

Textile Architecture A Dress for a Building

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Horw 24/04/12

Herzog de Meuron, Prada Epicentre in Tokyo







RECHERCHE/ 1. VISUELLER AUSDRUCK (Click to edit Master text styles)

Second level

Third level

Fourth level

Fifth level



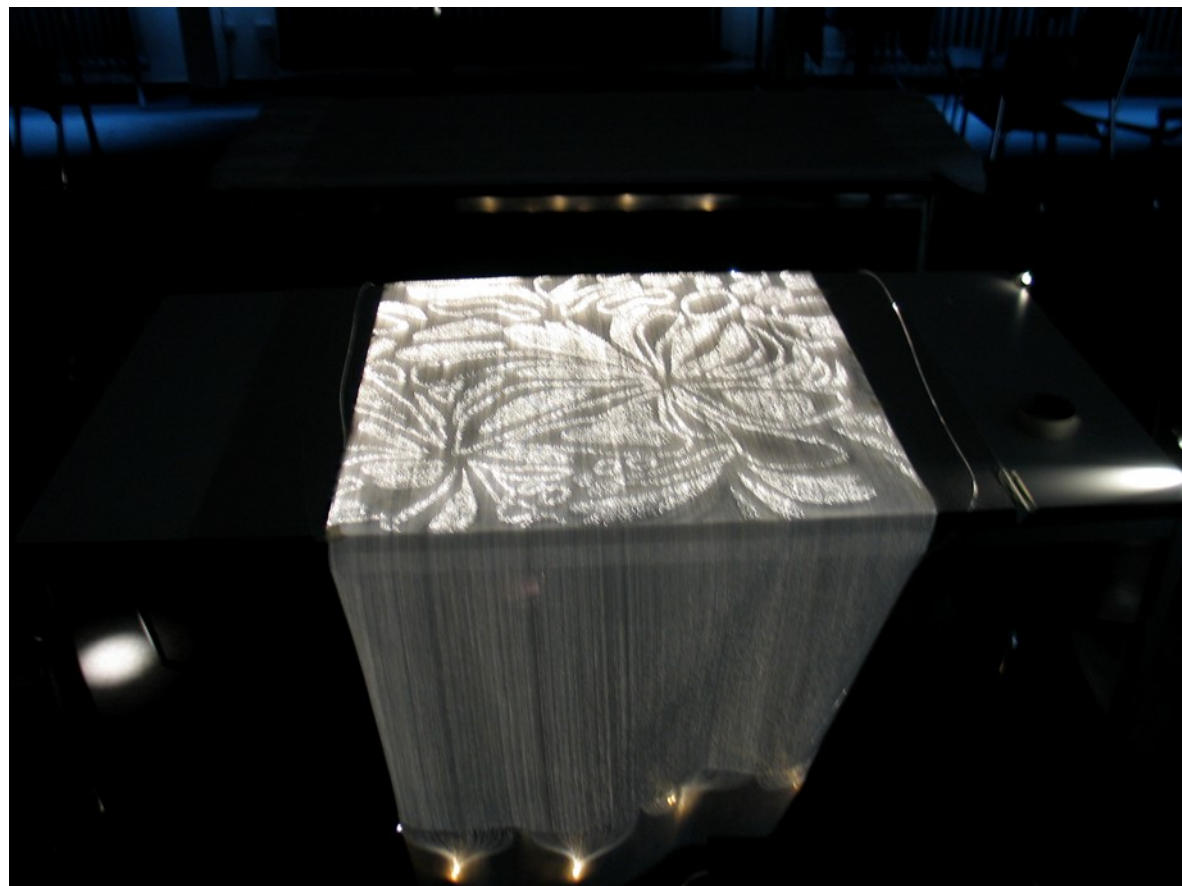


Sir Norman Forster, The Dolder Grand Zürich

