

# HYBRIDisation – a resilient strategy in times of change and transformation

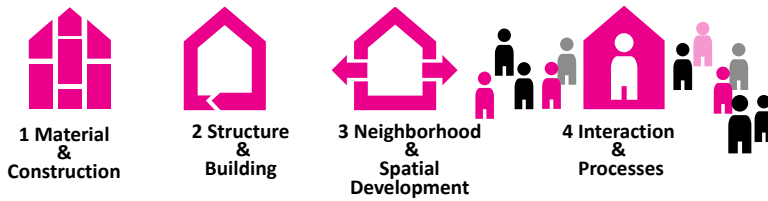
Prof. Dr.-Ing. Peter Schwehr, TU, SIA; C. Lars Schuchert; Franziska Winterberger  
 Institute for Architecture (IAR)  
 Competence Center Typology and Planning in Architecture (CCTP)

SBE19 Graz, Sustainable Built Environment D-A-CH Conference 2019  
 08 September 2019, TU Graz



**Research Topic**  
 Strategic transformation  
 of the built environment

**Main Goal**  
 Resilient buildings,  
 neighborhoods & districts



**1** Interdisciplinary Team  
(Architecture, Urban-Planning,  
Real Estate, Design, Building-  
technology, Informatics,  
Economy, Philosophy)

**23** Employees (no students  
included)

**13** Years of Experience

**101** Projects in the context of  
resilient strategies for the built  
environment

**3** Chapters

- Lucerne
- Zürich (NEST)
- Berlin

**∞** Motivated & Curious



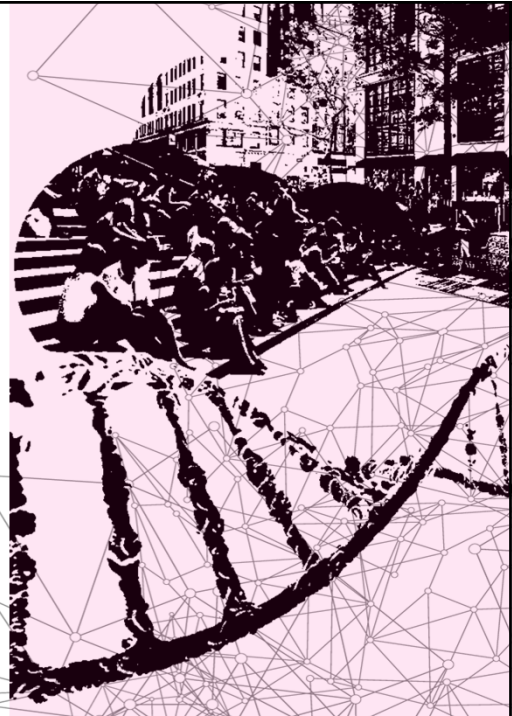
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## HYBRIDisation – a resilient strategy in times of change and transformation

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**The only constant in the universe is change**

Heraclitus (535 BC)

**Firmitas** (Durability)  
**Utilitas** (Convenience)  
**Venustas** (Beauty)

Vitruvius (1st century BC)

**The buildings are permantly under pressure to adapt!**

«You can't control it!»

**OPEN SYSTEM**

Resilience  
Use Flexibility  
Justifiable Design

Vitruvius 4.0

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## «Resilient Spaces»

### Resilience

Indicator of a system's robustness.  
The system overcomes disturbances, can reorganize itself and emerges stronger than before.

➔ to promote their capacities to support continual adaptations and strategic transformations

**Resilience ≠ Resistance!**



Foto: Peter Schwehr

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### 1st Level of Information

«Genotyp»  
(Embedded Potential - CODE)

### 2nd Level of Information

«Phänotyp»  
(Activated Programme - DECODIERUNG)



«Genotyp»

ACTIVATION  
«Decodierung»

