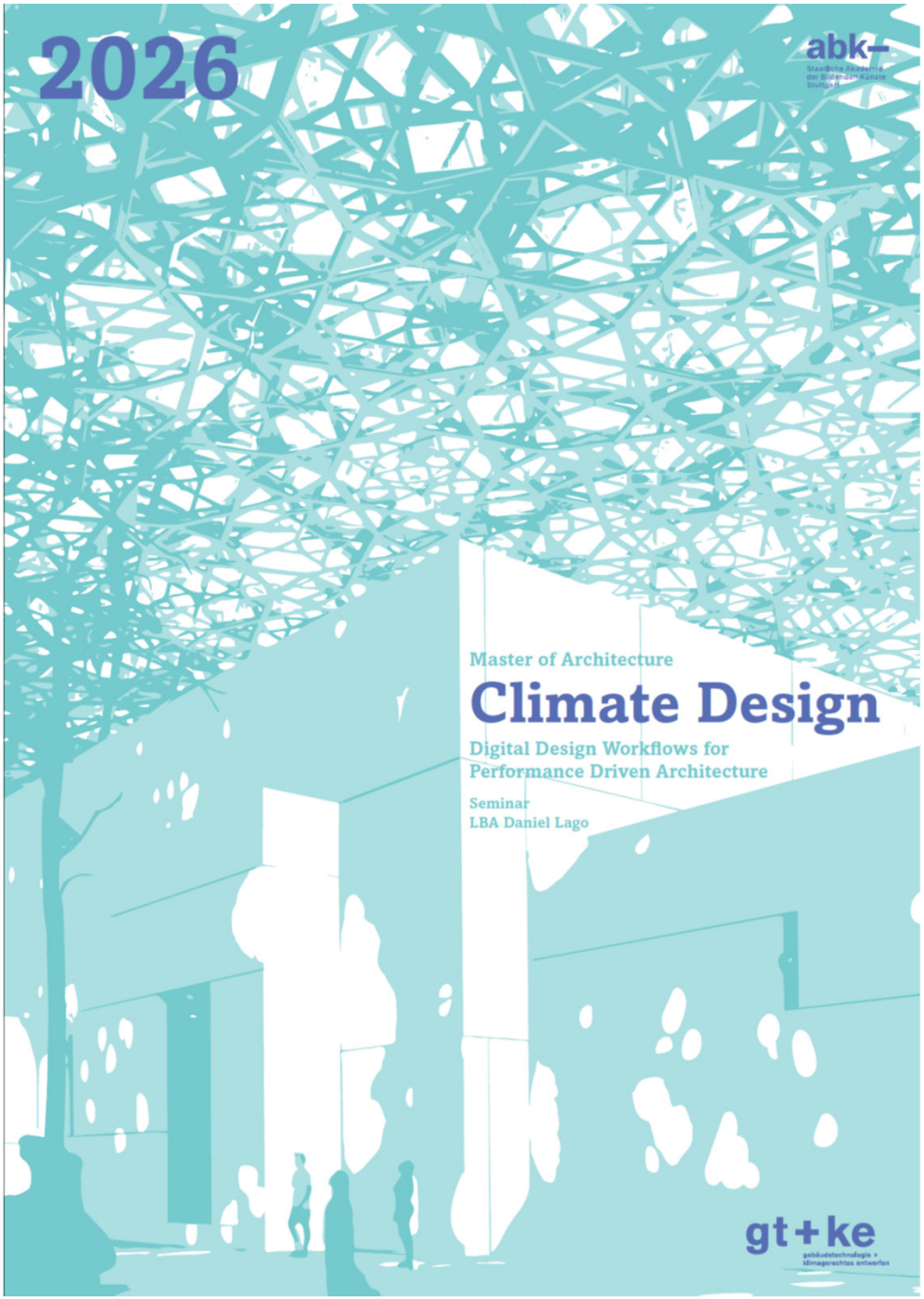

gt+ke

Lecturer
LBA Daniel Lago, BA. Arch.
Project Engineer at
Transsolar KlimaEngineering

Dates
Thursdays, 14:00-17:00

Kick-off
Thursday – 23.04.2026 – 14:00
KWR Pavillon, Campus Center

Main Language
English

Registration
by e-mail until Monday, 19.04.2026
climatedesigntools@transsolar.com

More Info
portal.abk-stuttgart.de, gt.abk-stuttgart.de

Climate Design Tools

Course outline

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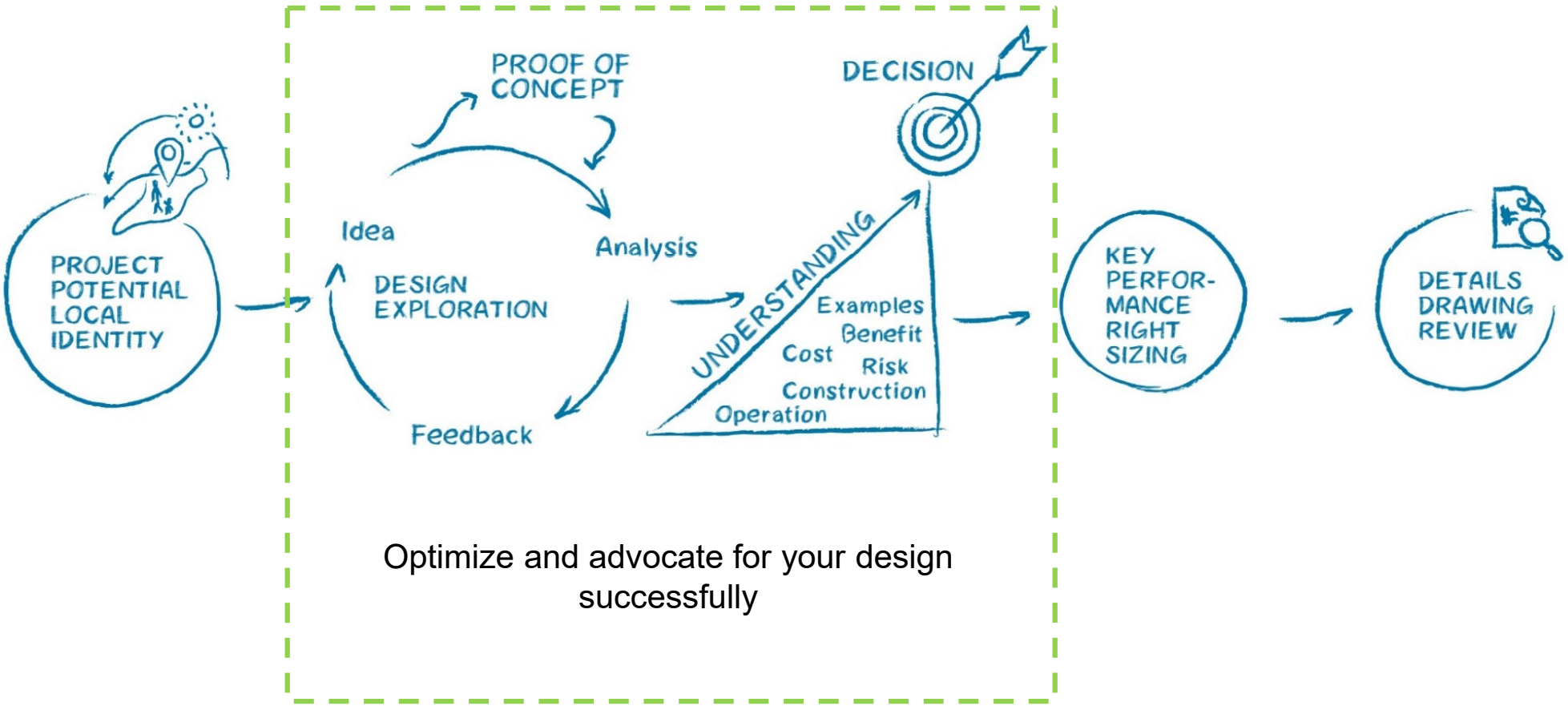
gebäudetechnologie + klimagerechtes entwerfen

Session	When	What
Session 01	23/04 (14:00 to 17:00)	Introduction Daylight and Radiation
Session 02	30/04 (14:00 to 17:00)	Introduction to Rhino / Software Setup & Troubleshooting
Session 03	21/05 (14:00 to 17:00)	Climate Studio Tutorials & Hands-on
Session 04	18/06 (14:00 to 17:00)	Climate Studio Tutorials & Hands-on
Session 05	25/06 (14:00 to 17:00)	Capstone Project - Introduction
Session 06	02/07 (14:00 to 17:00)	Capstone Project – Mid review
Session 07	09/07 (14:00 to 17:00)	Capstone Project – Final review