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A Dress for Architecture

Flexibility // Lycra-Shirt

Breathability // Sympatex

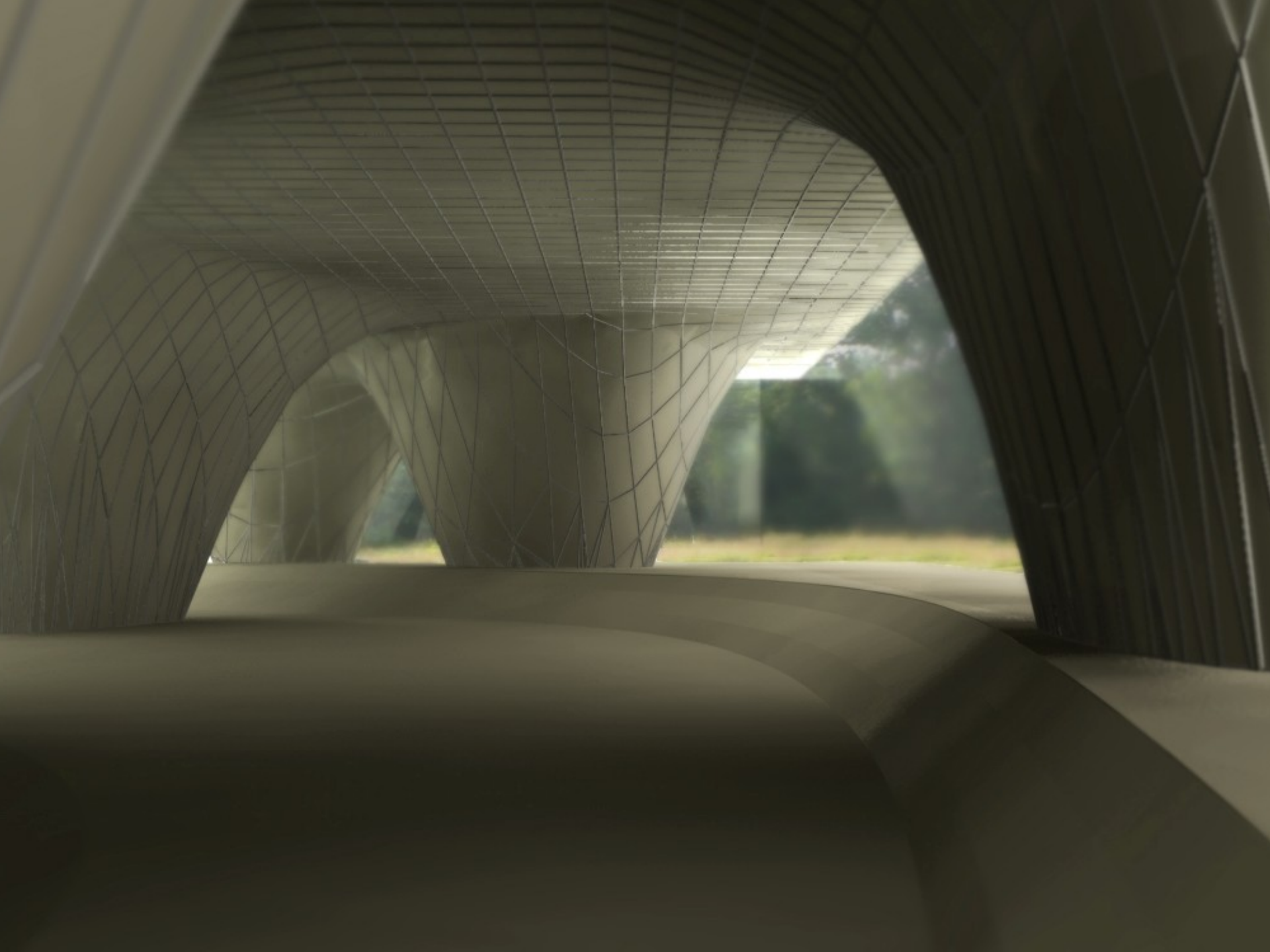
Waterproof // rain coat

Dirt Resistent // Lotus effect

Formability // making-up

Stability // Aramid

Designability // Color – form - pattern



... is it possible, that in the future walls are not made of stone and concrete but woven, knitted and filled on the spot?

