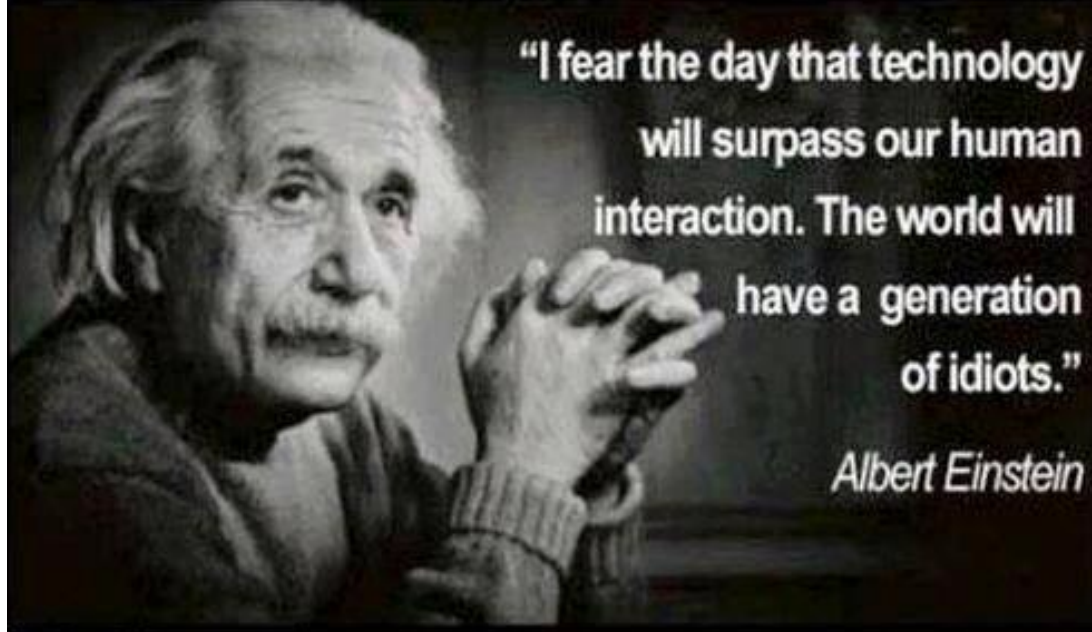


„nZEB New Trend or Knowledge from the Past“

Tallinn University of Technology
Faculty of Construction
Head of the Chair of Heating and
Ventilation

Hendrik.voll@ttu

What do you think what „active“
architects think of nZEB?



HVAC →
engineers??



„nZEB New Trend or Knowledge
from the Past?

Socrates in Ancient Greek

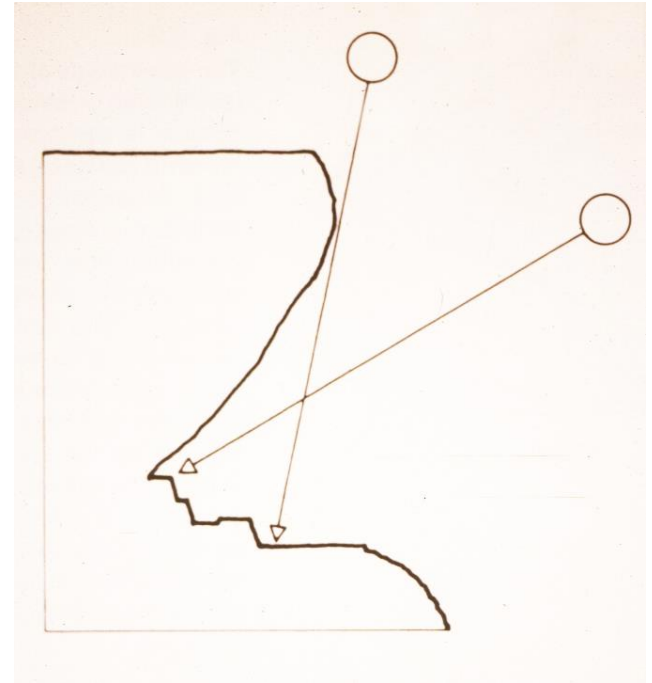
Socrates began his discourse by asking a question: „ When someone wishes to build the proper house, must he make it as pleasant to live in and as useful it can be?“ After his students answered in the affirmative, the master then asked, „ Is it not pleasant to have the house cool in summer and warm in winter?“ And when the student assented to this as well, Socrates then closed the discussing by affirming, „Now in houses whth a southern orientaton, the sun's rays penetrate into the covered porches, but in summer the path of the sun is right over our heads and above the roof, so we have shade...

