

Circular Building Assessment- A new tool made possible by BAMB

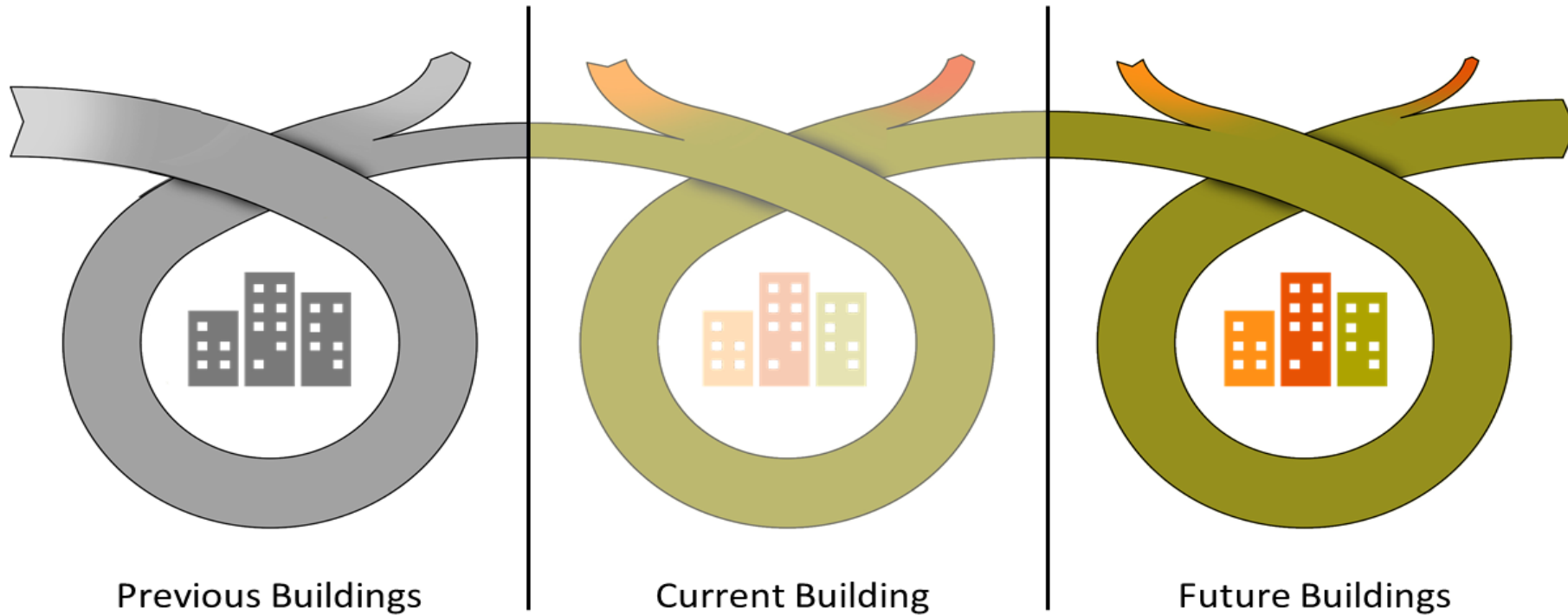
Gilli Hobbs
Director
BRE



slido