Source: Transsolar KlimaEngineering

Performance driven design

Timeline

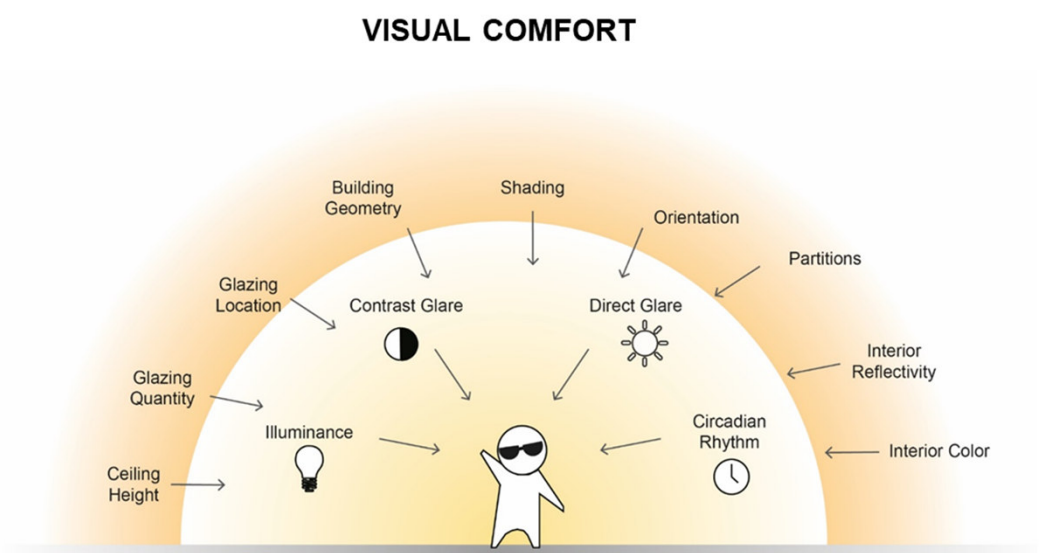


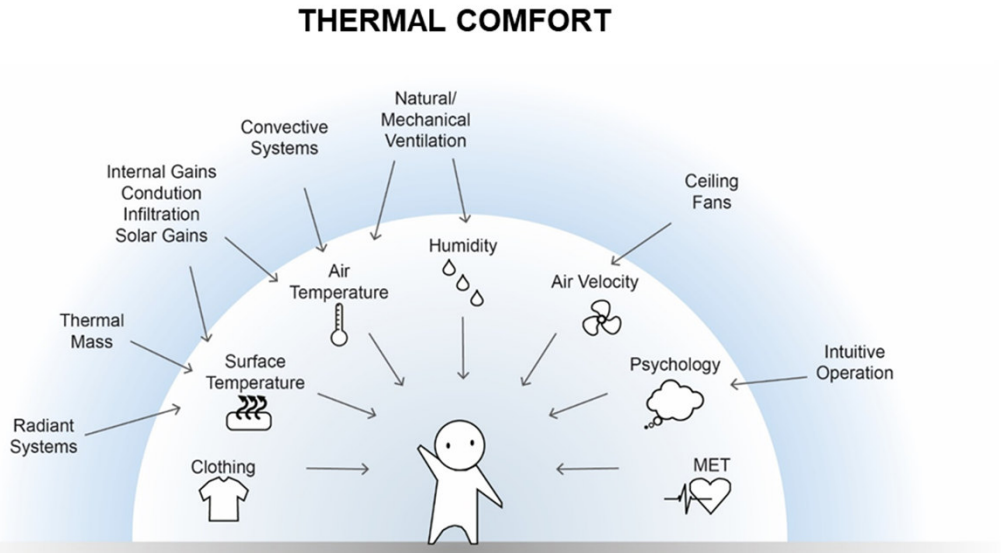
Optimize and advocate for your design successfully

Source: Transsolar KlimaEngineering

What do we ask of buildings?

Comfort



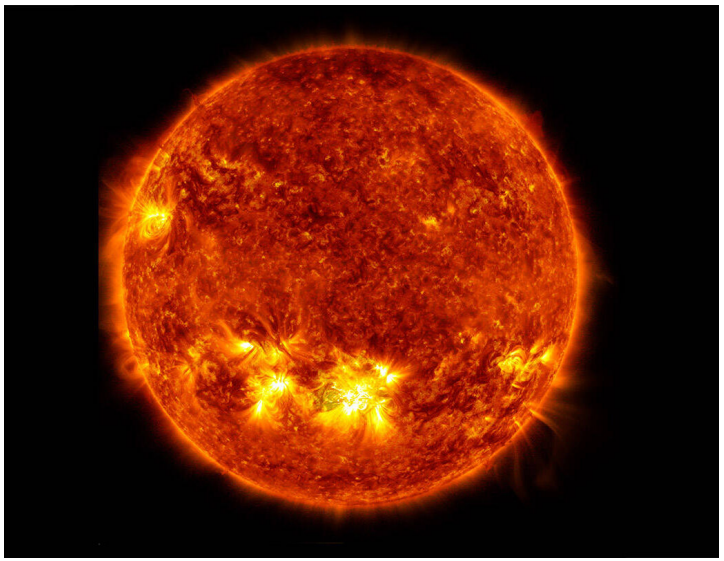


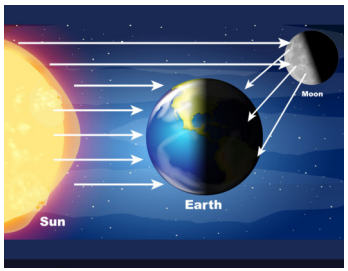
Subjective and objective influencing factors