KTI Feasibility Study: Textile Facades

Goal: Development of a self-sustaining textile wall

Deliverable: Mock-up for multi-layer, textile facade system, which consists of a textile skin / filling / connection, easy to build-up and deconstruct

University partner: Lucerne University of Applied Sciences and Arts

Departements of Architecture and Design

Industry partners: HP Gasser AG Lungern, Nolax AG

SYSTEMKOMPONENTEN**1
KONSTRUKTIVER AUFBAU**

Unterschiedlicher Aufbau der
Kammerungen zum System

**2
KAMMERN**

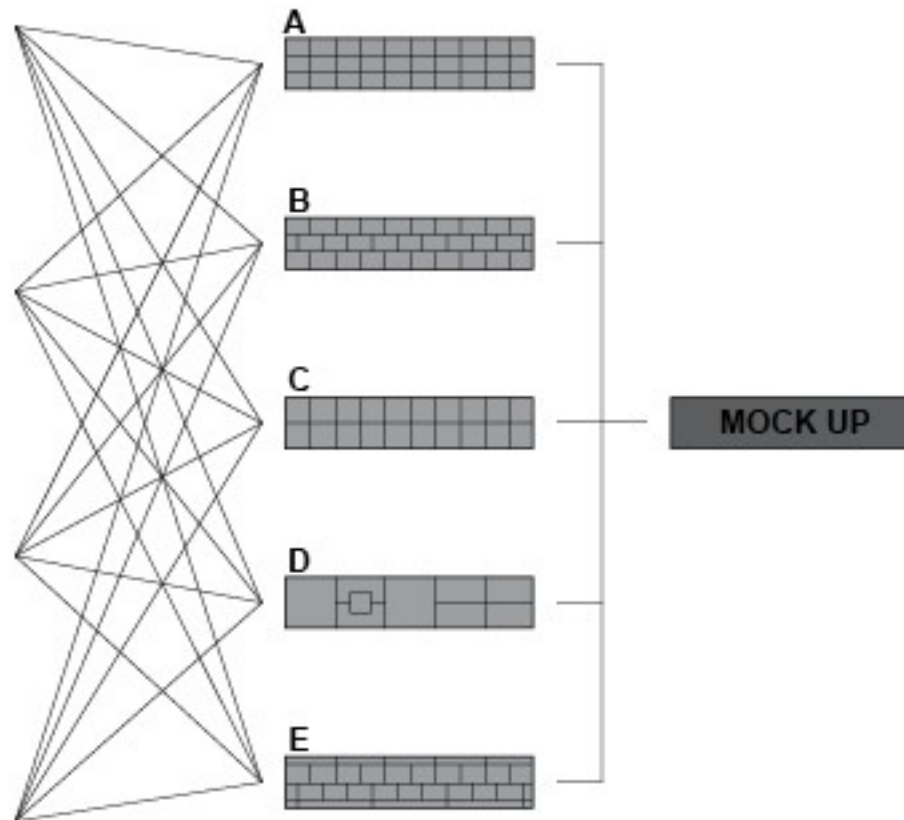
Kombination und Aufgaben
der einzelnen Kammer

**3
MATERIAL EIGENSCHAFTEN**

Einsatz spez. Eigenschaften für
sich und in Kombination

**4
FORMFINDUNG**

Den Ausdruck und Aufbau prä-
gende Fügungsmöglichkeiten

MODELL 1:20**MOCK UP 1:1**





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Textile Pavillon

Goal: Development of a new kind of textile party tent for exclusive clients

Deliverable: Concept of a textile tent, which has high design standards, where the textile cover fulfills functions concerning heat, moisture and is self-sustaining