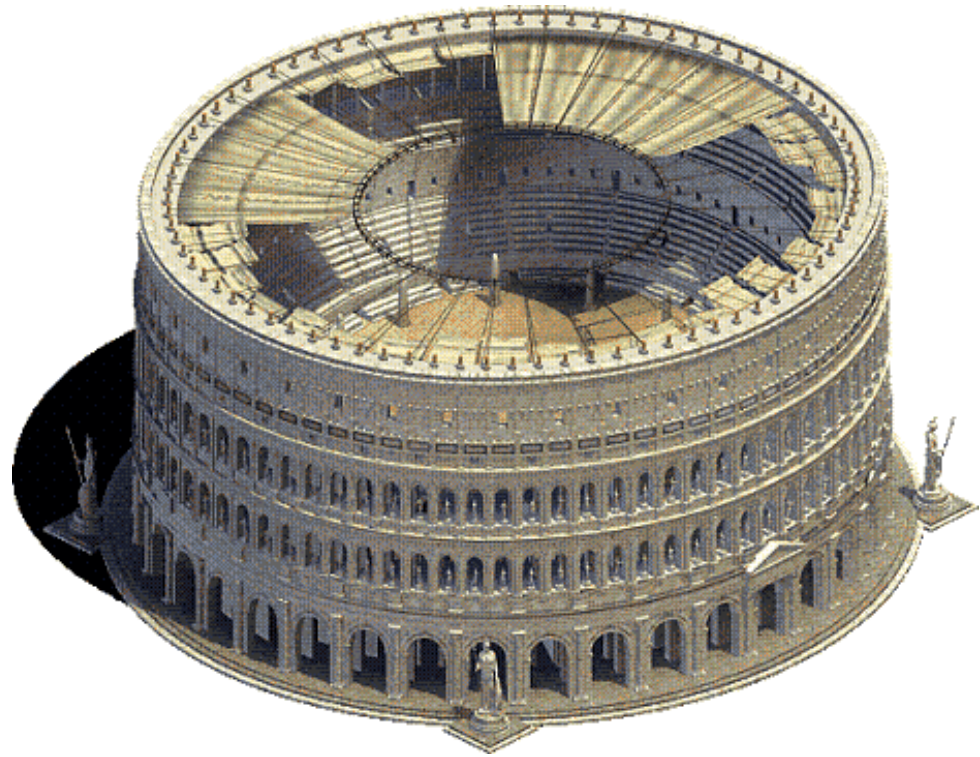
Let it shine The 600 year story of solar energy, J. Perlin