Source: Transsolar KlimaEngineering

Introduction to Daylight

Light sources

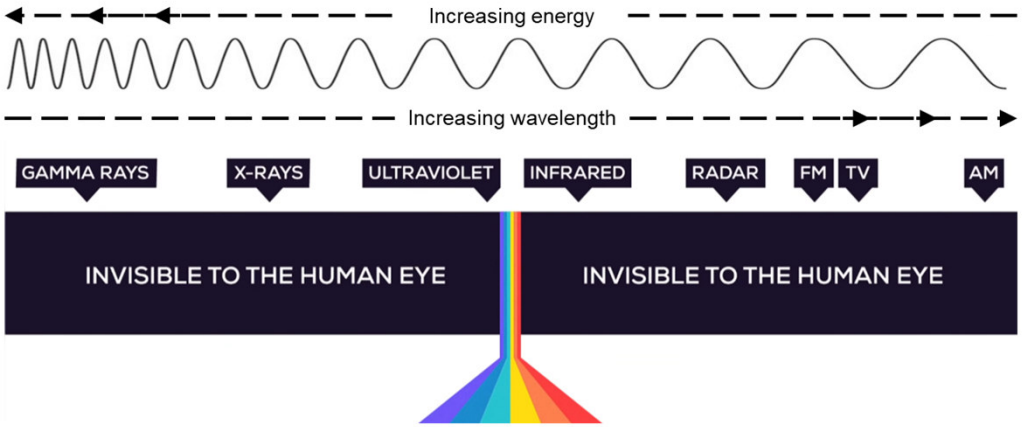




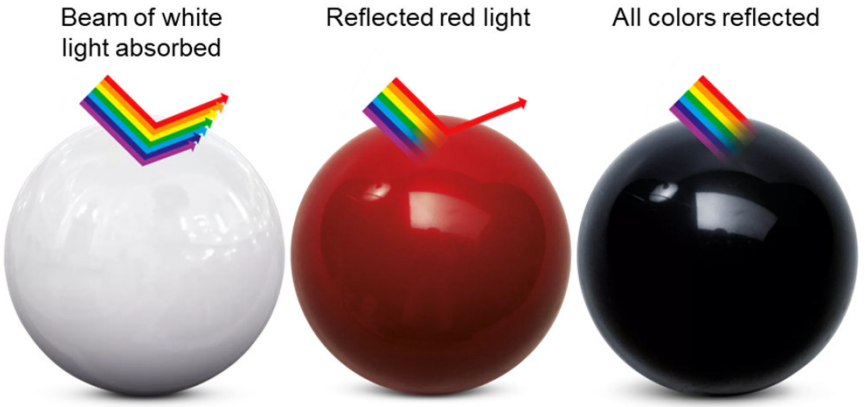
Source: Transsolar KlimaEngineering

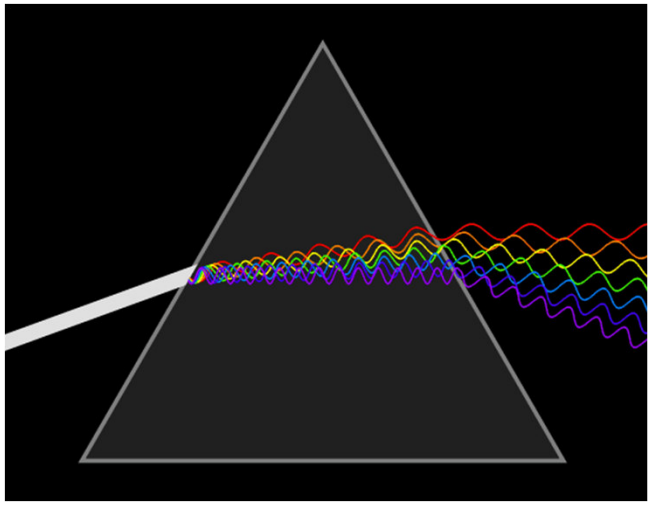
Introduction to Daylight

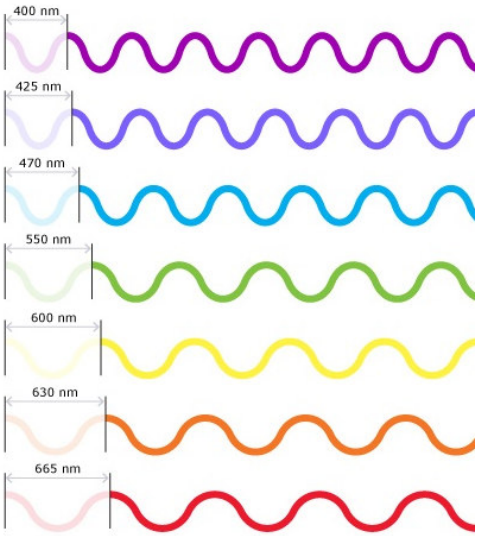
Physics of light



Only Wavelength between 380 -780 nm are visible to humans



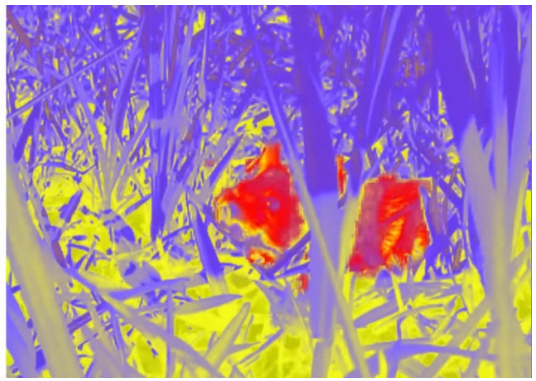




Source: Transsolar KlimaEngineering

Introduction to Daylight

Physics of light

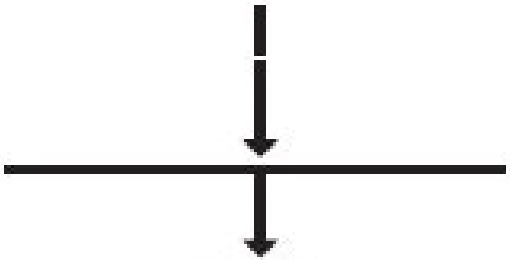


Source: Transsolar KlimaEngineering

Introduction to Daylight

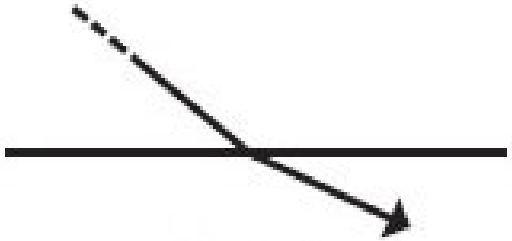
Light behaviors

Transmission

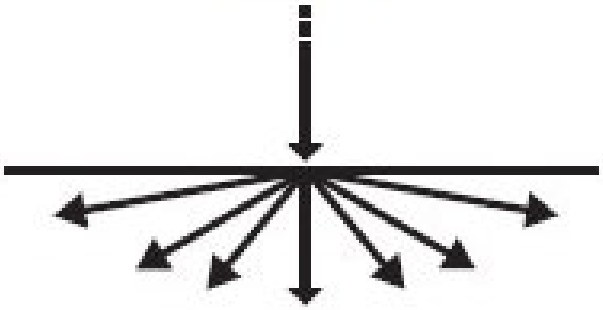


Reflection

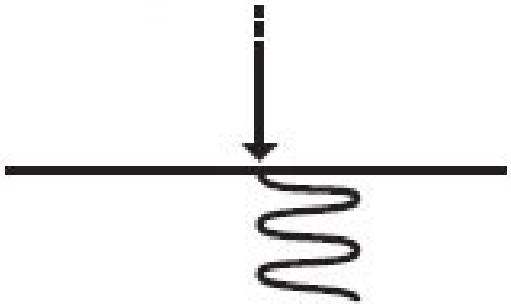
Refraction



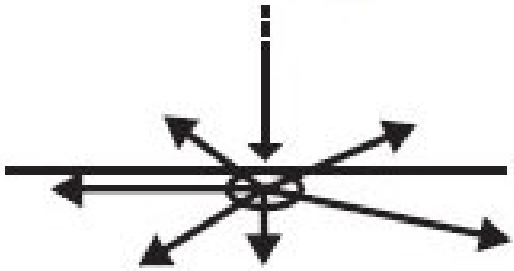
Diffraction



Absorption



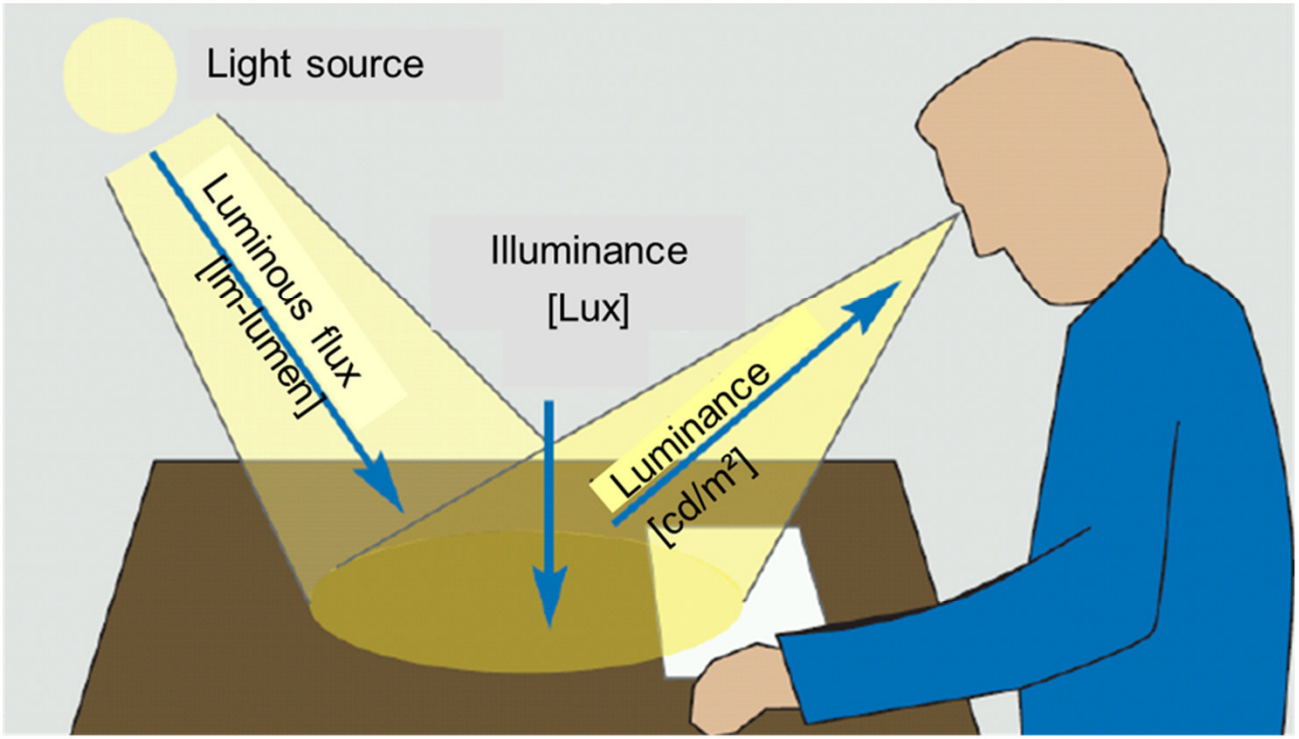
Scattering



Source: Transsolar KlimaEngineering

How to measure light?

Definitions, metrics and tools



IL-LUMINANCE
WHAT THE OBJECT RECEIVES

LUMINANCE
WHAT THE EYE RECEIVES

Source: Transsolar KlimaEngineering

How to measure light?

Digital tools and workflows

User interface

Rhinoceros 3D
Grasshopper

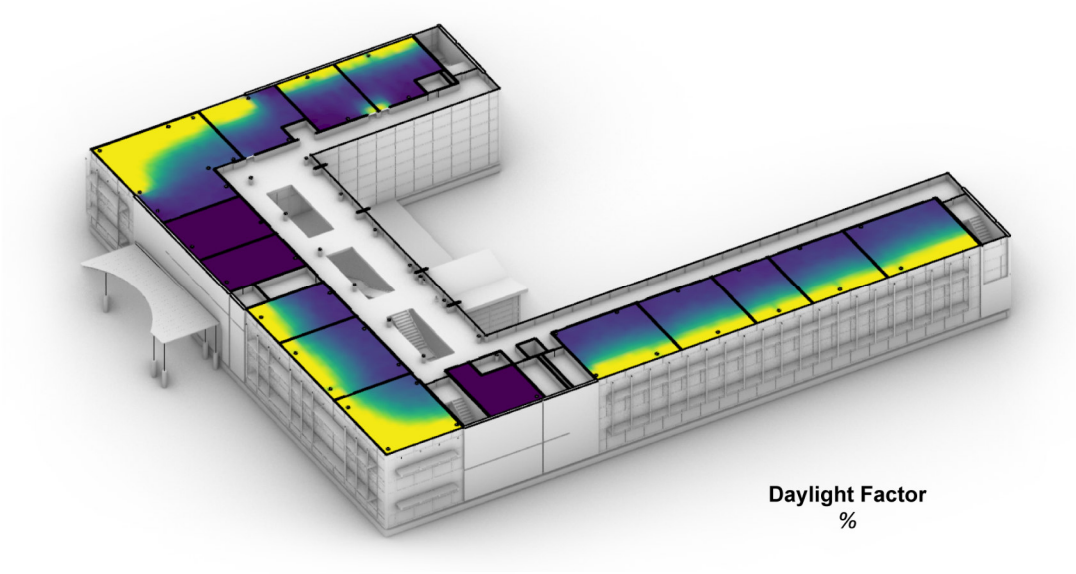
Validated engine

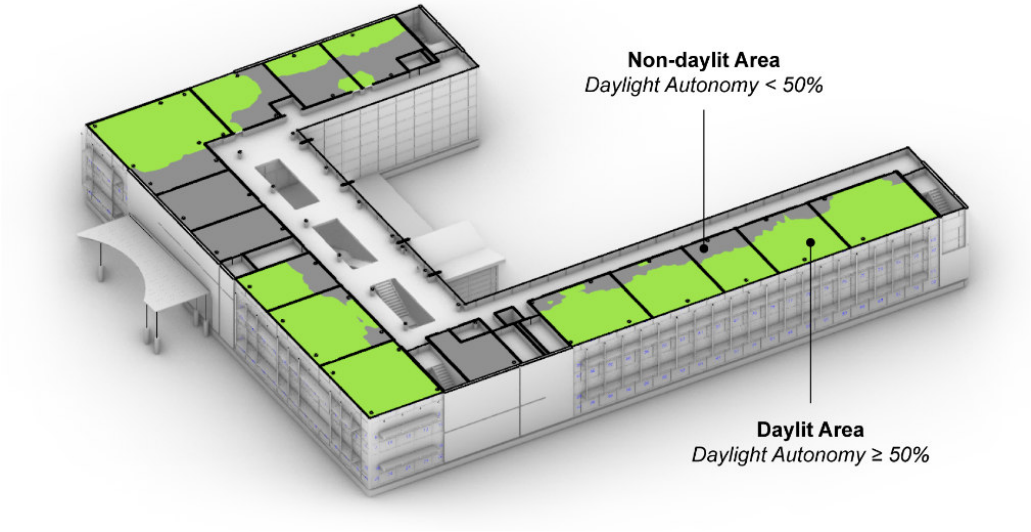
Radiance
Daylight simulation engine for static daylight analysis