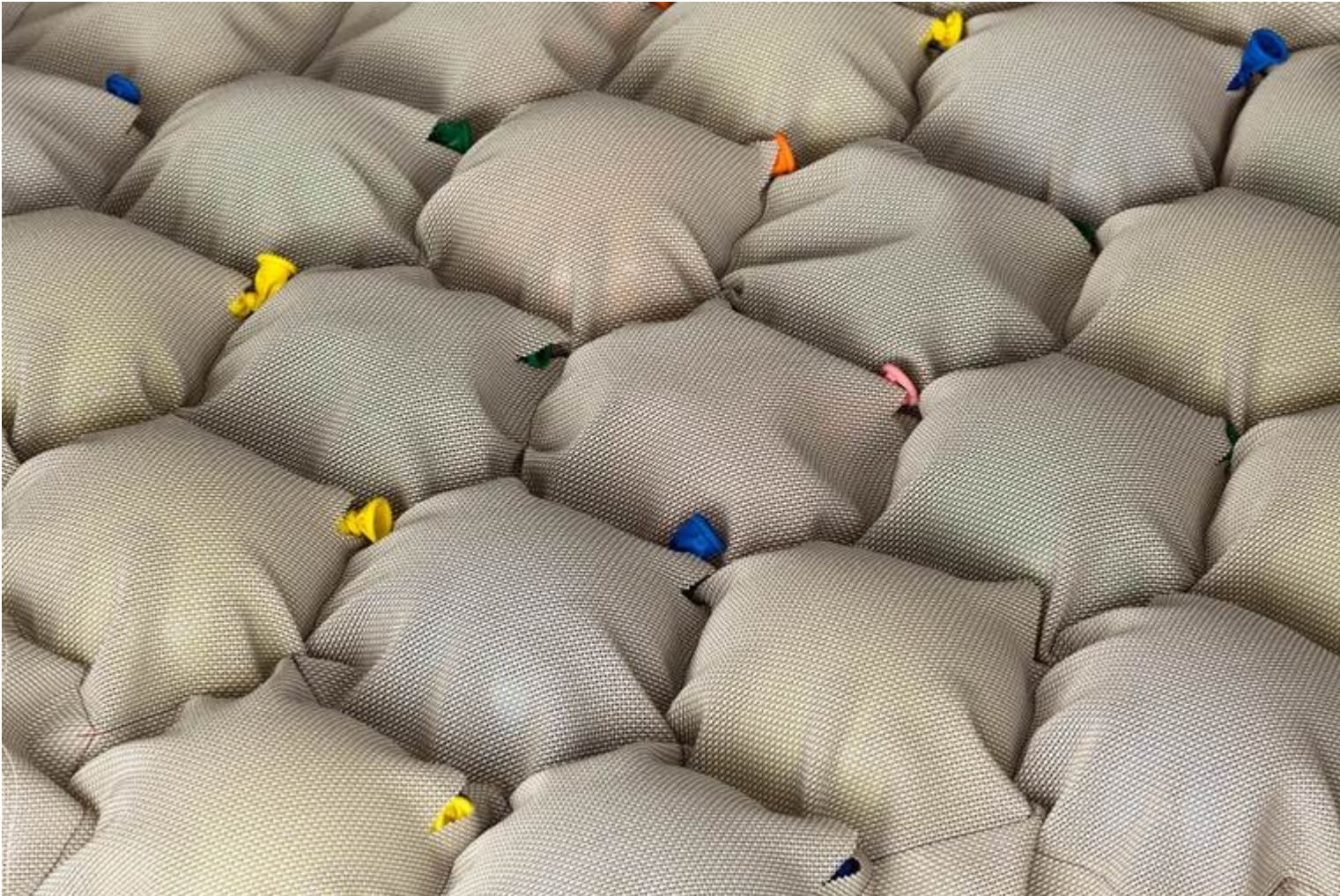
University partner: Lucerne University of Applied Sciences and Arts

Departements of Architecture and Design

Industry partners: Lucerne design, HP Gasser, Seecon

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Experiments







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Concepts





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Concept Textile Pavillon

- Construction Concept Tensegrity; wood sticks hold the pressure and the textile the tension
- Double layer principle:

Inner skin against weather impact made of PTFE, glass fiber with silicon / teflon or PVC-woven fabric

Inner skin for wellbeing and high standard design of natural fibers; i.e. wool or cotton (burning retardant agent)

- Filling for heat conservation: air / stone wool





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Conclusions and Future

- Textile Architecture has a high potential for changing contemporary architecture in a sustainable way:
 - light weight building materials
 - less grey energy
 - less durable housing
 - Easy to build and disassemble
- Opens up a great opportunity for new markets for textile companies
- Development of basic research results in follow-up projects with industry partners
- Collaboration in EU-Projects, joining or building-up of a consortium



Folie