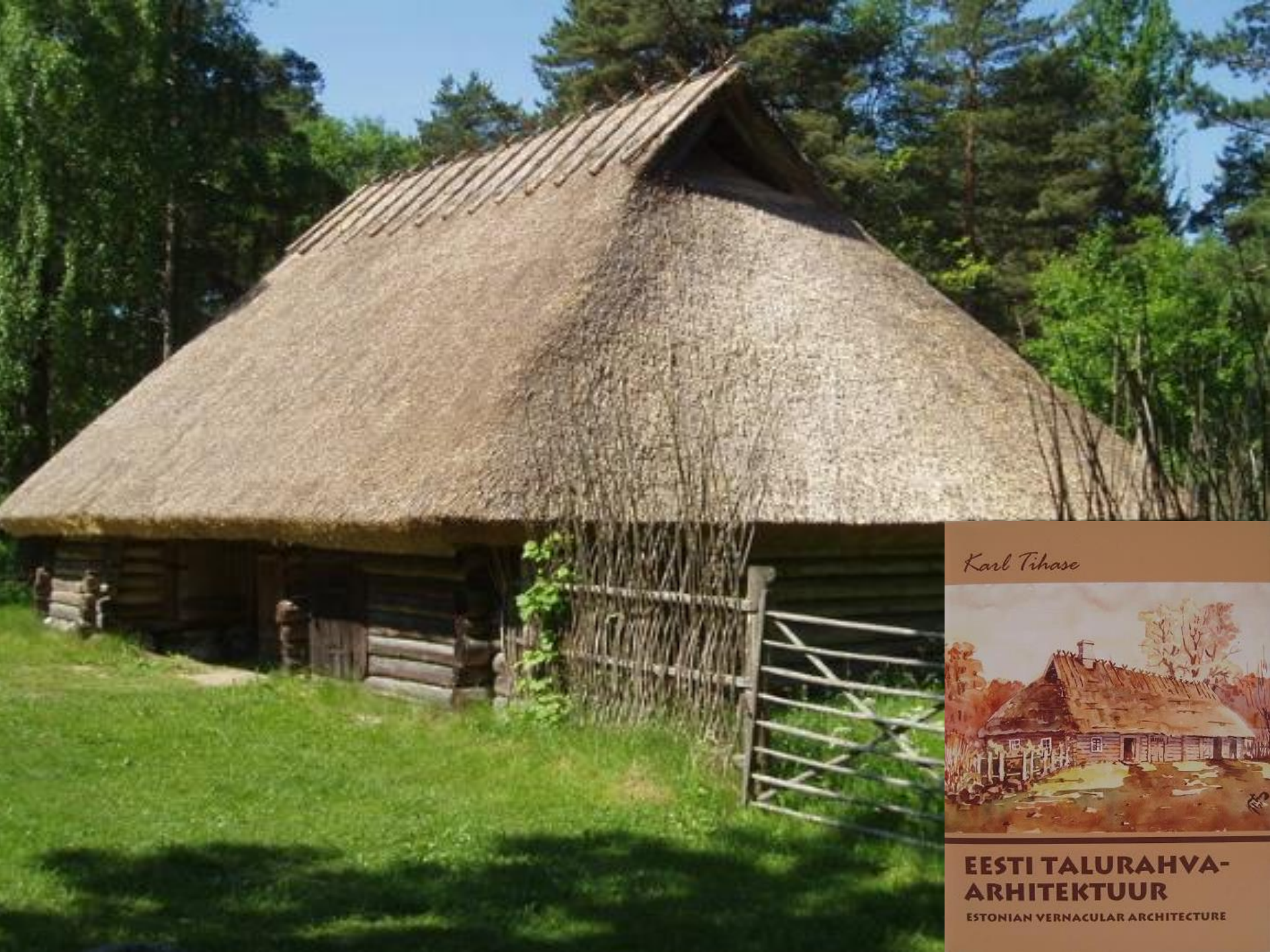
Aristoteles in Ancient Greek

„What type of housing are we to build for women and men, for foreigners and citizens?“ And then he answered, „For well-being and health, the homestead should be airy in summer and sunny in winter. A homestead possessing these qualities would be longer than it is deep; and its main front would face south.

Let it shine The 600 year story of solar energy, J. Perlin







Karl Tihase



**EESTI TALURAHVA-
ARHITEKTUUR**

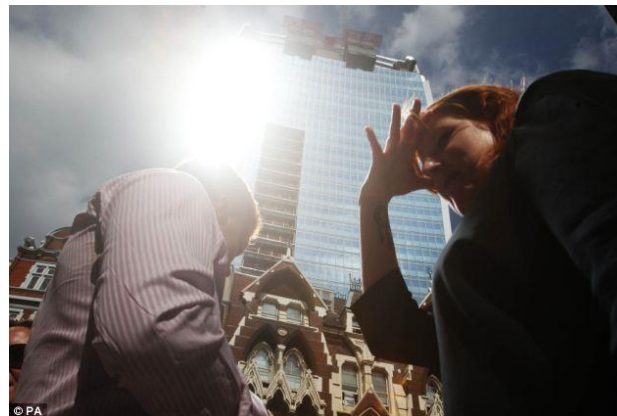
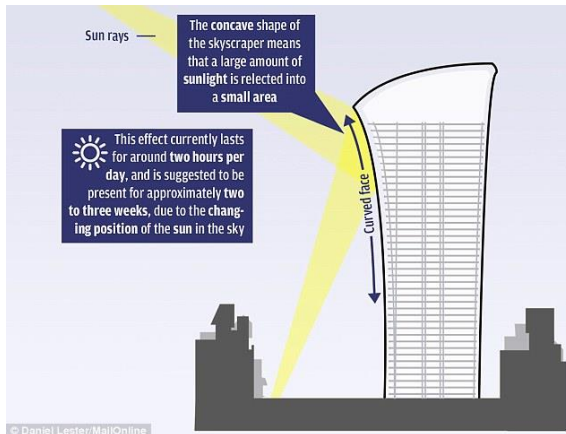
ESTONIAN VERNACULAR ARCHITECTURE

