

# Архитектура и Климат

ИНОВАЦИИ В АРХИТЕКТУРАТА, ВСЛЕДСТВИЕ НА КЛИМАТИЧНИТЕ ПРОМЕНИ



*Стоунхендж, Кралство Великобритания  
XXII Век преди Христа*

# Архитектура и Климата

През вековете хората са търсили да се установят там където има лесен достъп до:

Вода

Храна

Сигурност (Комфорт на живот)...  
...и създали градовете.

Сигурен ли е съвременния град?

*„Архитектурата е там където се случва живота“*



# Архитектура и Климат




## Характерни за последните десетилетия: Неустойчиви модели на градско развитие

*"Buildings are responsible for 40% of energy consumption and 36% of CO<sub>2</sub> emissions in the EU. Currently, about 35% of the EU's buildings are over 50 years old. By improving the energy efficiency of buildings, we could reduce total EU energy consumption by 5% to 6% and lower CO<sub>2</sub> emissions by about 5%."*

*Excerpts from the Energy Performance of Buildings Directive*

19 Юни, 2014  
Град Варна, Аспарухово

# Архитектура и Климат



Характерни за последните десетилетия:  
Неустойчиви модели на градско развитие

*'The survival of the planet itself is at stake,'*

*French foreign minister Laurent Fabius says.*

8 Юли, 2014

Град София, България

# Архитектура и Климат



## Характерни за последните десетилетия: Неустойчиви модели на градско развитие

*"No challenge poses a greater threat to future generations than climate change".  
Given the seriousness of the problem, and its impact upon us all, I am wondering when the election debate will focus on switching defence spending to combating our worst possible enemy. It isn't Russia. After all, increasing defence spending to 2% of GDP will not be of much use if there is nothing left to defend.*

*Barack Obama*

2 Август, 2014  
Град Мизия

# Архитектура и Климат

NOVA



kalendar@ntv.bg

КАЛЕНДАР

22

## КЛИМАТИЧНИ ПРОМЕНИ

Ако затоплянето продължи,  
Добруджа ще заприлича на пустиня

# Архитектура и Климат



*"...First, because we human beings are part of the environment. Any harm done to the environment, therefore, is harm done to humanity.*

*Second, In all religions, the environment is a fundamental good."*

*Pope Francis' address to the United Nations. September, 2015*

I DON'T BELIEVE IN  
GLOBAL WARMING

# Архитектура и Климат

- Критерии за **качество** преди **Цена** и **Време**
- Водещи да са **експертите**
- Най-добро за обществото - **конкурсите**
- Качествена, Отговорна, **Устойчива** архитектура

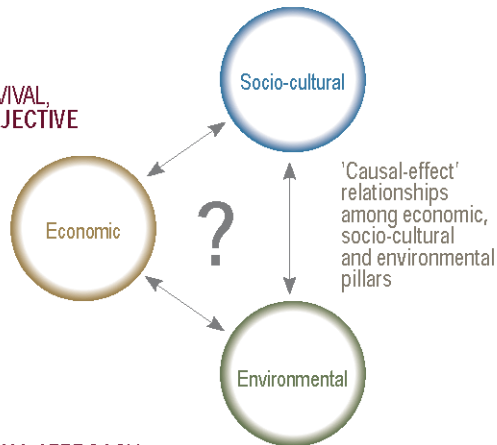




# Архитектура и Климат

Figure 1

ECONOMIC REVIVAL,  
A CENTRAL OBJECTIVE



THE TRADITIONAL APPROACH



Economic models at the expense of social and environmental outcomes  
Today's volatile markets = Cities can only partially rely on economic models

Figure 2

A NEW APPROACH: SOCIAL CAPITAL + FOCUS ON ENERGY DEMOCRACY



The architectural profession has a key role in turning the current urban challenges into opportunities. It may do so in three tangible manners:



Характерни за последните десетилетия:  
Неустойчиви модели на градско развитие...  
ЗОП в интерес на обществото.

# Архитектура и Климат

WGBC Europe Leadership awards 2013 - Building Design and Performance  
*BREEAM, LEED, DGNB ...*



First place - Eiffel Palace, Hungary  
*BREEAM, LEED, Historical value*

# Архитектура и Климат

WGBC Europe Leadership awards 2015. Building Design and Performance



King's Cross - London, England

## Several new standards suggested (though some may be revisions)



Area	Potential new standards
Smart cities	Heat gain in cities, wind in cities, smart grids for electricity or other energy grids.
Climate data standards	Maintenance of climatic data standards used to provide input data for design of buildings building systems and the build environment ISO/15927 (1-6) and ISO/52010-1 (draft)
Storm water	Storm water management standards have to be developed. Example: ISO/NP 24523 "service activities relating to drinking water supply and waste water systems - Storm water management - Guidelines for Planning of Stormwater System in urban areas.
Extreme weather	To test resistance scenarios of extreme weather are needed. Methods for stress tests and to test the capacity of infrastructure to cope with extreme conditions are needed.
Indicators and data	Methods to select climatic data, to define and to build stress tests for buildings. Methods to define indicators and warning values to help elaborate prevention plans.
Management	A guidance standard for integrating climate adaptation into management systems.
Flooding	Management of flooding and its impact, e.g. Sustainable Urban Drainage Systems. This may affect a EN 1916, EN 1917, and EN 124 and may see new standards, or changes.
Drainage	Too much water goes to sea; bad drainage on level sites, and problems with slopes.
Constructed elements	Standards related to solar shading elements, ventilation of buildings trough canadian well or thermal diphaser (temporal temperature shift) and water storage.

