NEW GLAZED COLLECTORS FOR FACADES:

THE L.E.S.O. COLOURED GLAZING PROJECT

(selected slides from PLEA 2007 (Singapour) oral presentation: “From facade integration of thermal ollectors to active facade system”, MC.Munari Probst, C.Roecker)

AVAILABLE GLAZED COLLECTORS

Visible absorber, welding points, defects

... DIFFICULT FACADE INTEGRATION !

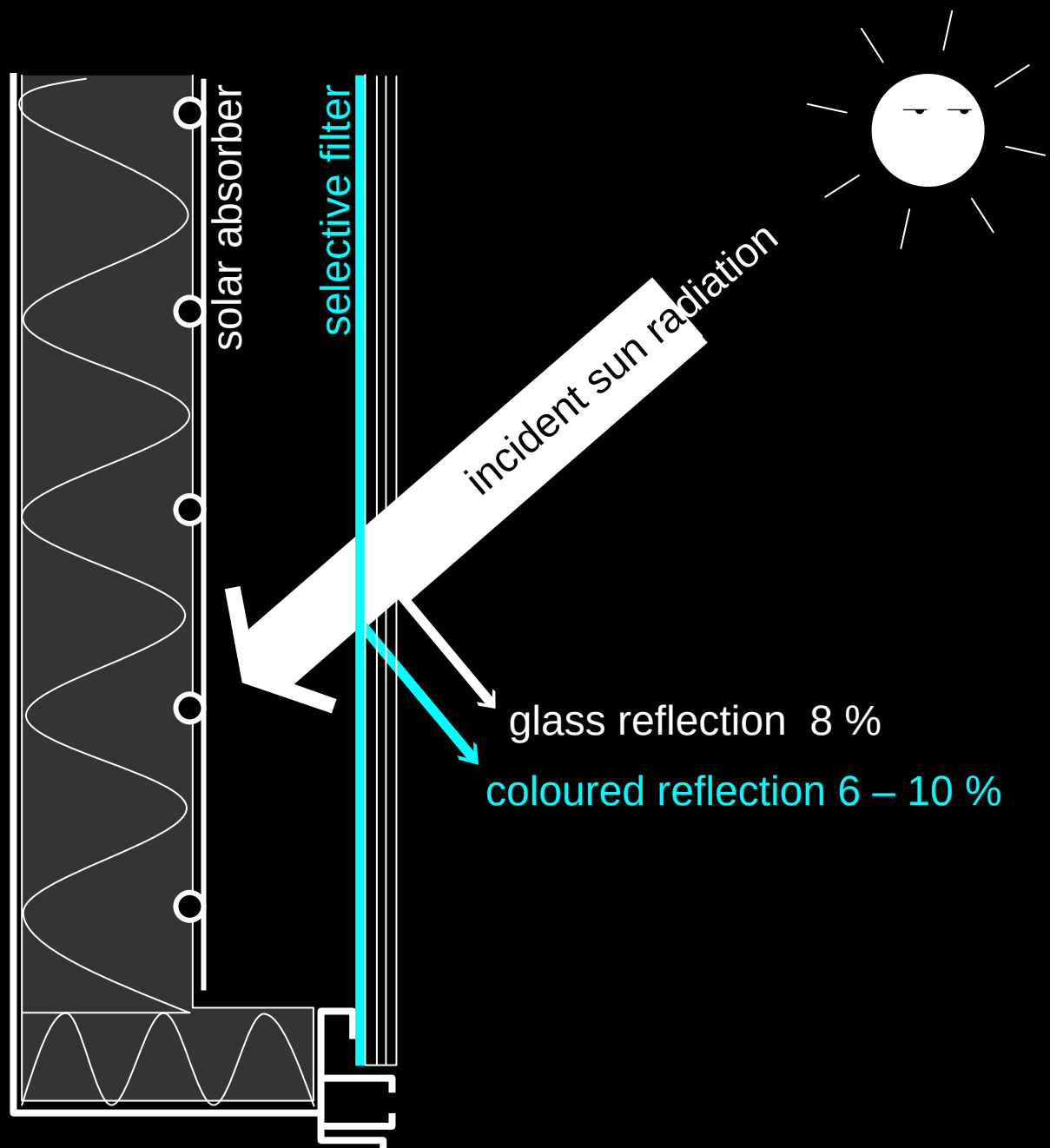
"HIDE THE ABSORBER

by

COLOURING THE GLASS"

BUT HOW ?

