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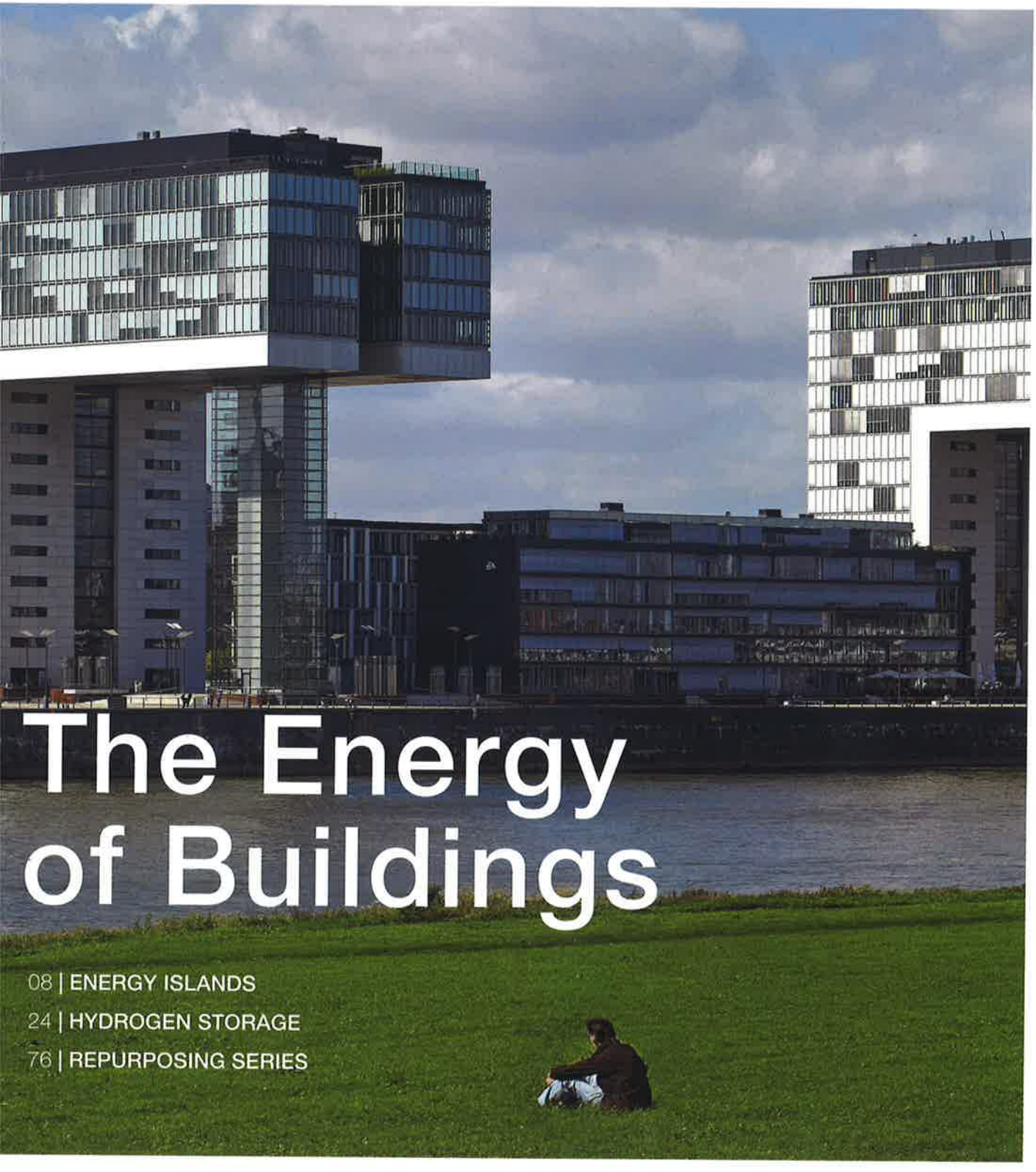

The Energy of Buildings

Brussels: From Exemplary Buildings to Buildings as Material Banks

Brussels – the Capital of Europe and of Belgium – has reduced energy consumption by 28% and has brought down greenhouse gas emissions per capita by 33% between 2004-2015. This article highlights the EU-funded "Buildings As Material Banks" (BAMB) project and field visits to exemplary buildings in Brussels during the EU Sustainable Energy Week (EUSEW) from 19-23 June 2017.

Over the course of slightly more than a decade, the Brussels-Capital Region has undergone fast and positive change, achieving significant results in the energy sector. Brussels is a densely-populated city with significant population growth and an economic sector oriented towards tertiary functions. Brussels does not have a territory that would permit the mass exploitation of renewable energy sources; the optimal solution therefore is to follow an ambitious policy aimed at improving the energy performance of buildings. In this context, after six calls for "Exemplary Buildings", Brussels Environment (the environment and energy administration of the region) has taken the lead of an EU-funded innovation project called "Buildings As Material Banks" that addresses waste, recycling, reuse and resource efficiency in the construction sector.

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Buildings as Material Banks (BAMB)

BAMB VISUAL. **Source:** Elma Durmisevic

> To create a sustainable future, the building sector needs to move towards a circular economy.

The EU-funded BAMB project comprises 15 partners from 7 European countries to enable a systemic shift in the building sector by creating circular economy solutions. Today, building materials end up as waste when no longer needed, with effects like destroying ecosystems, increasing environmental costs, and creating risks of resource scarcity. To create a sustainable future, the building sector needs to move towards a circular economy. Whether an industry goes circular or not depends on the value of the materials within it: worthless materials are waste, while valuable materials are recycled. Increased value equals less waste, and that is what BAMB is creating – ways to increase the values of building materials.

BAMB will enable a systemic shift where dynamically and flexibly designed buildings can be incorporated into a circular economy. Through design and circular value chains, materials in buildings sustain their value – in a sector producing less waste and using less raw resources. Instead of being to-be waste, buildings will function as banks of valuable materials – slowing down the usage of resources to a rate that meets the capacity of the planet.

Launched in September 2015, the project will progress for three and a half years as an innovation action within the EU-funded Horizon 2020 program. Over this period, the partners will develop and integrate tools that will enable the emergence of Materials Passports and Reversible Building Design Tools with the support of new business models, policy propositions, as well as management and decision-making models. During the project, these new approaches will be demonstrated and refined with input from six pilots and feedback from the actors participating in the BAMB Stakeholder Network.

BAMB
BUILDINGS AS MATERIAL BANKS

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THE BAMB CONSORTIUM CONSISTS OF:

- Brussels Environment (Project Coordinator)
- Environmental Protection Encouragement Agency (EPEA)
- Vrije Universiteit Brussels (VUB)
- Vlaamse Instelling voor Technologisch Onderzoek (VITO)
- Building Research Establishment (BRE)
- Zuyd Hogeschool
- IBM Netherlands
- Sunda Hus i Linköping AB
- Ronneby Municipality
- Technische Universiteit München (TUM)
- Universiteit Twente
- Universidade do Minho
- Sarajevo Green Design Foundation
- Drees & Sommer
- BAM Construct UK

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