#BuildingCircular

Circular Building Scenarios



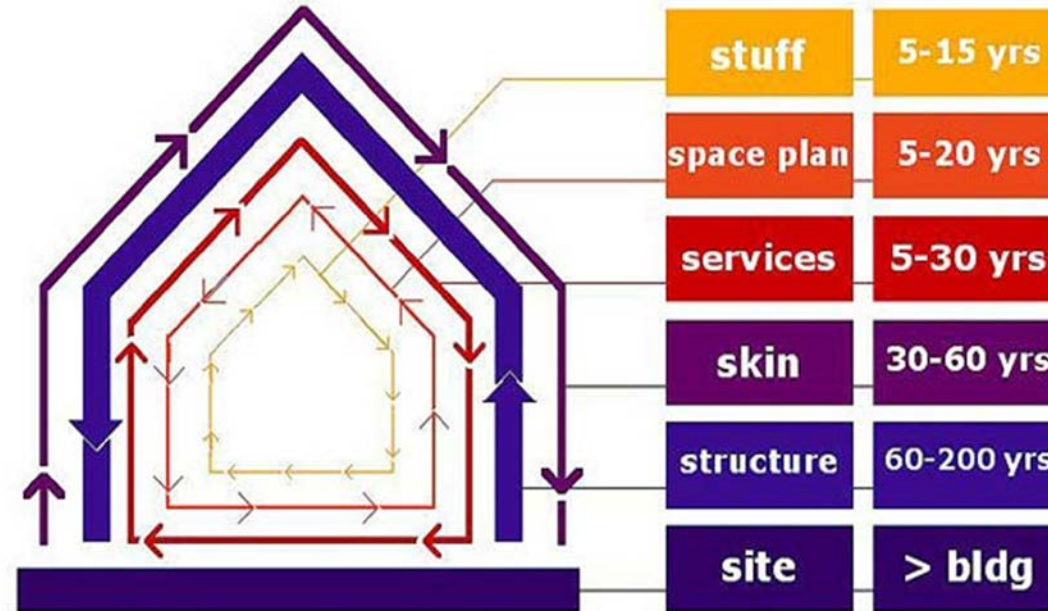
Displacing new products & materials

Transformation capacity