FIRST STEP: ADD A SELECTIVE FILTER TO THE INNER GLASS SIDE



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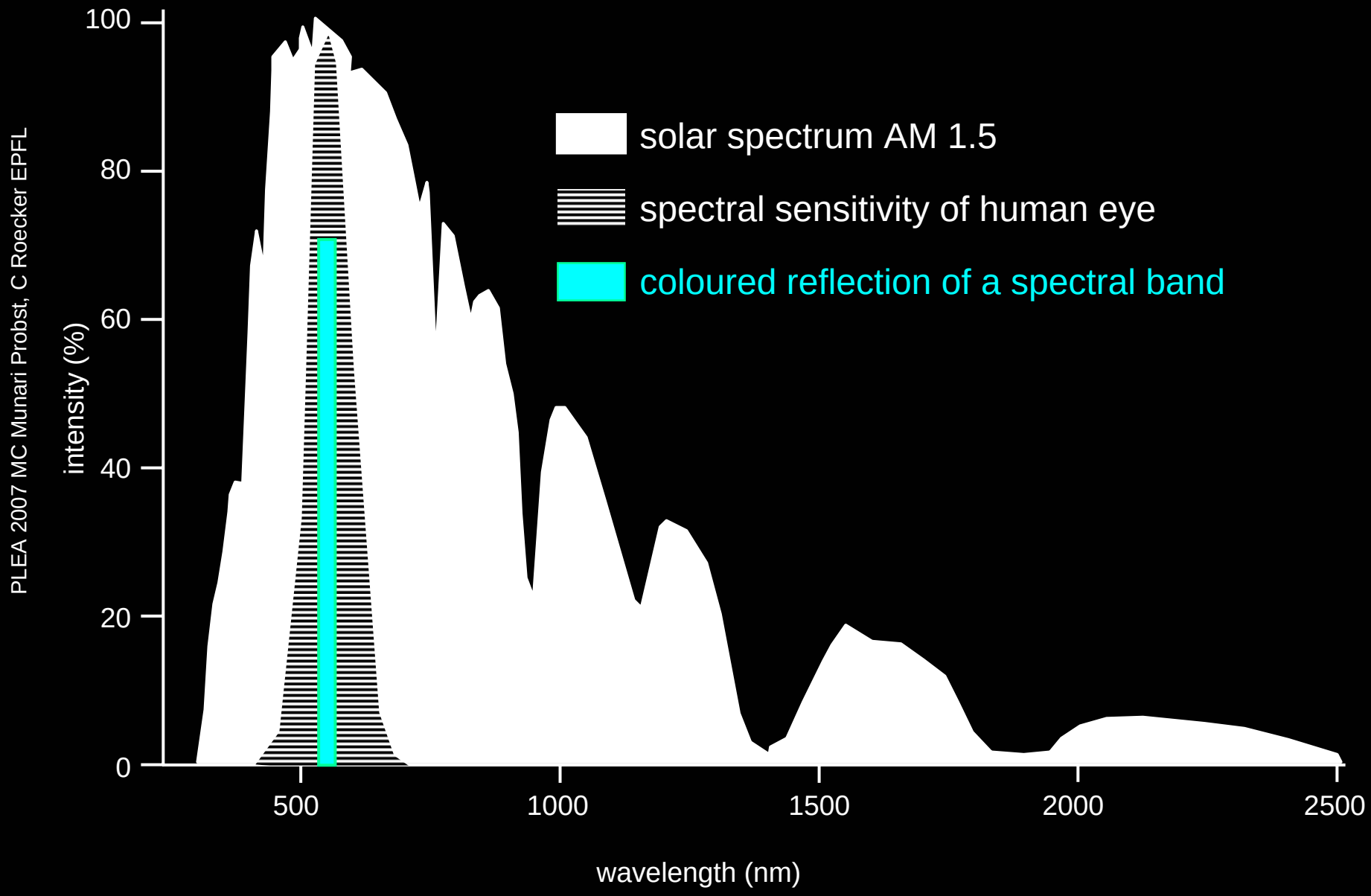
CHARACTERISTICS OF THE IDEAL REFLECTIVE FILTER:

