re·c·be

RESOURCE EFFICIENCY

in Construction and the Built Environment

UNIVERSITY OF CAMBRIDGE

UNIVERSITY OF BATH

29 January 2021

Department of Engineering, University of Cambridge

resource efficiency collective











UNIVERSITY OF CAMBRIDGE

Resource Efficiency Collective is a research initiative at Cambridge University. Together, we seek answers to a challenging question: how can we deliver future energy and material services, while at the same time reducing resource use and environmental impact?

Smart Sustainable Packaging from Plants (S2UPPlant)

Joanna Wakeling
November 20, 2020

We're excited to announce our involvement in the launch of S2UPPlant – Smart Sustainable Plastic Packaging from Plants. Background: Over 90% of plastics are derived from fossil-derived feedstocks,...

Exergy calculator

Jonathan Cullen
September 15, 2020

The use of energy and materials in modern society is associated with greenhouse gas (GHG) emissions that exacerbate climate change. To reduce emissions, a combined energy and material...

Resource Efficiency in Construction and the Built Environment (RECBE)

Michal Drewniok
August 24, 2020

Nearly half of the UK's carbon emission are linked to the construction and operation of the built environment, and this figure excludes the embodied carbon in the materials...

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The Lightest Beam Method

Michal Drewniok
January 11, 2021

The Lightest Beam Method – A methodology to find ultimate steel savings and reduce embodied carbon in steel framed buildings Over the last ten years, global demand for...

Should transition bonds have a place in the path towards carbon neutrality?

Ana Morgado
November 27, 2020

"The European Union's target of achieving net-zero emissions by 2050 is a costly one. An annual investment of €260 billion is estimated as needed to advance EU transition...

