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Light as a service in Schiphol Airport

// CIRCULAR PROPERTY

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“Man is a temporary guest in the enclosed system of Earth, here everything is equally important for a stable balance with a future. Within its boundaries we can only mentally continue to grow,” writes architect, author and entrepreneur Thomas Rau on his website turntoo.com. In his book *Material Matters*, Rau pleads for a radical mind shift that pushes the circular economy to its extreme consequences: “we all need to become users instead of owners”.

What are the implications for real estate?

THOMAS RAU “We need to come to a fundamentally different relationship with our planet: we’re only guests here, and that implies stewardship,” says Thomas Rau. “The rule is that all materials are limited, everything is ‘limited edition’. That’s why nothing can be lost. Otherwise there is loss

of value. Documentation and data are the answer. Data gives material an identity so that it becomes traceable and can never be lost again. If we want to avoid refuse, then we shouldn’t recycle but give all limited editions a documented identity. We have set up something like a land register, or cadastre, for this: Madaster, which documents where,

in what form and for how long a material is stored. The consequence is that everything we produce should be designed as a sort of materials depot: a house, a train, a computer, a coffee maker. None of these products exists forever. With a re-mountable construction, you can easily make something else out of it – not even necessarily the same type of product.”

In doing so you shift the responsibility for the material from the user to the producer.

THOMAS RAU “Anything can become a service. It places power and responsibility for material with the producer. With ownership the power lies with the producer and the responsibility with the consumer – which means the product eventually ends up on the waste mountain, or at the recycling plant for non-optimised recycling. Service makes sense in a lot of sectors already: you don’t buy a house when you want to stay overnight, you go to a hotel. The producer – the hotelier – has every interest in ensuring his product – the hotel – stays in good working order for as long as possible. Like a depot that maintains its value because you can take the materials out again one by one. Material as a service means we borrow materials that we can use until we no longer need them, at which point we return them again. Everybody in the chain is responsible for the authenticity and cleanliness of the materials. We’ve even put together a value creation chain and a value sustain chain that map materials in the forward and backward directions.”

You go even further than that: you assign materials ‘universal material rights’.

THOMAS RAU “People have rights and human rights violations are the most common among undocumented people; you can use this analogy for material rights. Material without identity is refuse. A materials passport prevents it from becoming so. We have written 33 articles that we will be presenting to the UN in New York on

December 10, 2018, for the 70th anniversary of the Universal Declaration of Human Rights! We need to take a Copernican view: we, as people, owe everything to what exists, and we should be mindful of this. We really must agree what is needed NOW, not in 30 years’ time. You could call it a mind change against climate change.”

How can you apply this re-mountable, circular approach to real estate?

THOMAS RAU “Circular lighting was the start. The first project was light as a service at Schiphol Airport in collaboration with Philips. Philips sold light instead of lighting and will take the LED lights back at the end of the contract for reuse. We built the first circular town hall, a new building for an energy grid operator and this year we’ll start making a fully re-mountable circular head office for Triodos Bank. Each project’s materials passport is published online and accessible to everyone. We want to make a big atlas of all the materials in use. We’re currently in talks in Belgium, Switzerland, Germany and Portugal for new projects so we can create a Madaster there too.”

What can the real estate industry do to catch up on the circular movement?

THOMAS RAU “Many developers, contractors and builders find it an interesting approach. It’s no longer about making profit *at the expense of* but *in favour of*, so their financial incentive remains. The value of your building will never be zero again with a materials passport. When a building is disassembled the value mostly remains. However, we must not effect this transformation through a moral or ethical axis. My agenda is to make financial incentives accessible to this new way of thinking. Transformation, but via the financial axis. With respect for our finite, closed system, which we have to care for.”

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THOMAS RAU is an entrepreneur, architect, innovator and visionary, who actively contributes to the national and international dialogue about sustainability and the use of renewable energy sources in architecture. RAU Architects has been designing buildings using environmentally-friendly materials and focusing on a healthy living environment since 1992.



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