MINIMUM TRANSMISSION LOSSES

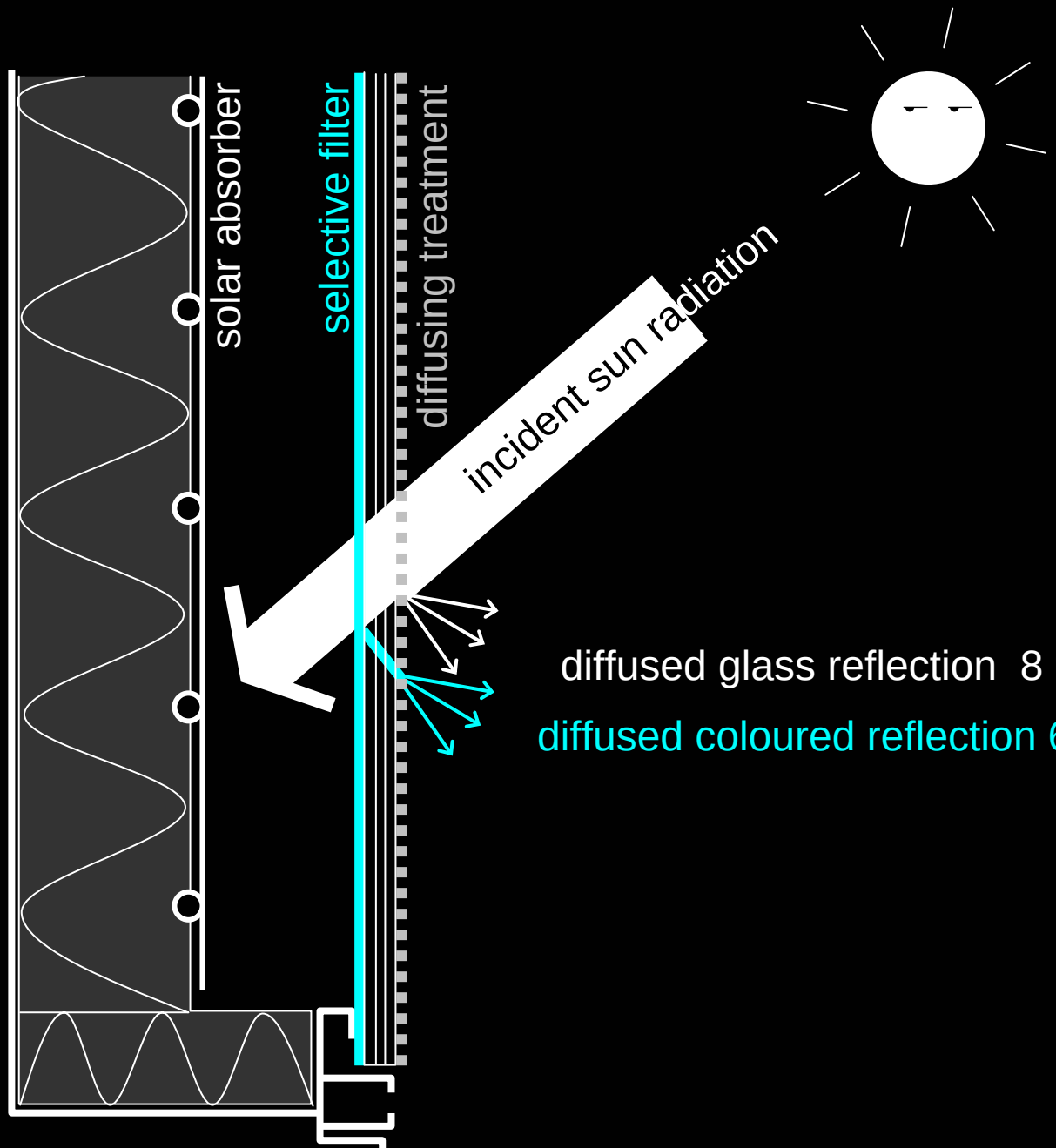


EXAMPLE OF COLOUR PALETTE

(SELECTIVE FILTERS ON EXTRA WHITE GLASS)

g = 82 - 86 % (extra white glass 8% + selective filter 6-10%)

STEP 2 : SELECTIVE FILTER IN.... DIFFUSING TREATMENT OUT



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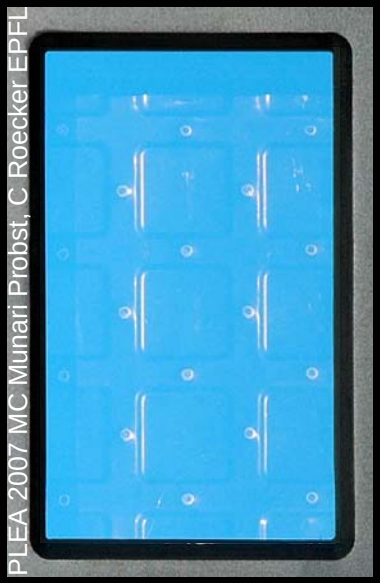
RESULTING GLASSES:

SELECTIVE FILTER IN + DIFFUSING TREATMENT OUT

blue coating ONLY



blue coating (in)

acid etching (out)

blue coating

structured glass (pyramidal)

blue coating

patterned acid etching

blue coating

custom acid etching

g ≃ 80 - 86 % (extra white glass 8% + selective filter 6-10% + 1% diffusing treatment)

UP SCALING

Full scale solar

collectors with

prototype glasses

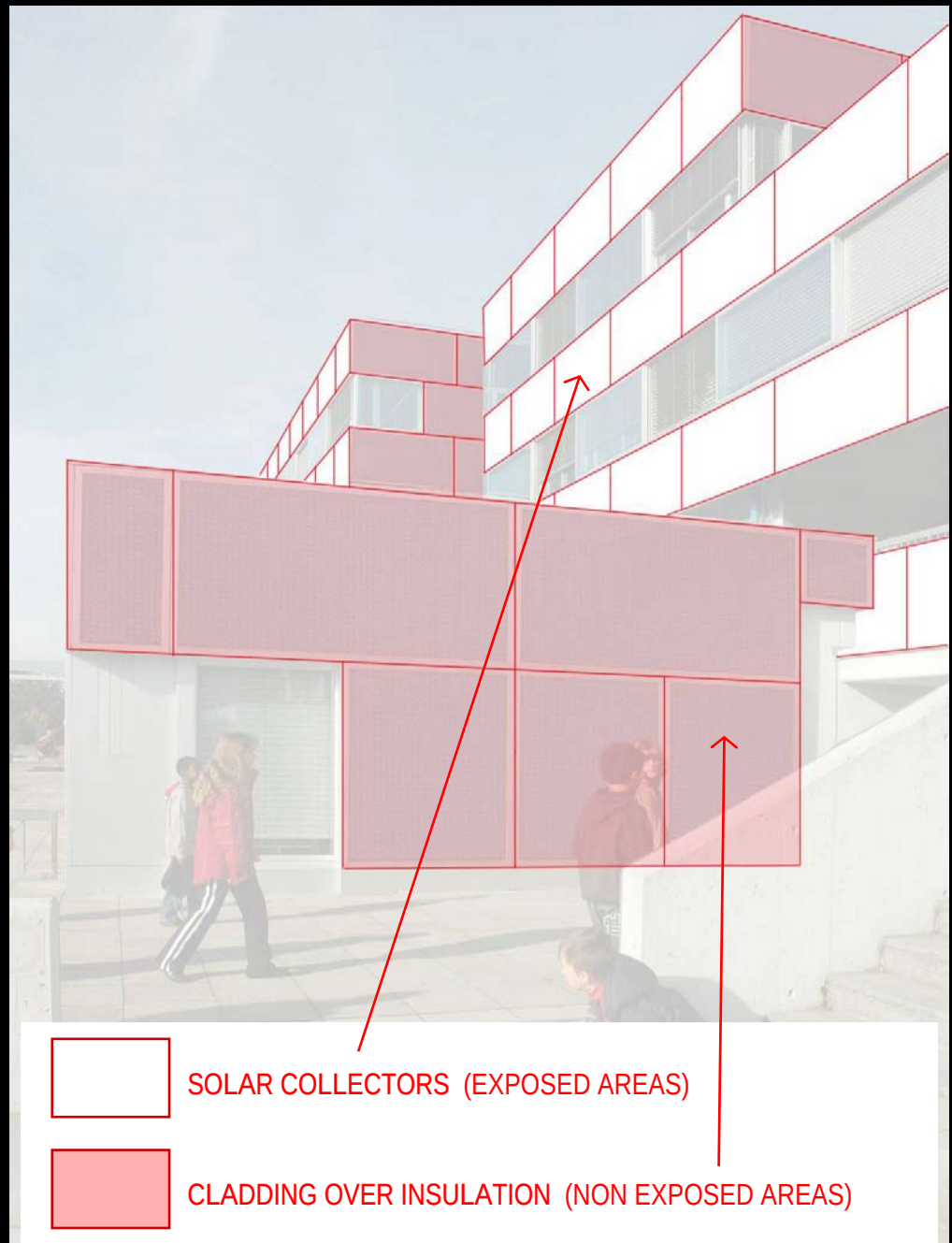
(and the team !)