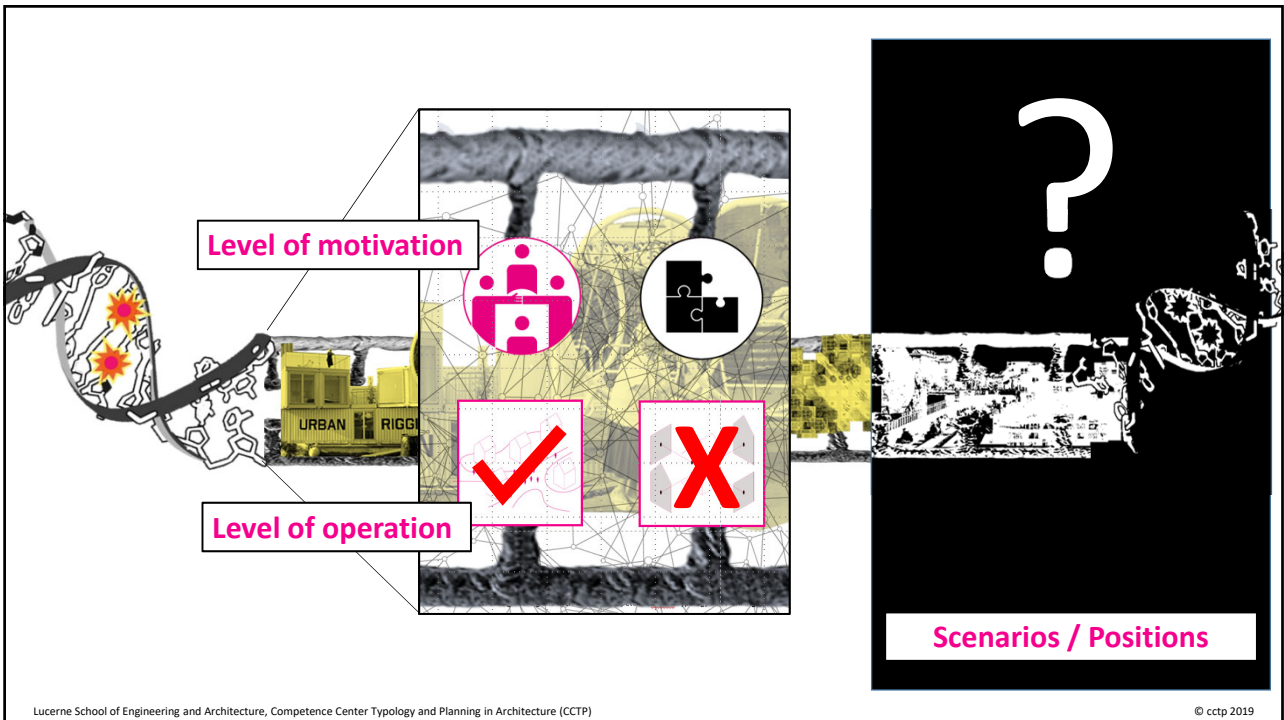
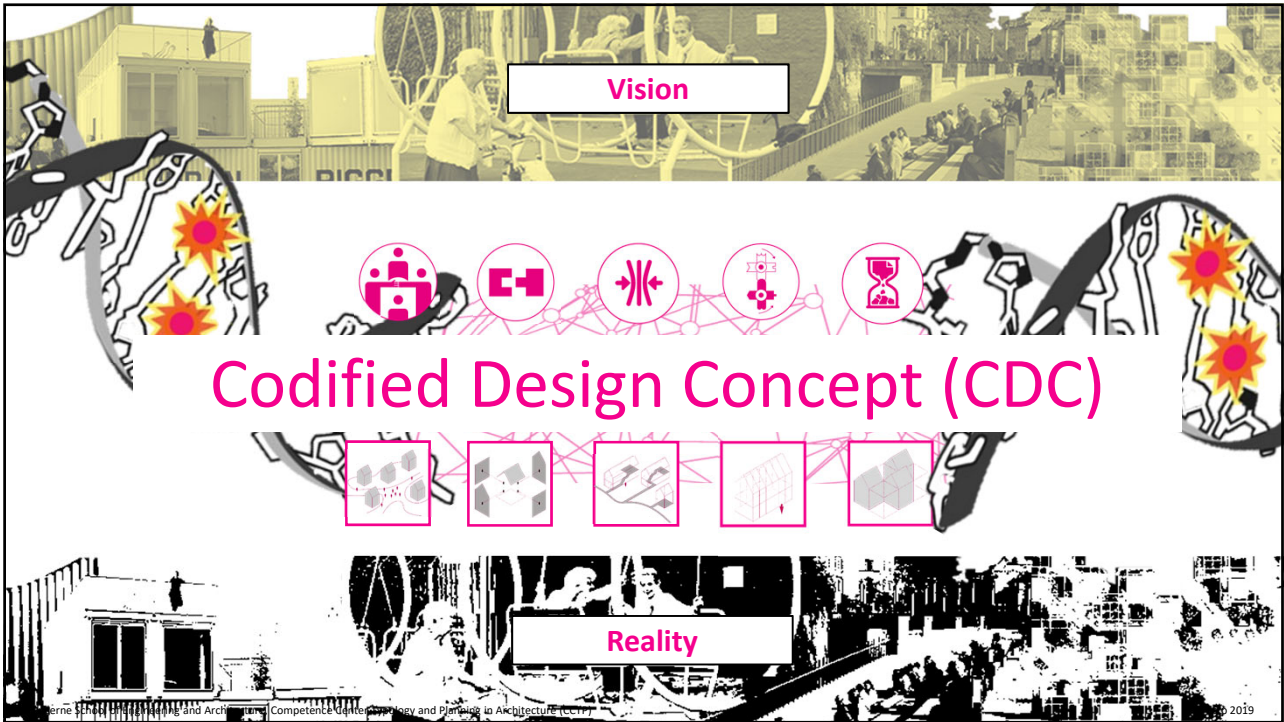