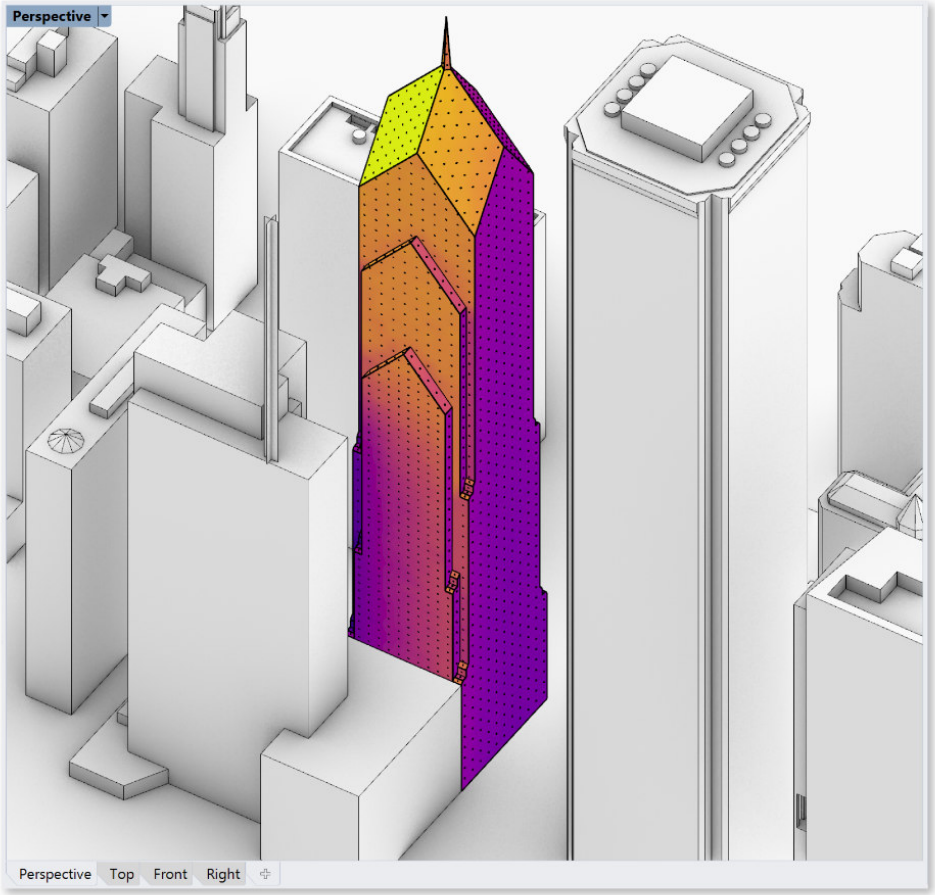
Source: Transsolar KlimaEngineering

How to measure light?

Digital tools and workflows







Climate Studio

Source: Transsolar KlimaEngineering

Daylight-Radiation 3D-model with Rh

Preparation, simplification, materials

Rhinoceros®

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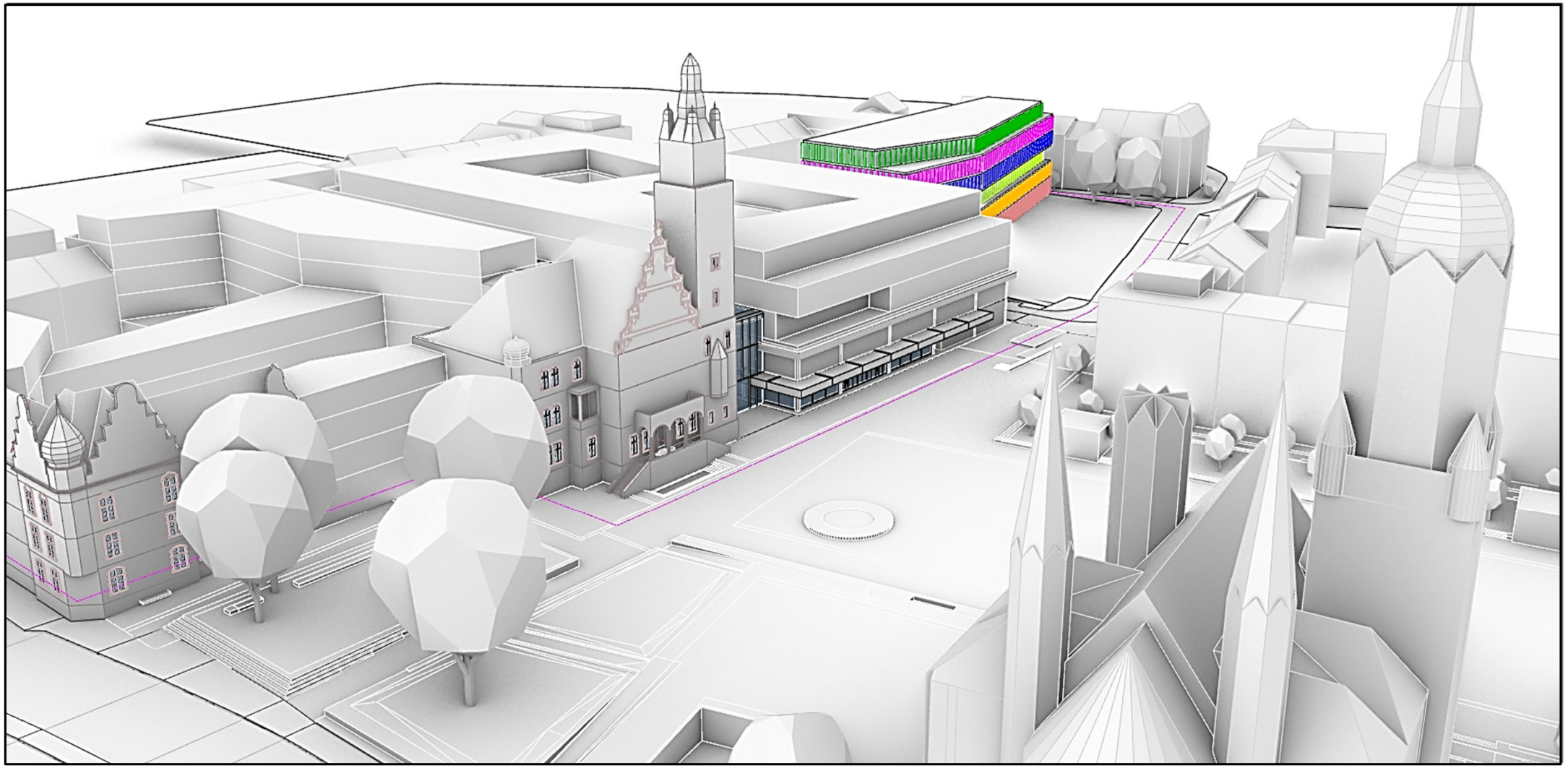
gebäudetechnologie + klimagerechtes entwerfen