A NEW MULTIFUNCTIONAL GLASS FOR ACTIVE FACADE SYSTEMS

SCHOOL BUILDING RETROFIT - PULLY

(real picture)

SCHOOL BUILDING RETROFIT - PULLY



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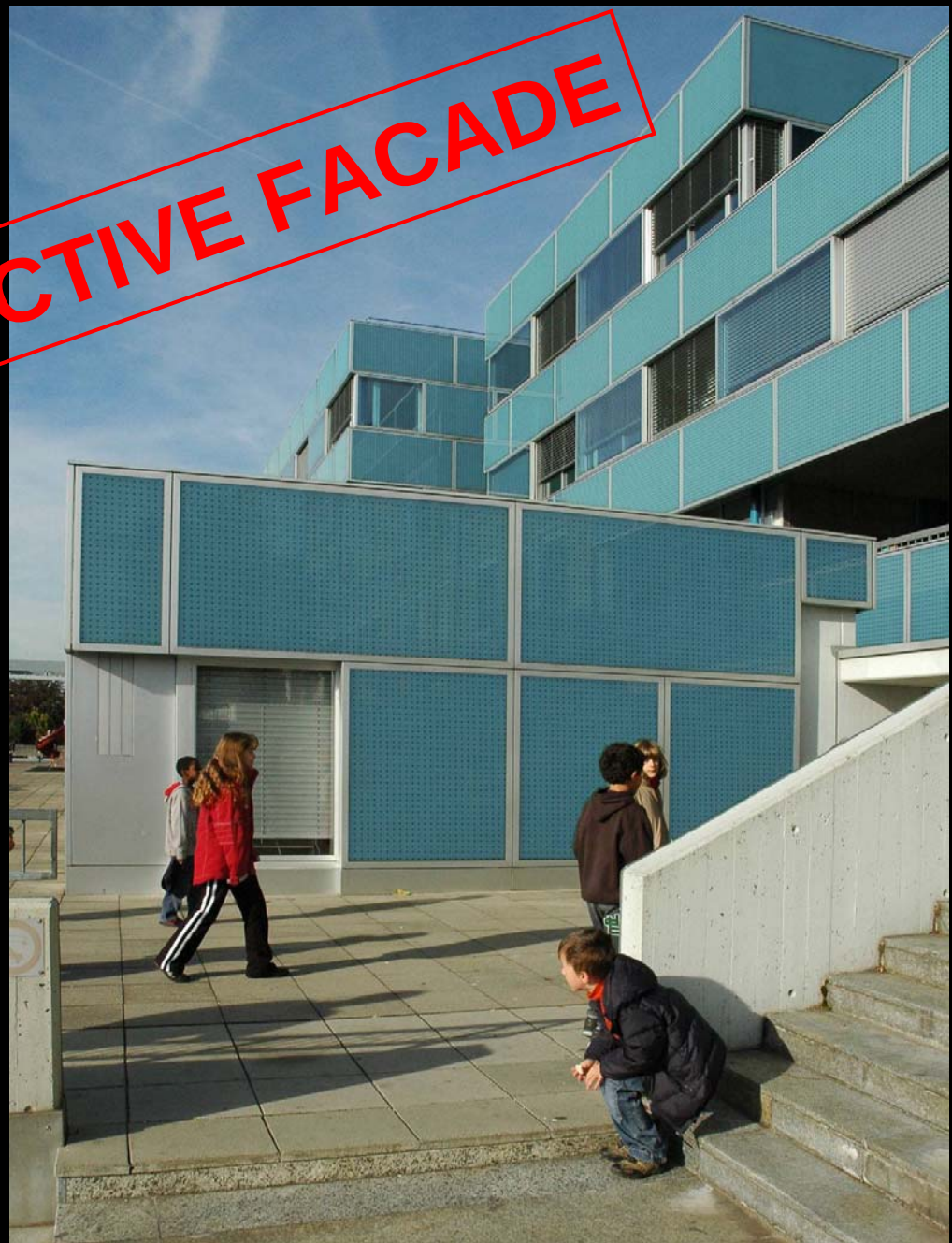
SCHOOL BUILDING RETROFIT - PULLY

1 glass…

…**2** functions

SCHOOL BUILDING RETROFIT - PULLY



(simulation)

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END

Authors wish to thank:
E.U. for financing the survey (EU project SOLABS).
OFEN for financing the LESO Glazing project.
Pierre Loesch for technical support.