«Phänotyp»

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[<https://design.tel/haludov-o-palace-hotel/> abger. 10.09.2019]

[Foto: Peter Schwehr]

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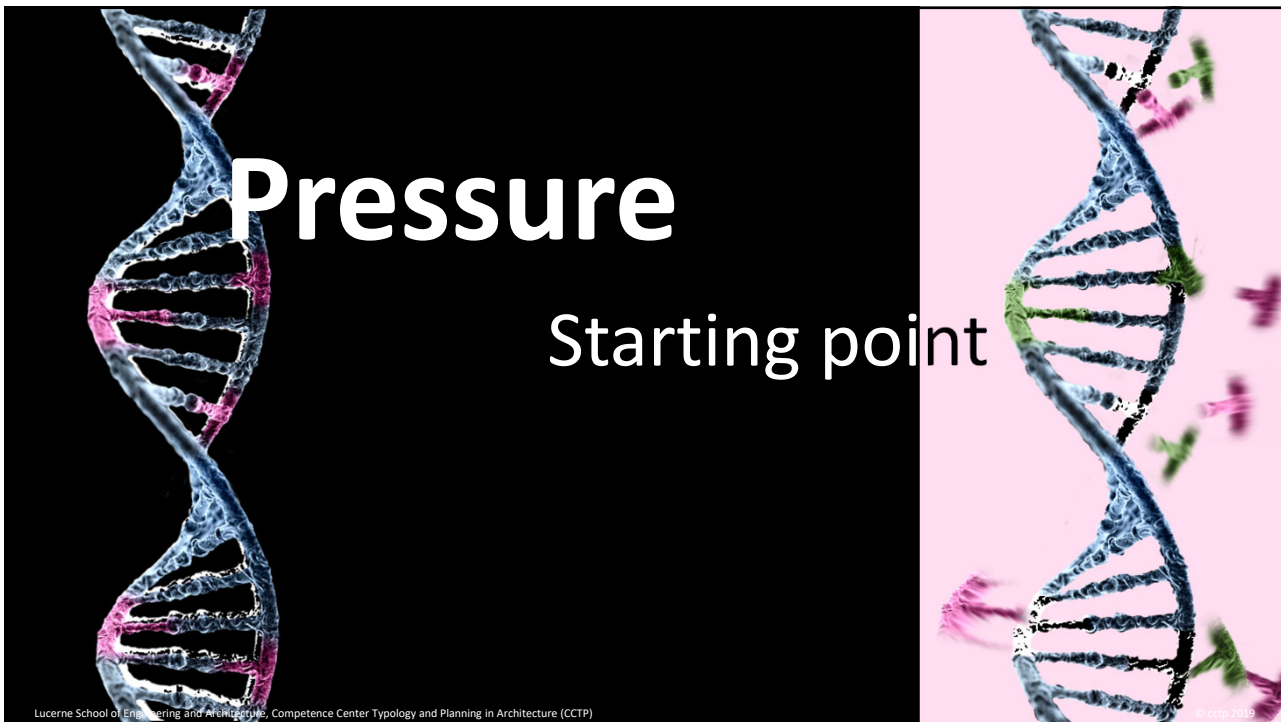
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# Pressure

Capacity to cope

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# URBAN AREAS

“This category corresponds with the “model of a city with short routes, places to work on site and good social mixture”. [6] The goal is to support areas that accommodate residential space and “service and business enterprises in small-scale, mixed use. [...] This mobilises additional living space where the city is at its most attractive, ensures well-functioning intermixing and makes conservative use of land.” [7] **These new zoning codes make it possible to build higher and more densely in “urban areas”, and use an apartment as both working and living space. Consequently a new hybrid, multifunctional typology of buildings is necessary.** The challenge now is to formulate structural, creative and location-specific typology approaches in such a way that they correspond with current demands and can hold their own in changing times.”