Source: Transsolar KlimaEngineering

Daylight-Radiation 3D-model with Rh

Preparation, simplification, materials

Rhinoceros®

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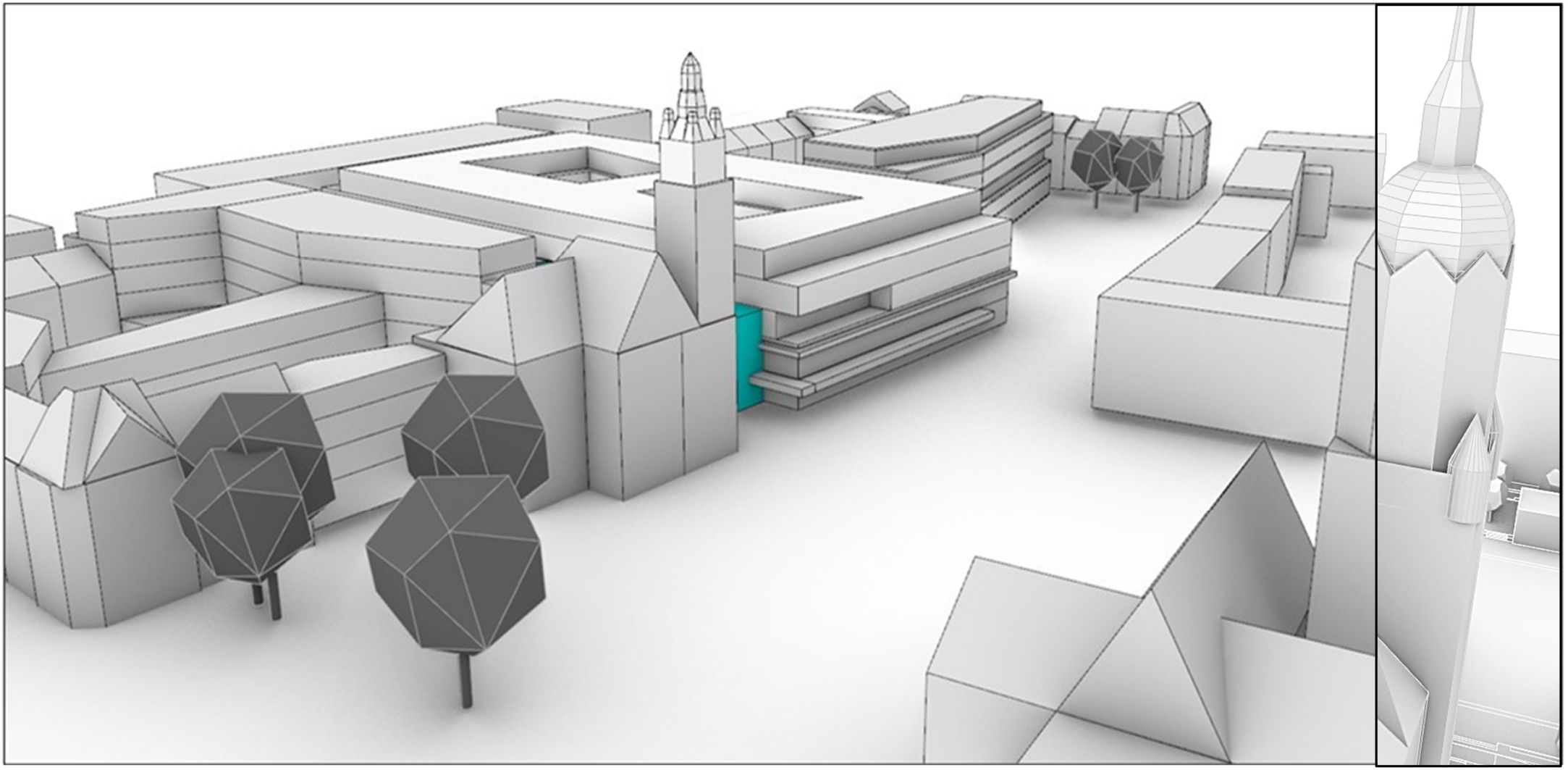

Source: Transsolar KlimaEngineering

Rhino + Grasshopper

Parametrization, visual programming

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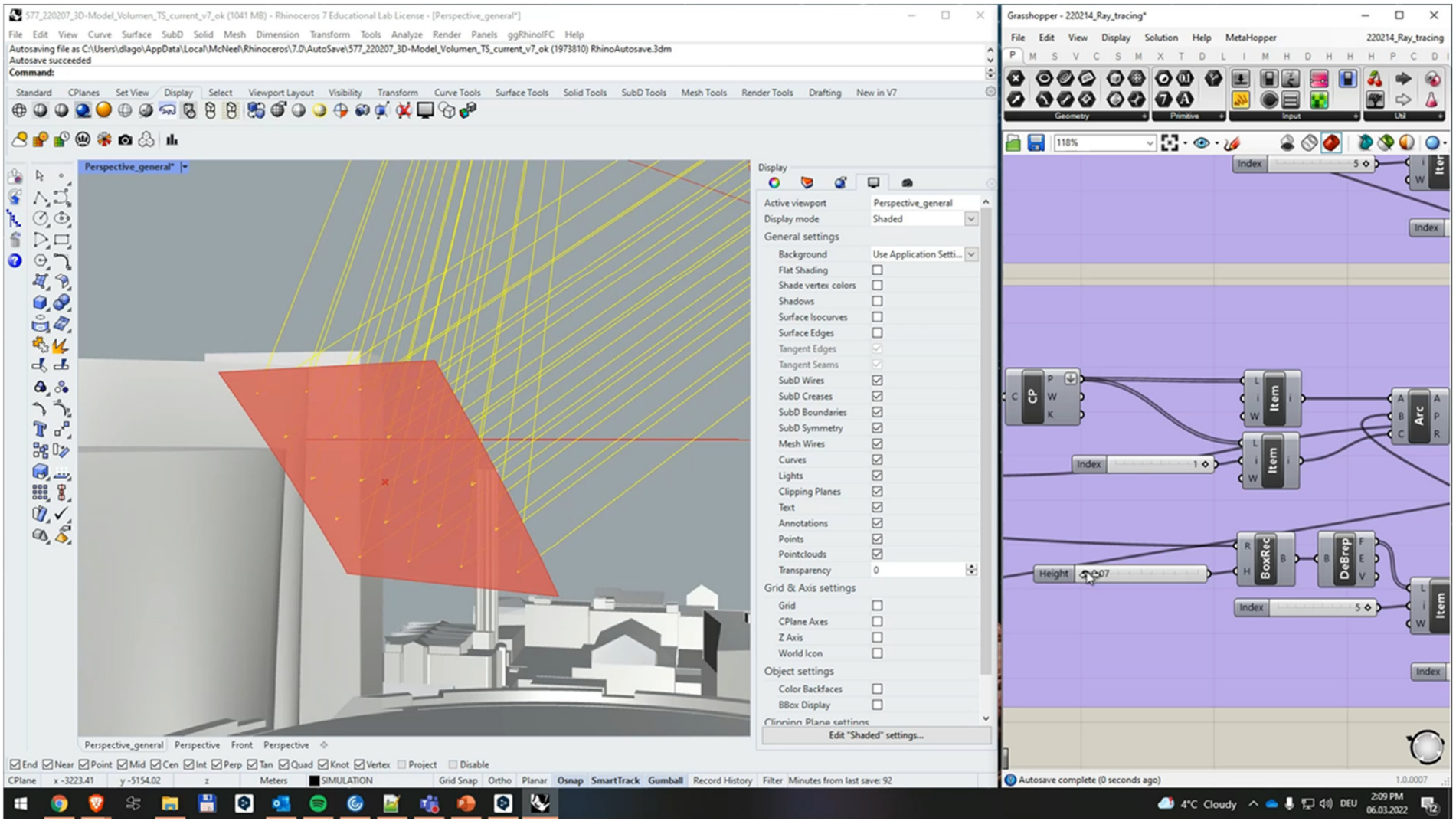

Source: Transsolar KlimaEngineering

Digital Workflows and Computer simulations

Solar Radiation studies

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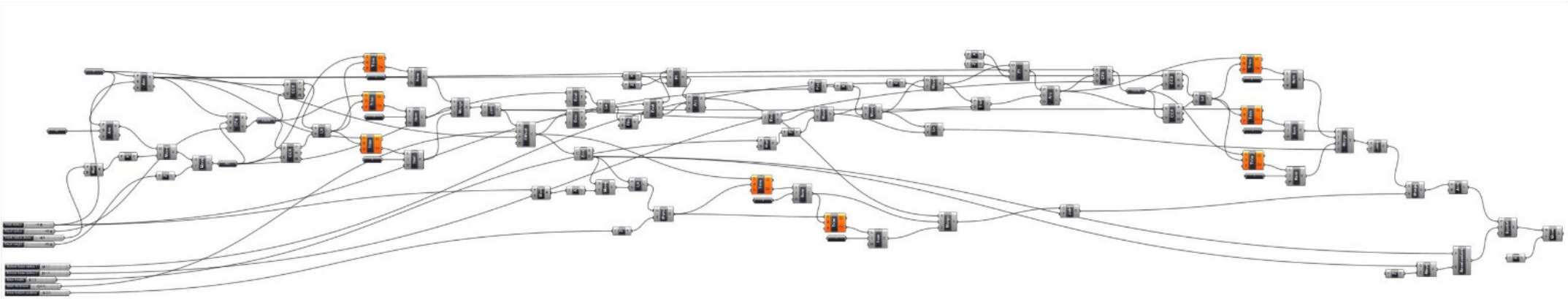
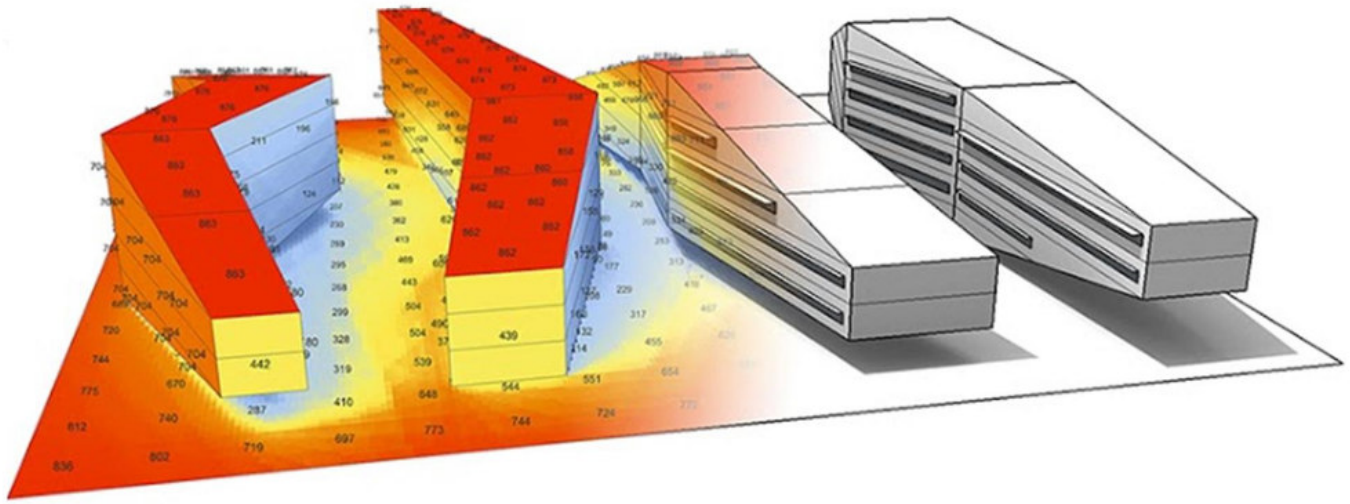