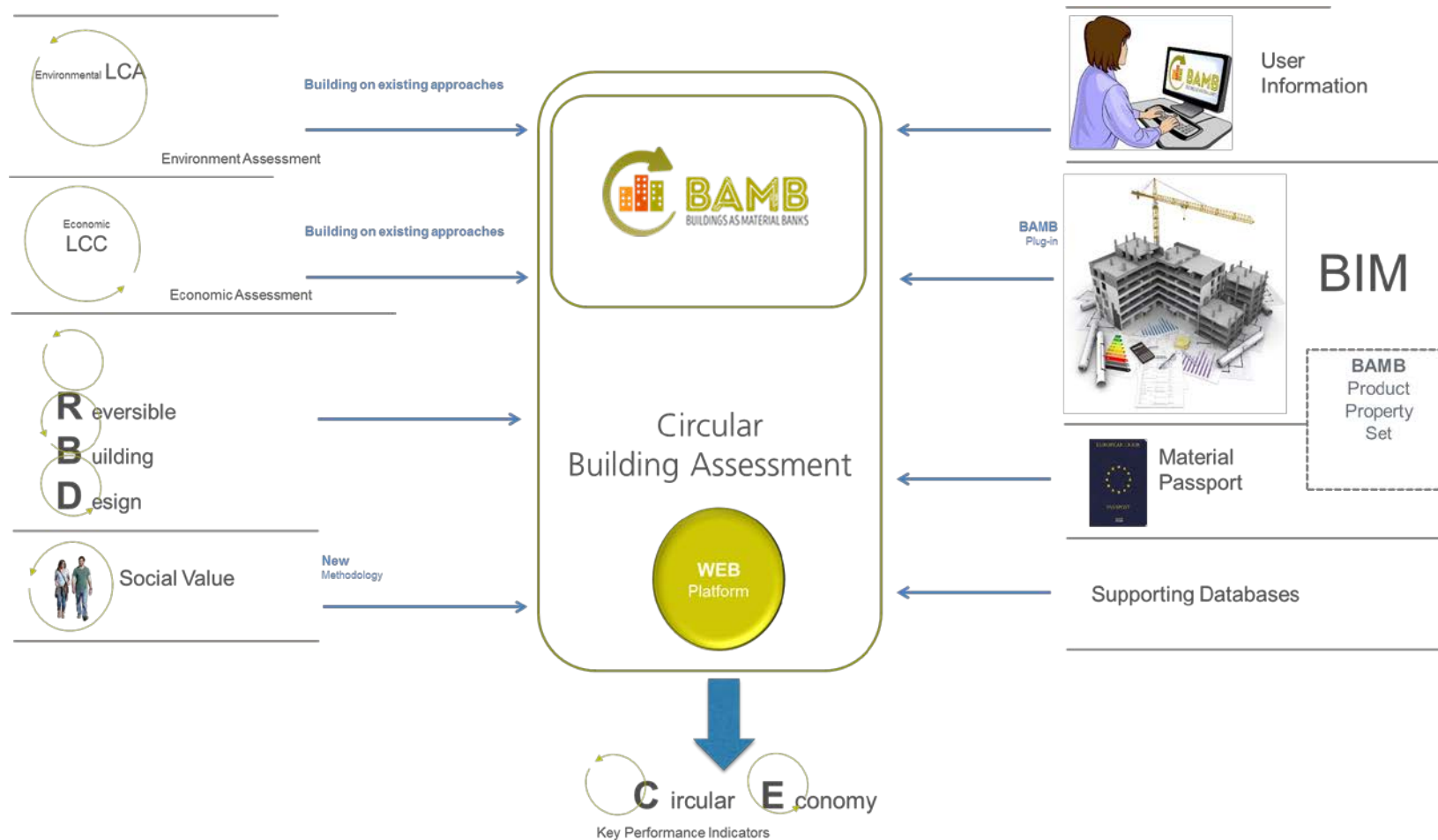
Future reuse potential



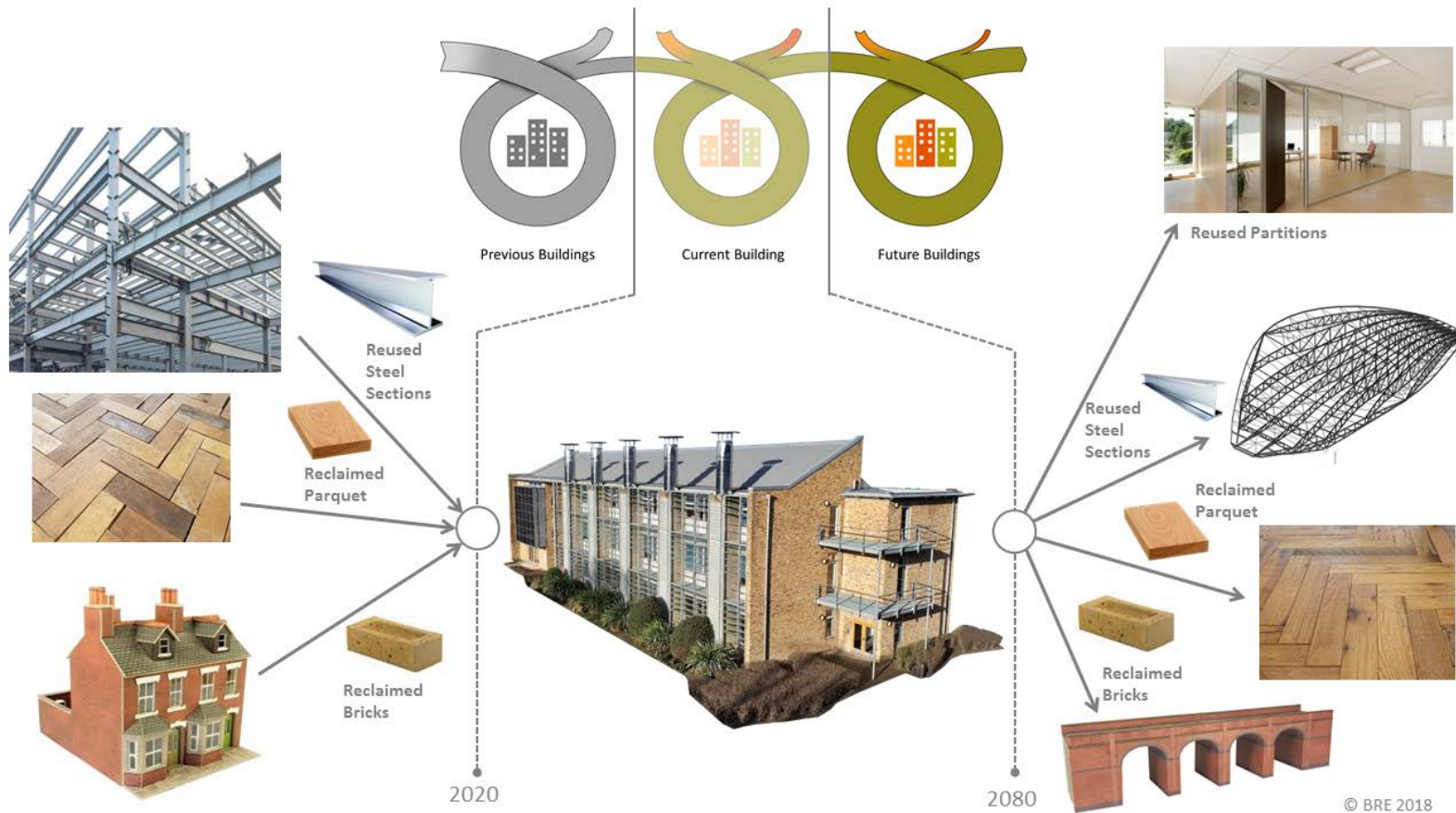
Evolving and Flexible Assessment