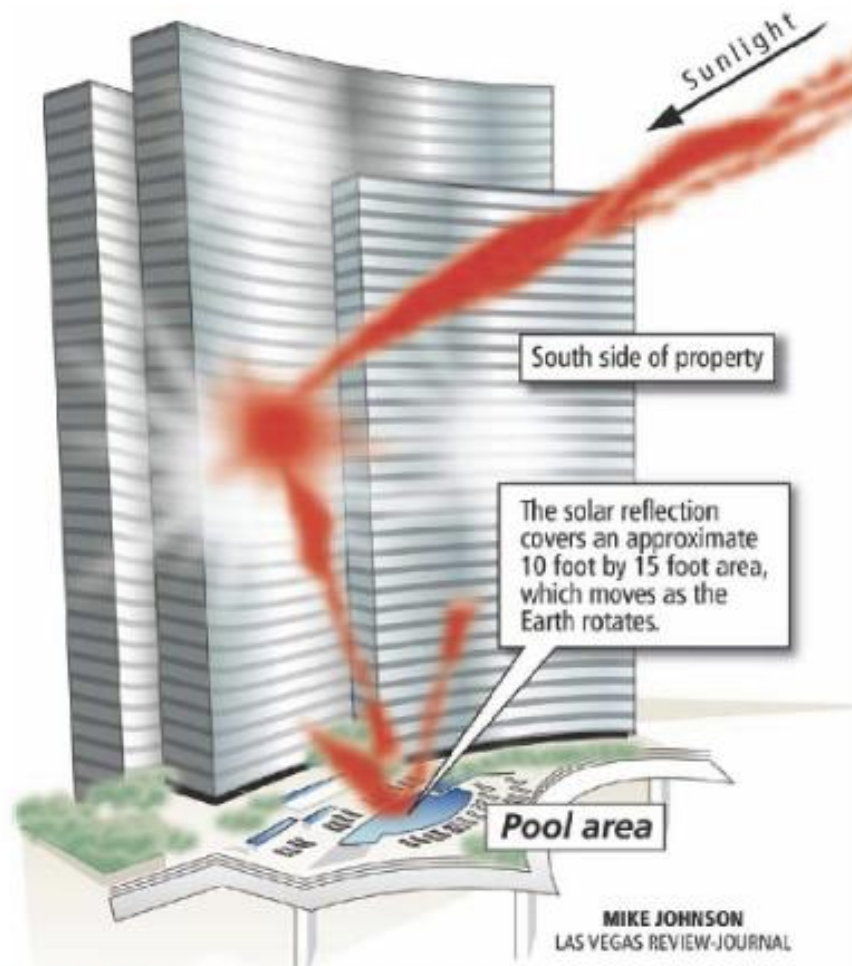




**The revolution of HVAC changed
the architecture education**







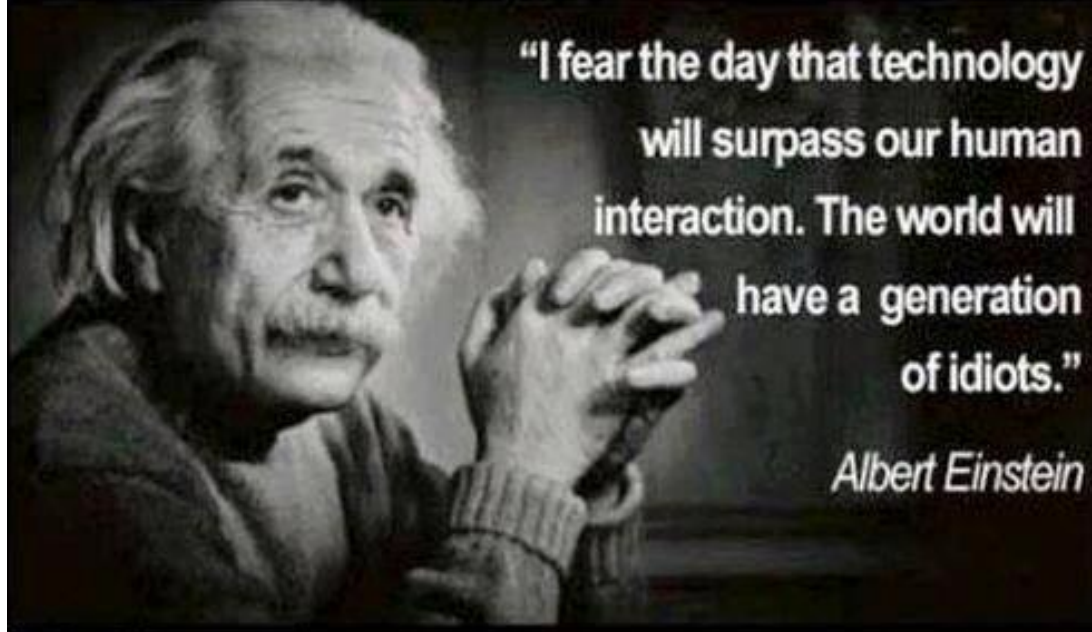
MIKE JOHNSON/LAS VEGAS REVIEW-JOURNAL



Bill Pintas' melted plastic newspaper bag.







Architects?? →



In last year or two architects
attitude has remarkably changed!

Architects are the key!

What is daylight?

Daylight is a combination of direct sunlight (direct solar radiation) and diffuse light (light reflected from the clouds).

Quality daylight is: Sufficient for visual task, visually comfortable and perceptually pleasing, glare-free, well distributed across the space.