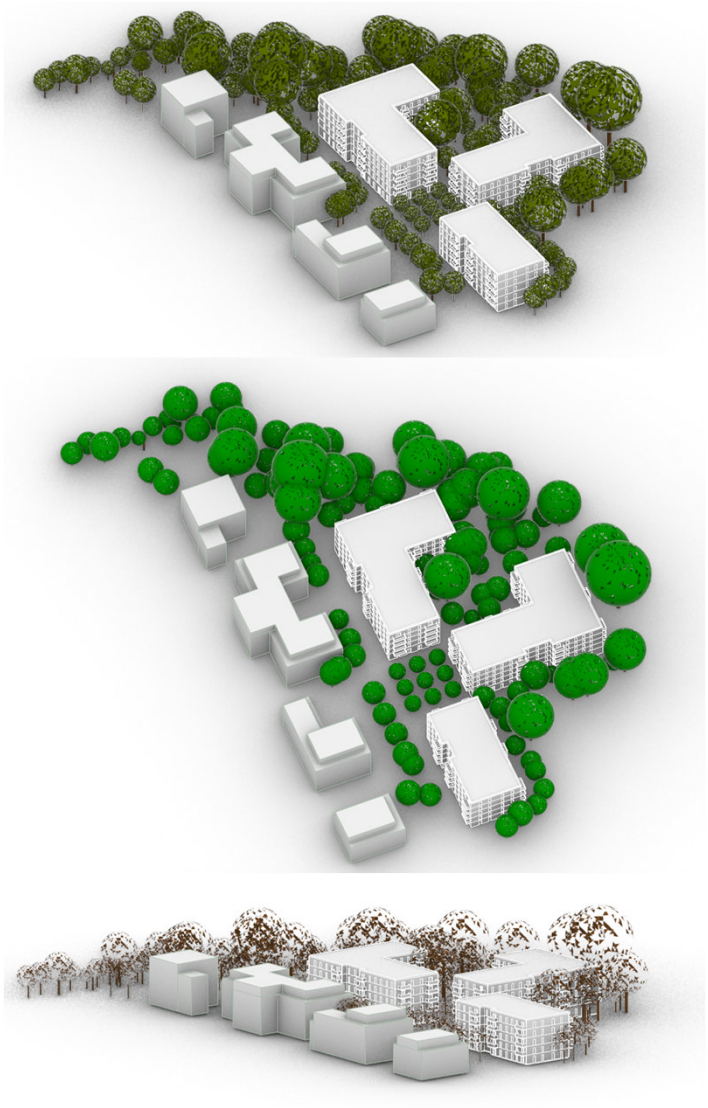
Façade Radiation Analysis

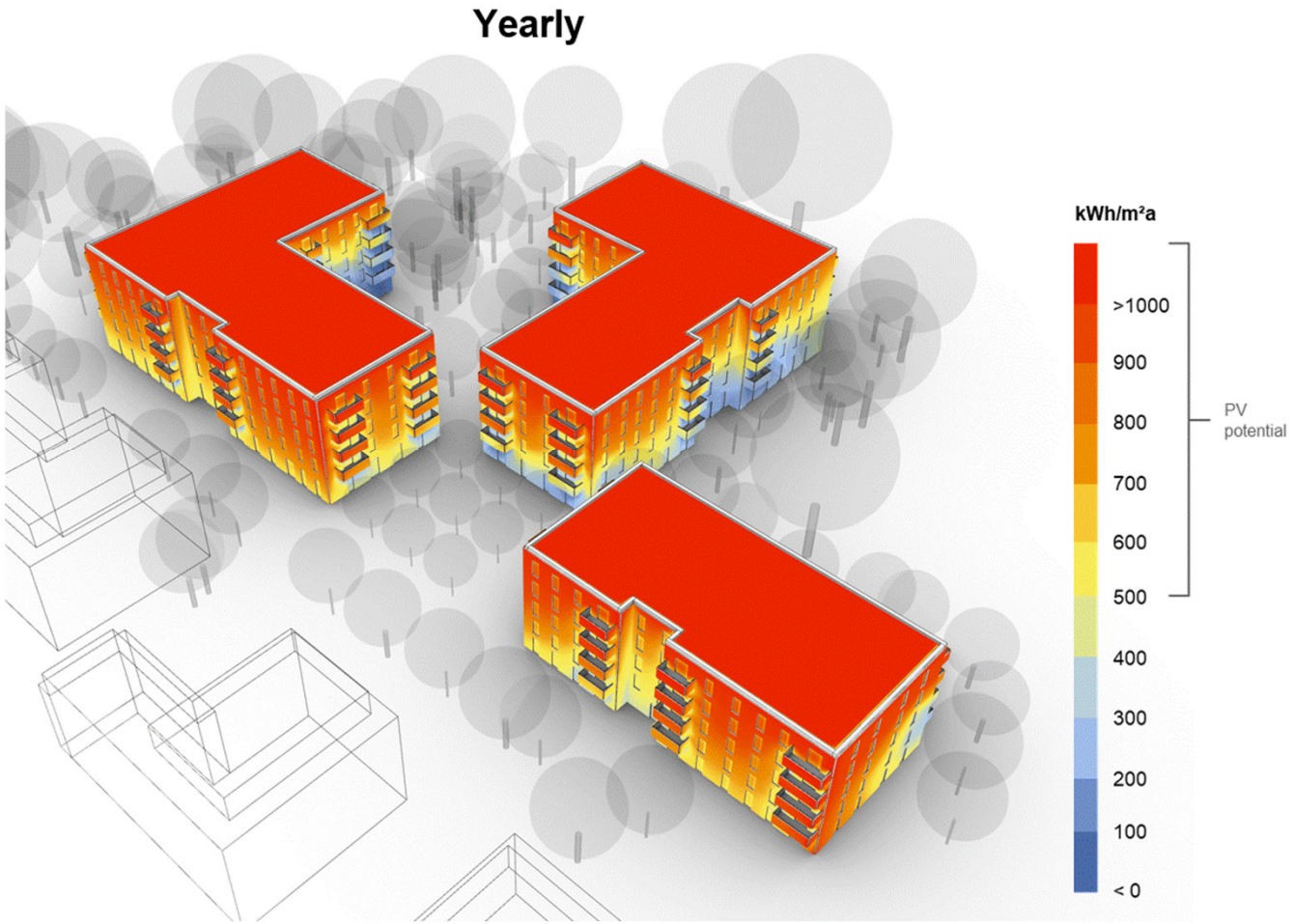


Source: Transsolar KlimaEngineering

Digital Workflows and Computer simulations

Solar Radiation studies and View from the Sun





Source: Transsolar KlimaEngineering

Digital Workflows and Computer simulations

Design and optimization of external shading devices

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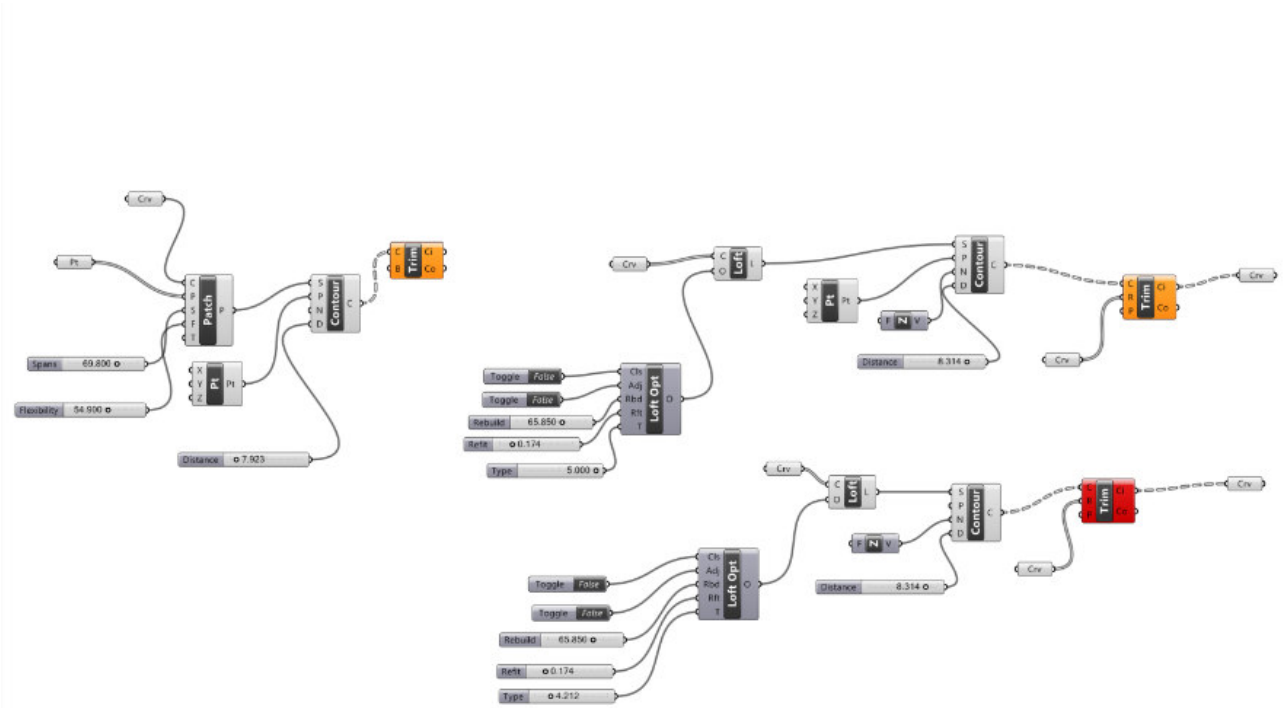