Energy reduction in construction

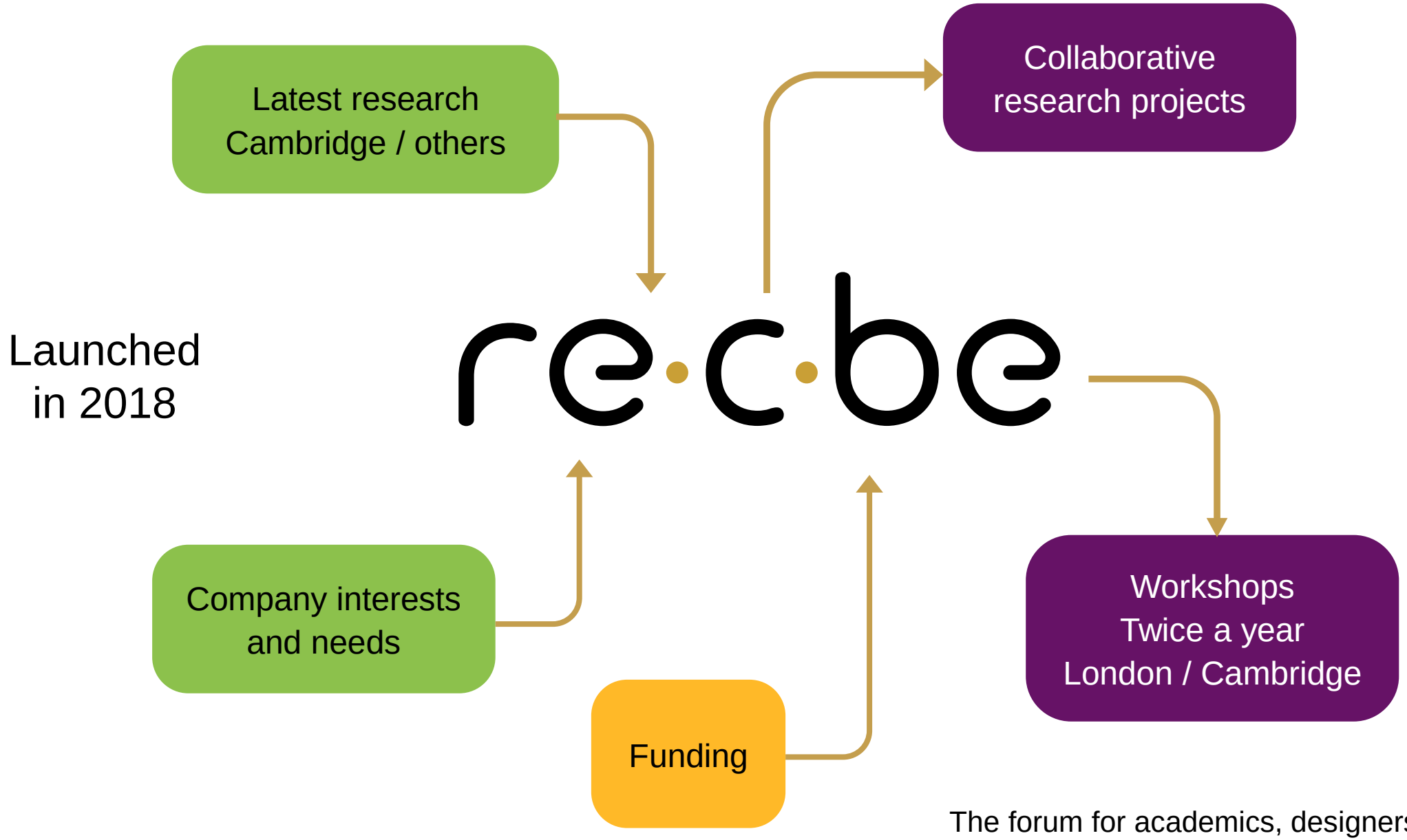
Michal Drewniok
October 18, 2020

Redukcja energochłonności w budownictwie (Energy reduction in construction) by Michal Drewniok is now available! Download the chapter here (PL) EN: The construction sector is considered to be the...

THE 'P' WORD

Jonathan Cullen
September 22, 2020

THE 'P' WORD – Plastic in the UK: practical and pervasive ... but problematic By Jonathan Cullen, Michal Drewniok and André Cabrera Serrenho Click here to download the...



The forum for academics, designers, engineers, contractors, clients and policy makers …


WORLD GREEN BUILDING COUNCIL
UK GREEN BUILDING COUNCIL
bre
ZERO WASTE SCOTLAND
ASBP
mpa The Concrete Centre
SCI
Wood for Good
BCSA
NFDC
National Federation of Demolition Contractors
Voice of the Global Demolition Industry
cpa construction products association
targeting zero
re·c·be
ARUP
expedition
smith and wallwork engineers
MOTT MACDONALD
LAING O'ROURKE
RAMBOLL
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SKANSKA
CLEVELAND STEEL & TUBES LTD
sdc
Dde- Dorton Group
TFT
GRANTA MATERIAL INTELLIGENCE
vito vision on technology

Circularity, carbon and energy in construction

13.00 **Welcome – Jonathan Cullen** (University of Cambridge)

13.05 – 13.20 – Julia Stegemann “The UKRI Interdisciplinary Circular Economy Centre for Mineral-Based Construction Materials” (University College London)

13.20 – 13.35 – Will Hawkins “Dynamic Life Cycle Assessment – concrete, steel or timber?” (University of Bath)

13.35 – 13.50 – Bruce Martin “Delivering low carbon concrete for Network Rail” (Expedition Engineering)

13.50 – 14.05 – Michal Drewniok “Energy Cost Metric – methodology to reduce Whole Life Energy in Construction” (University of Cambridge/University of Bath)

14.05 – 14.20 – Discussion and Q&A

14.20 – 14.30 – Projects in collaboration with RECBE and next steps

talks

discussion and Q&A

Projects in collaboration with RECBE and next steps

EPSRC Impact Acceleration Account Postdoctoral Placement Scheme

"Relationships between building structural parameters and embodied carbon"

3 months (2020), £10k

EPSRC Impact Acceleration Account Impact Starter Grant

"Post-construction assessment of Energy Cost Metric of the Civil Engineering building in West Cambridge"

3 months (2020), £16k

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RAMBOLL

GRIMSHAW

RAMBOLL

smithandwallwork engineers

MAX FORDHAM

sdc

EPSRC Impact Acceleration Account Impact Starter Grant

“Low carbon concrete technologies (LCCT) – understanding and implementation”

3 months (2021), £17k

EPSRC Impact Acceleration Account Knowledge Transfer Fellowship

“Climate compatible decision making in the construction sector”

12 months (2021), £70k

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