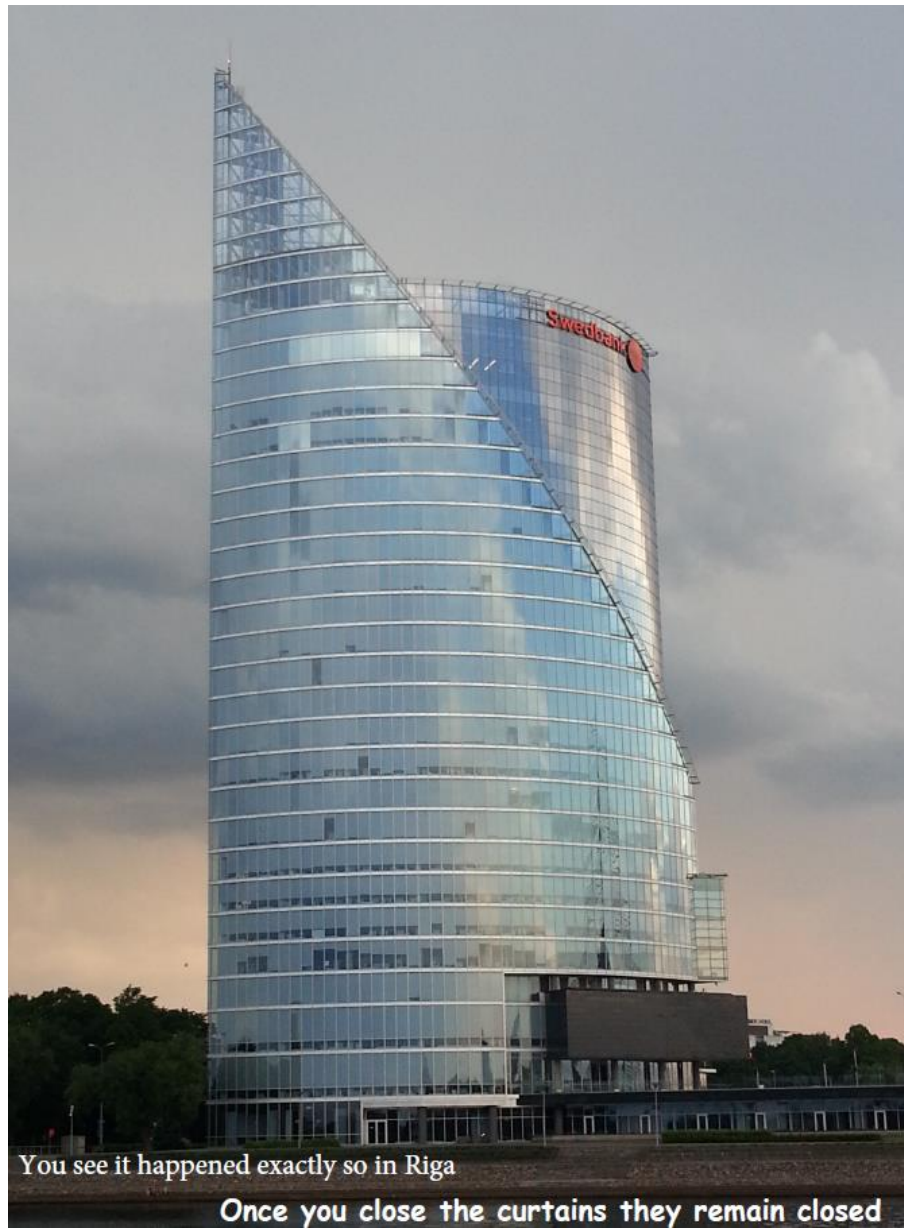
Direct sunlight



Diffuse light



Why?



You see it happened exactly so in Riga

Once you close the curtains they remain closed





Similarity? Difference?