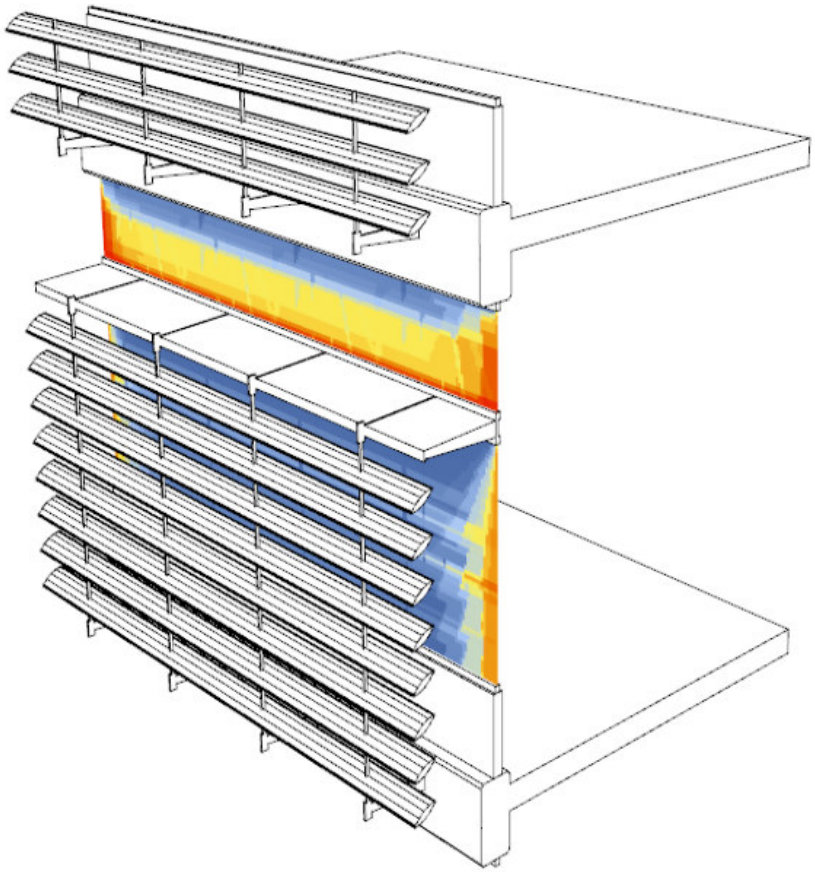

Source: Transsolar KlimaEngineering

Digital Workflows and Computer simulations

Sunlight hours (Facades and Outdoor spaces)

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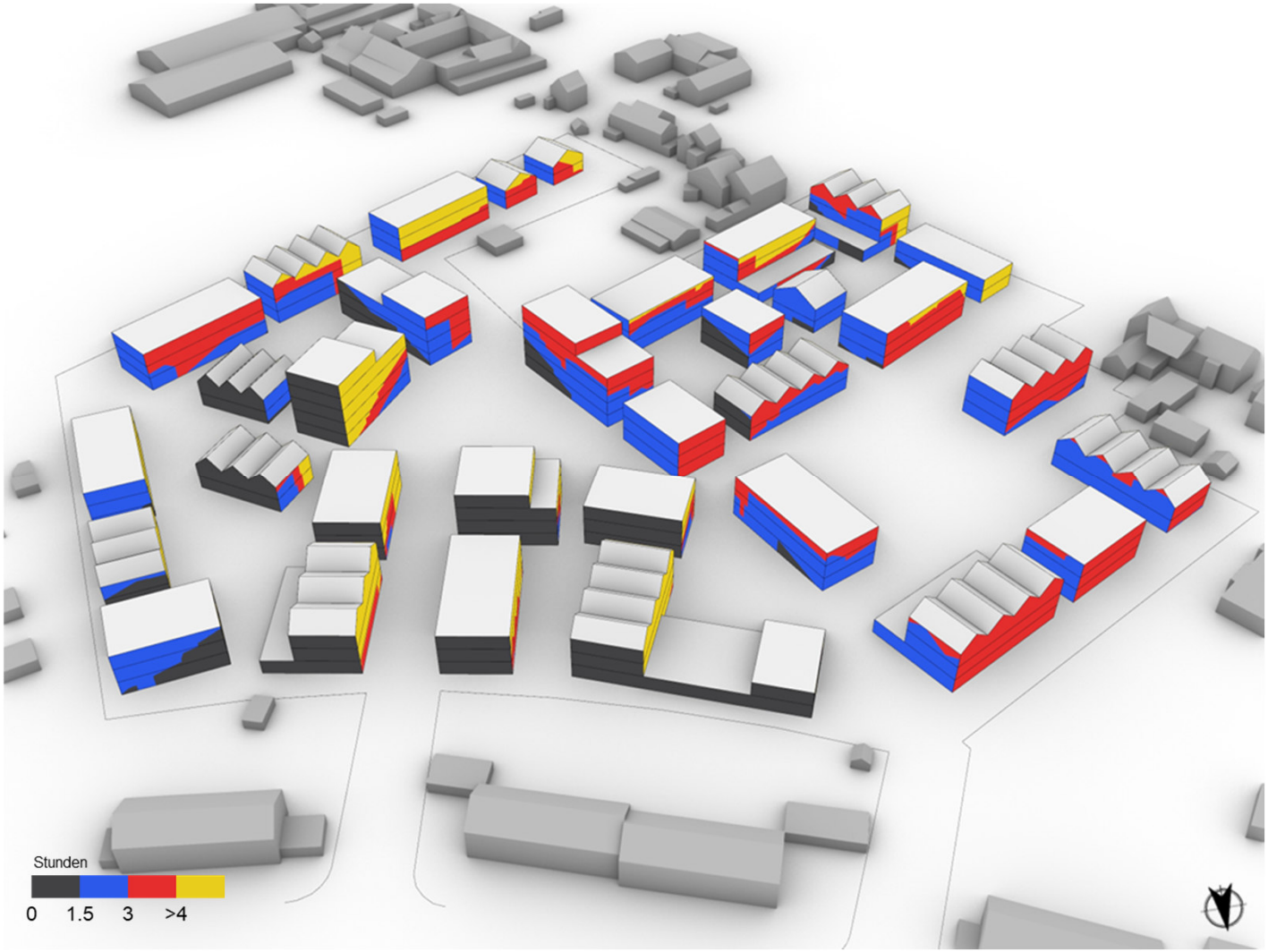
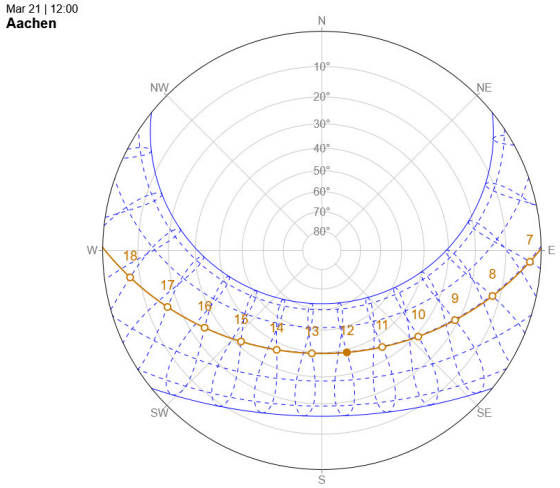
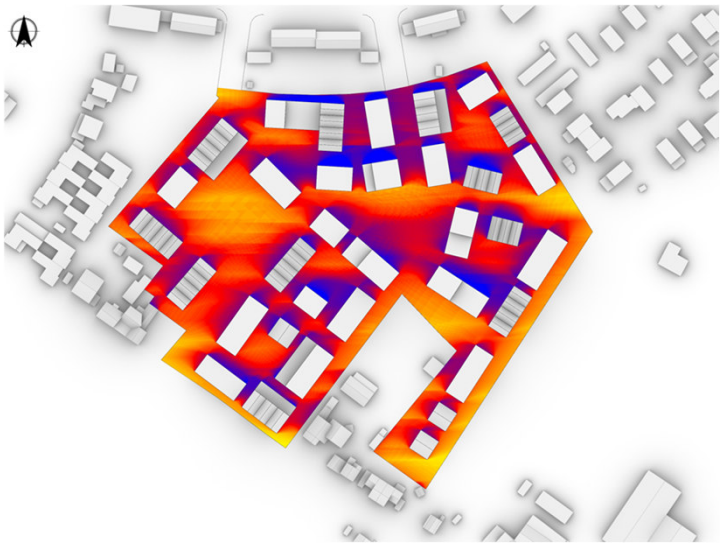
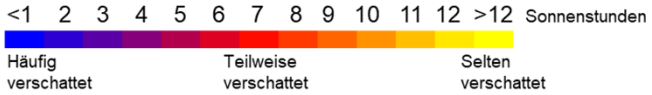




