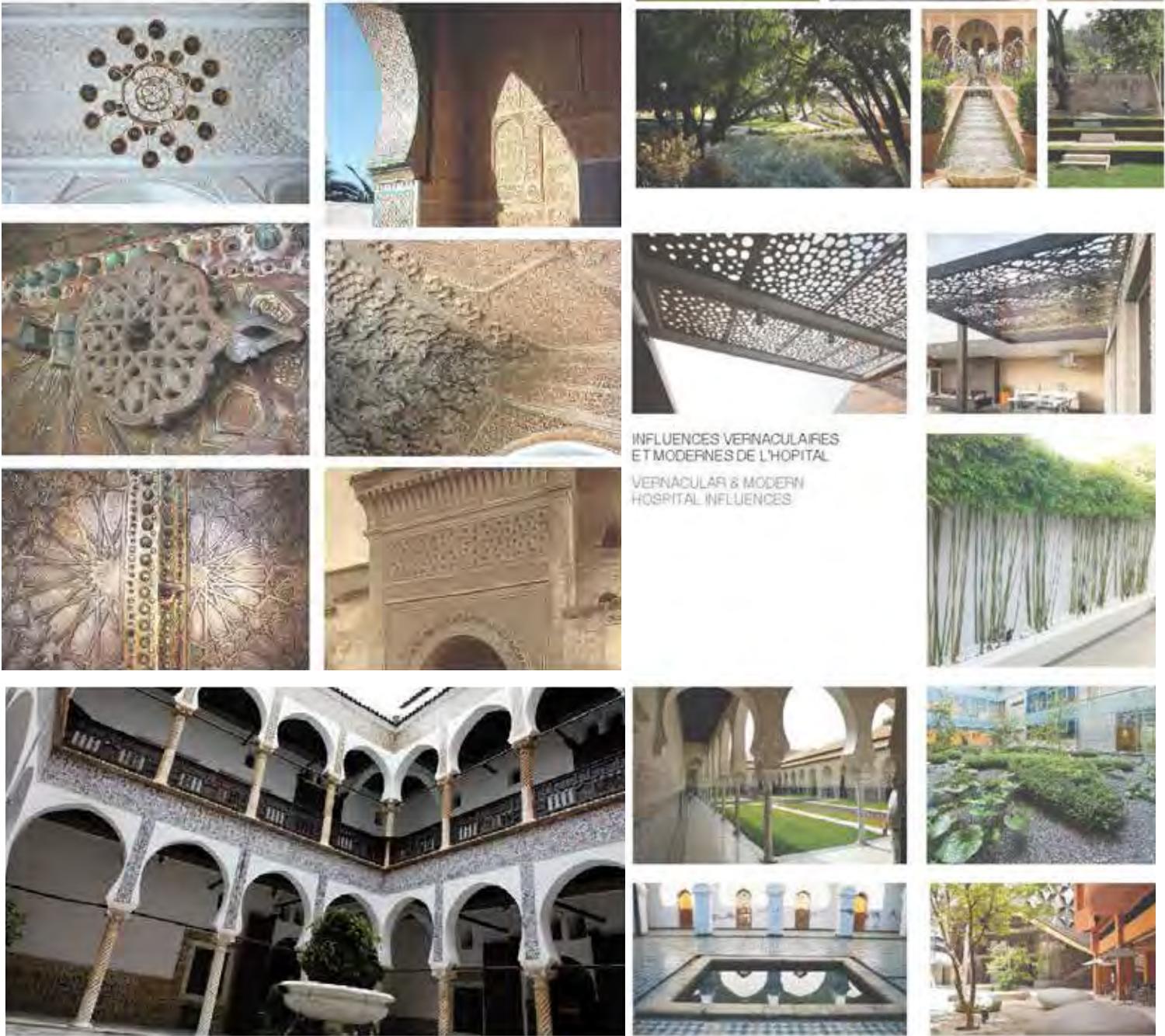
# TLEMSEN CENTRE HOSPITALIER UNIVERSITAIRE, ALGERIE







# INFORMED BY REGIONAL ARCHITECTURE



# WESTERN VIEW



# VIEWS FROM ALL WARDS TO PARKLAND



# A 30METRE BUFFER OF FORMAL PLANTERS TO THE CARPARK



# LINK TO THE UNIVERSITY PLAZA AND THE CHILDREN'S ENTRANCE



# VIEW TO THE ORCHARD AND PARKLAND BEYOND