# Архитектура и Климат

СПИРАНЕ НА КЛИМАТИЧНИ ПРОМЕНИ  
АДАПТАЦИЯ КЪМ НОВИЯ КЛИМАТ



2°

# Архитектура и Климат

ТЕРМАЛНА ИЗОЛАЦИЯ. СУПЕРИЗОЛАЦИЯ  
МНОГОФУНКЦИОНАЛНОСТ. СТРУКТУРНИ ИЗОЛАЦИОННИ ПАНЕЛИ (СИП)



2°

# Архитектура и Климат

ПРЕЛИВЕН БАСЕЙН. RETAINMENT POND

ЗЕЛЕН ПОКРИВ



2°

# Архитектура и Климат

## ПРЕЛИВЕН БАСЕЙН. RETAINMENT POND ГРАДСКИ „ГАСИТЕЛИ“ НА НАВОДНЕНИЯ





# Архитектура и Климат

Ново Мислене. Нов подход, Нова техническа програма.  
Appearance is not important. Merger with nature



Lycee Jean Moulin - in the French city of Revin

# Архитектура и Климат

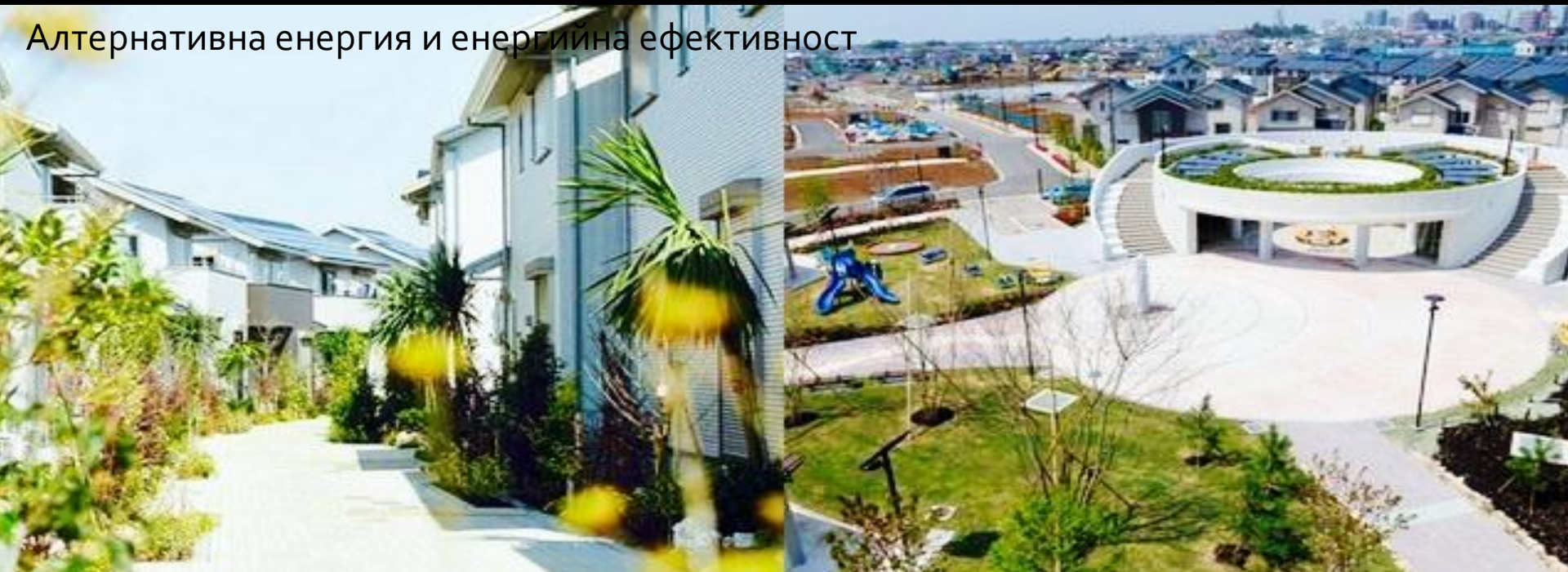
Амбиция и иновации. Autonomous school in terms of energy needs.



UCN IMAGO – City of Aalborg, Denmark

# Архитектура и Климат

Алтернативна енергия и енергийна ефективност



Fudjisawa - Japan

# Архитектура и Климат

Иновационни Строителни Материали



NASA DEVELOPPED:

HPS  
ENDU ROOF  
SUPER THERM  
OMEGA FIRE



INFLECTOR WINDOWS



POLIURETHANE PANELS  
AEROGELS

Fudjisawa - Japan

# Архитектура и Климат

HEINEKEN, СТАРА ЗАГОРА



# Архитектура и Климат

## MILD HOME. ПЪРВО ЕКО-СЕЛИЩЕ, ГР. СОФИЯ



# Архитектура и Климат

МІДНОМЕ. ПЪРВО ЕКО-СЕЛИЩЕ, ГР. СОФИЯ



# Архитектура и Климат



WORLD CLIMATE SUMMIT

*PARIS, FRANCE, 2015*

Благодаря за Вниманието!

Арх.НиколайГЪЛЪБОВ  
+359 887 855 800, [architecture.bg@gmail.com](mailto:architecture.bg@gmail.com)