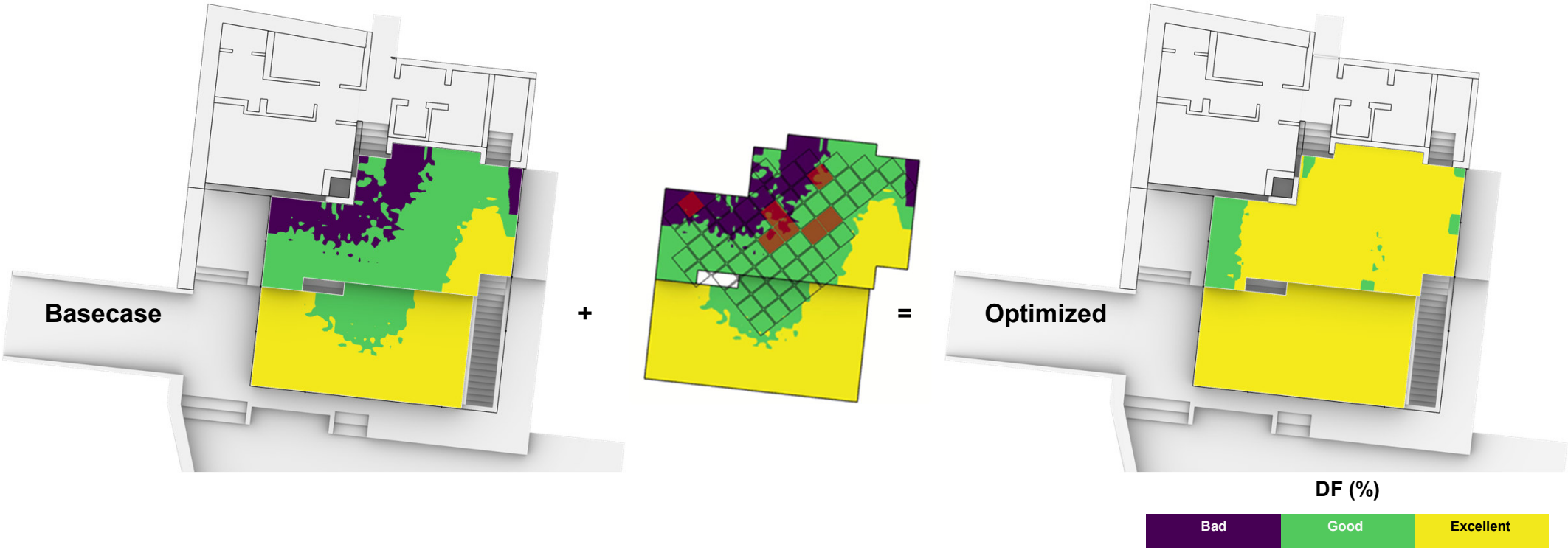




Source: Transsolar KlimaEngineering

Digital Workflows and Computer simulations

Daylight Evaluations



Source: Transsolar KlimaEngineering

Digital Workflows and Computer simulations

Daylight Performance and Luminance Visualization

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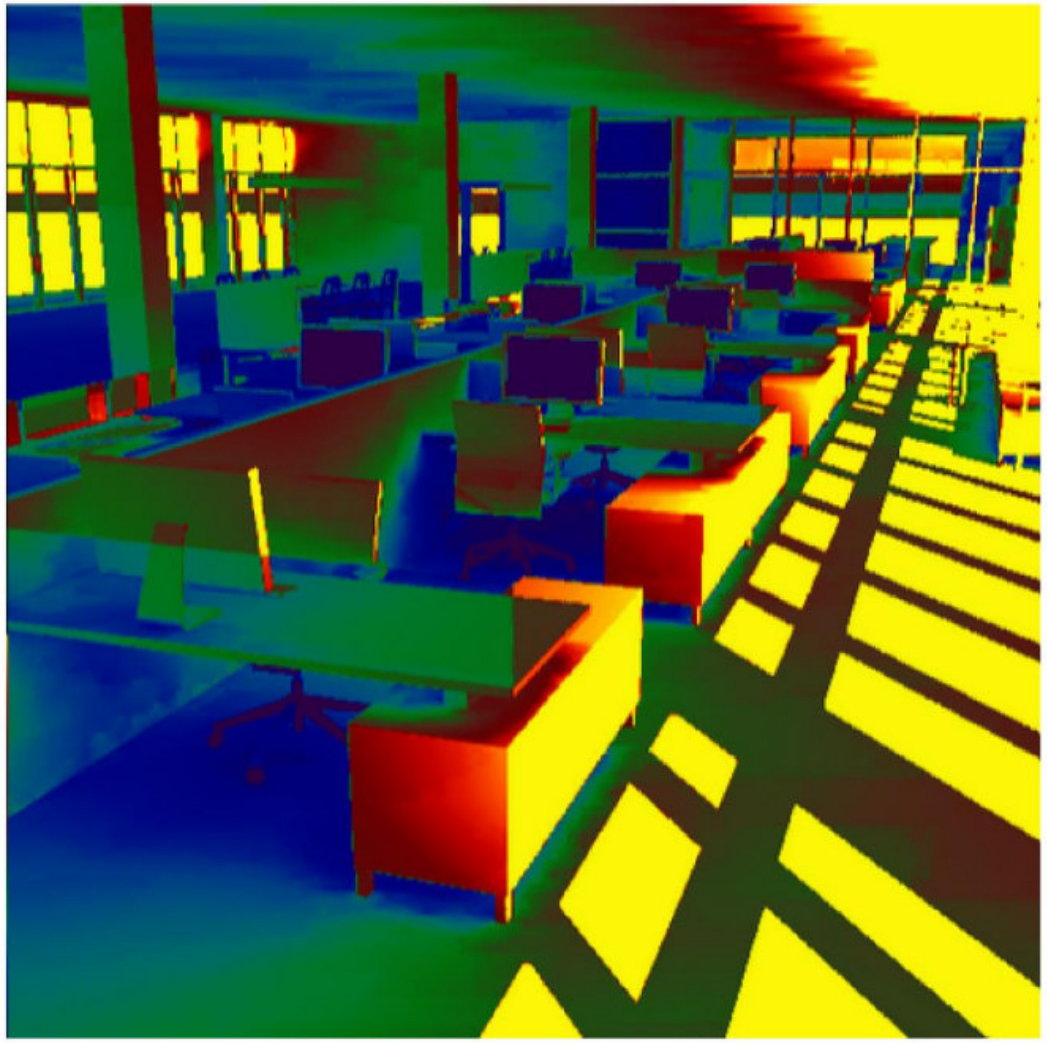

Source: Transsolar KlimaEngineering

Digital Workflows and Computer simulations

Designing with light

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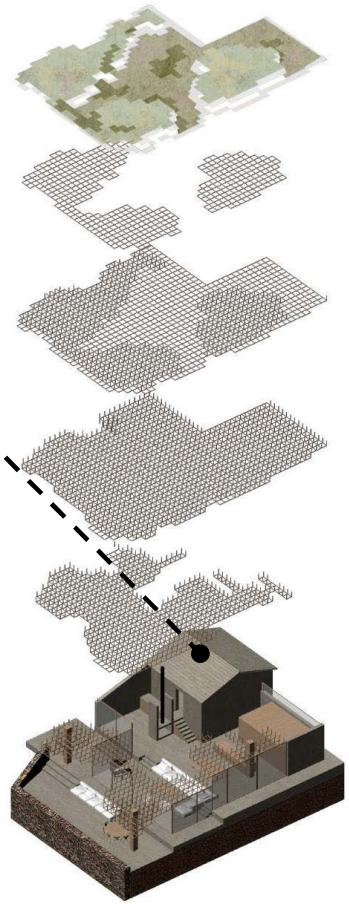
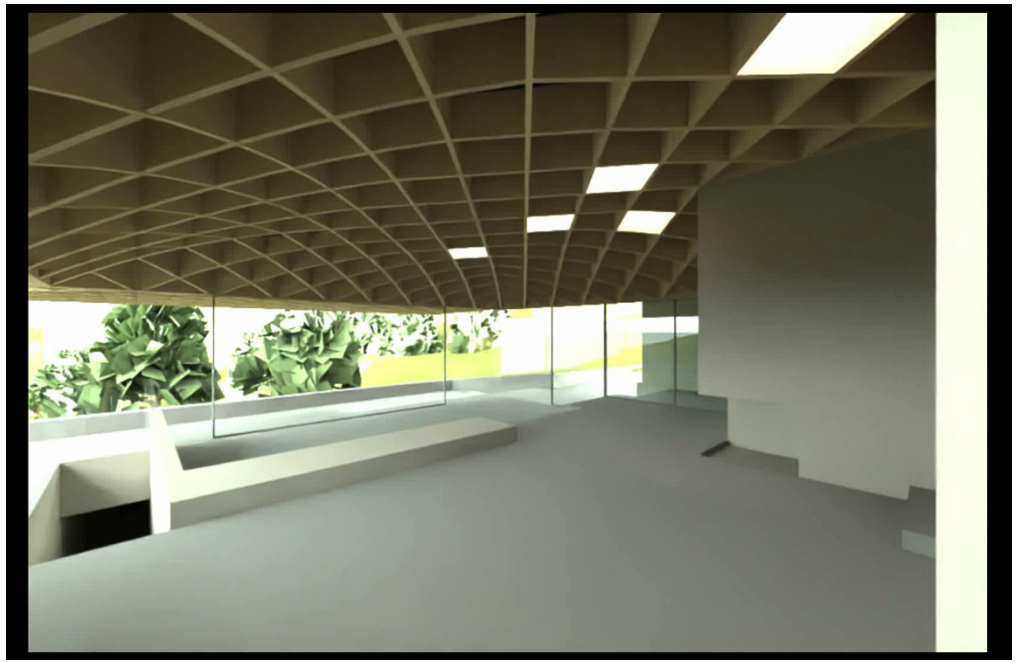
gebäudetechnologie + klimagerechtes entwerfen





Source: Transsolar KlimaEngineering