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# «The typology is dead – long live the Hybrid»

[Peter Schwehr, 2017]

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**Characteristic**

- Process-related
- Build environment

ephemeral	life-cycle-oriented	local	proportioned
upcycle	offers buffer	independent	equivalent
trial & error	diverse	fault-tolerant	usage-neutral
incomplete	exchangeable	appropriate	unbundled

reflective	responsibility	cooperative	human scale
life-cycle-oriented	sharing	transdisciplinary	local
scenario-based	trial&error	independent	

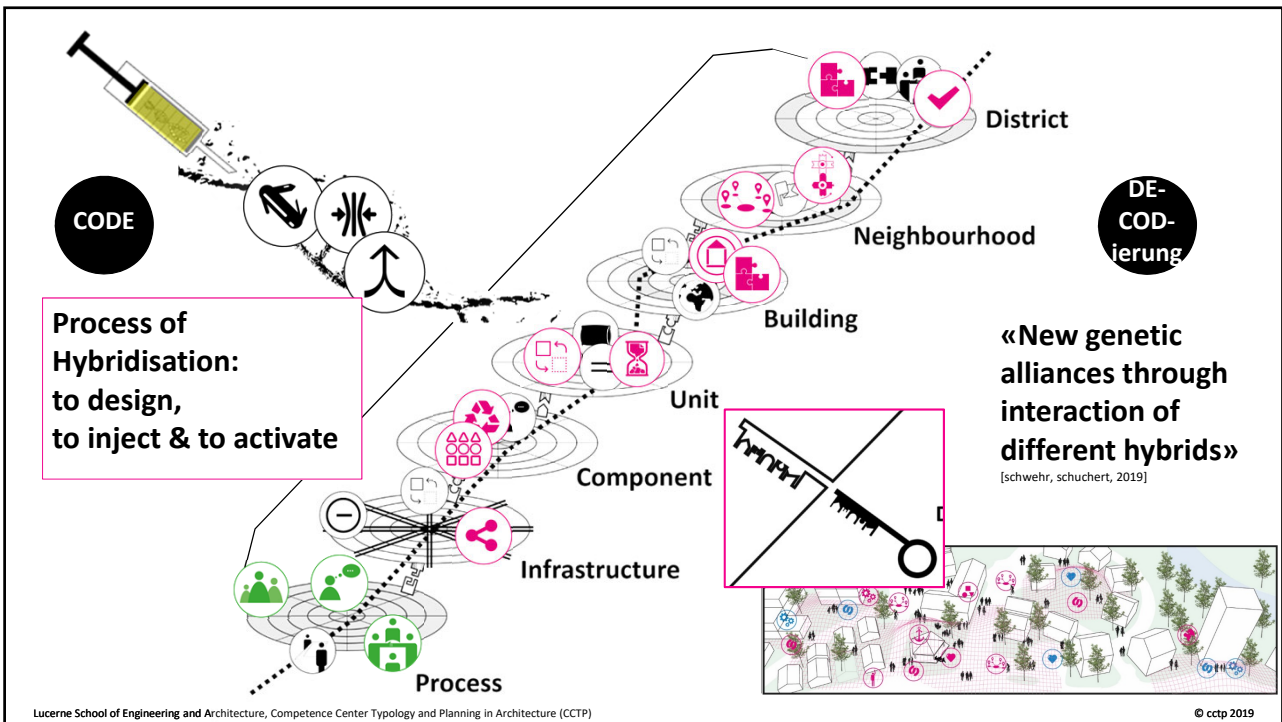
**«The hybrid building has the multifunctional, adaptable and synergetic genes in its code»**  
[schwehr, schuchert, 2019]

**«The adaptable structure has a highly stimulating nature to encourage adoption of the building, can respond dynamically to the location and the changing requirements, exploits synergies ...»**  
[schwehr, schuchert, 2019]

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Frizz23; Berlin  
Deadline Architekten

Bildung	32 %
Kreativwirtschaft	22 %
Einzelhandel	15 %
Miniloft	15 %
Kunst	12 %
Gastronomie	4 %

**Character Hybrids**

**Application-specific**  
Has “unexpected mixing of functions”  
Appropriation as a principle, scope for action

**Multi-used**  
Oriented towards usage and changes thereof (e.g. learning)  
Based on unknown future  
Use creates form  
Full-time activity

**Environment as system boundary**  
Focus impact on city  
Sensible interaction with environment required  
Uses synergies

**Open system**  
Interconnected and open to development  
Anti-fragile (disruption = opportunity), fault-tolerant  
Great diversity  
From visible to undercover

**Changes within and outside the system through spontaneous or planned initiation**  
Change can only be planned and controlled to a certain extent (e.g. appropriation by new users)

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# Challenges

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— Existing Structures  
— Building Culture  
— Politics / NIMBY  
— Gentrification  
— Unknown Future  
[...]

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