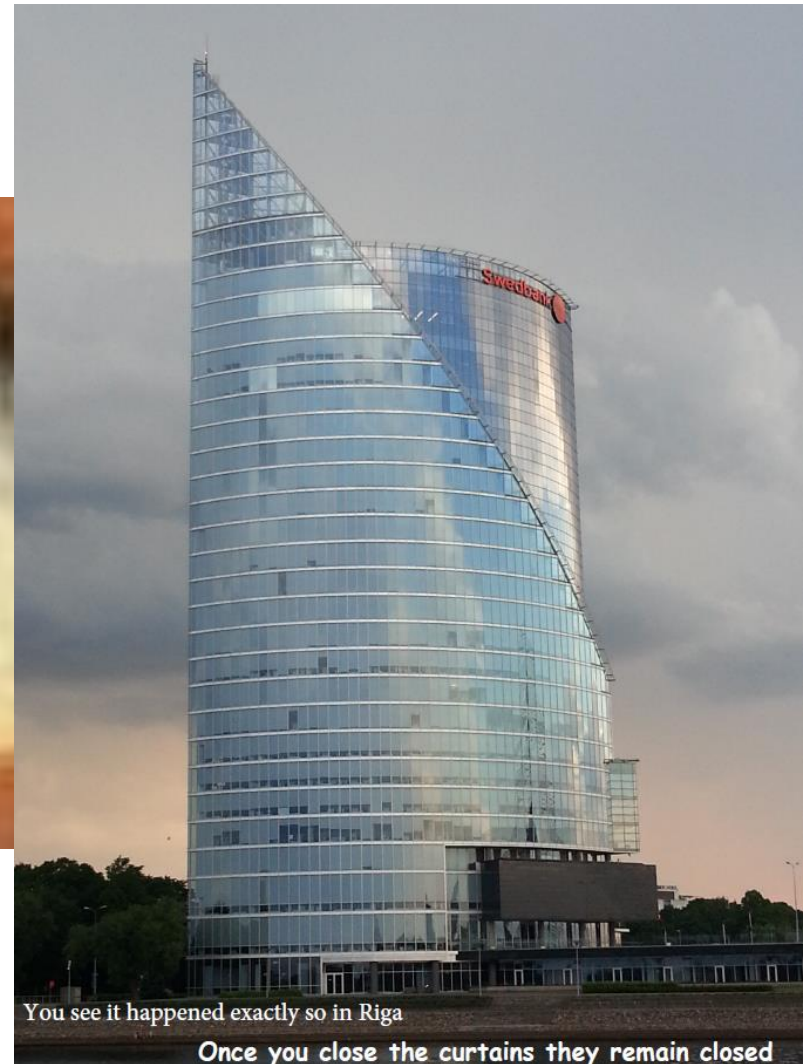








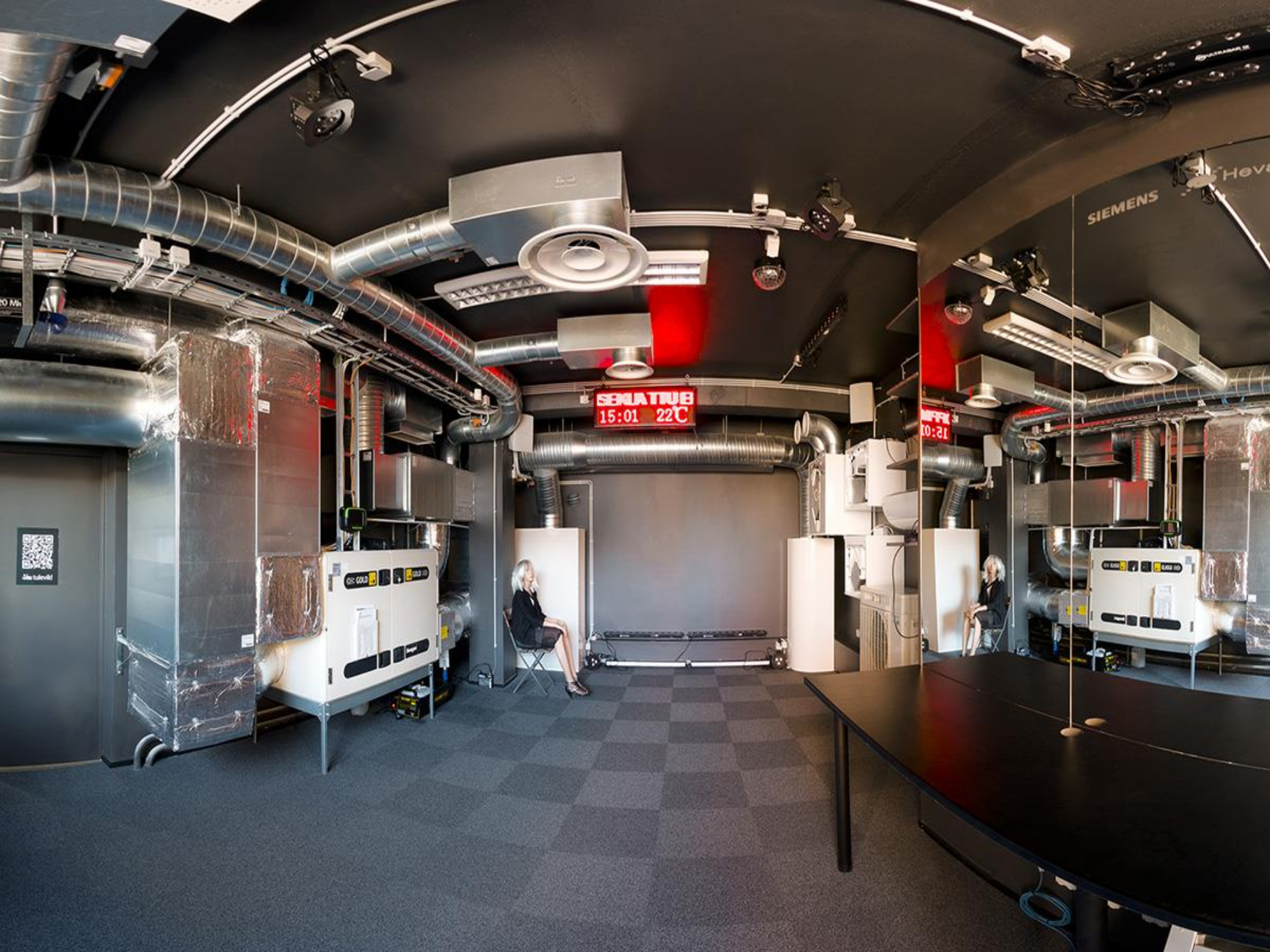




You see it happened exactly so in Riga

Once you close the curtains they remain closed





SENKTRIEB
15:01 22°C

OFFK
10:21

SIEMENS



010 GOLD
010 GOLD

010 GOLD
010 GOLD

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