What is Circular Building Assessment



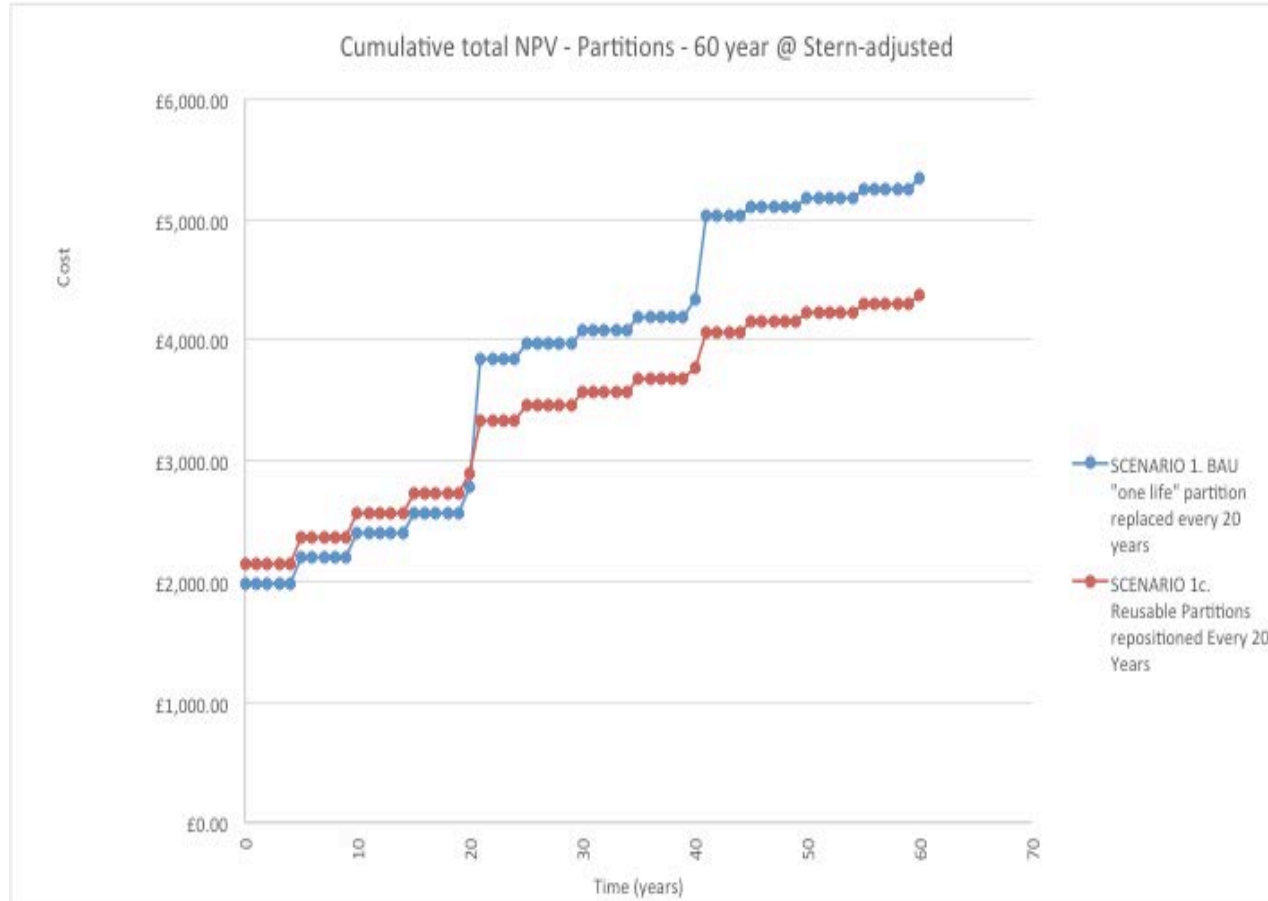
Environmental assessment



CE scenarios modelled:

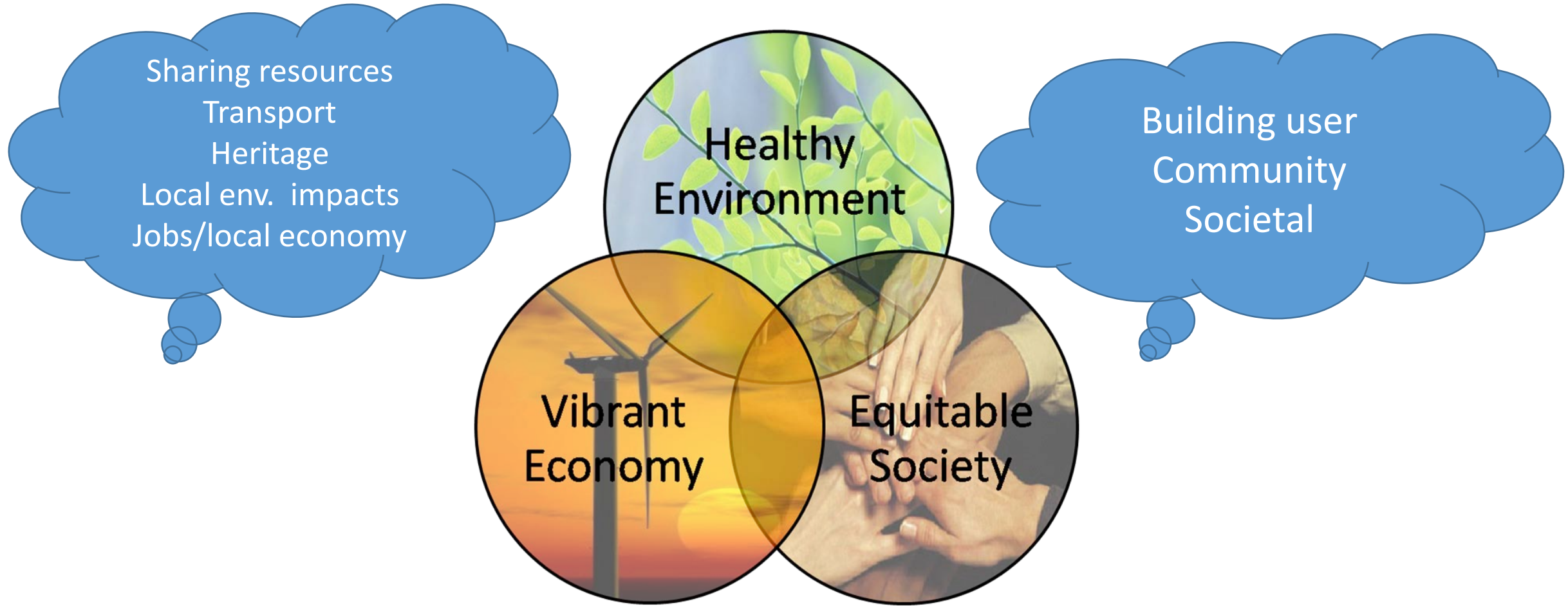
- 80 000 reclaimed bricks
- Future reuse potential of bricks
- Extending building life cycle
- Reuseable partitioning

Economic Assessment



#BuildingCircular

Social Assessment



#BuildingCircular

Prototyping and Piloting

CBA Home Projects

Projects Dashboard

SundaHus

Add new project

Logged in as: Christian Log out

Add new project

Project name

Building owner/Client name

Project code

Construction method

Project function

Address

Postal Code

Country

Latitude

Longitude

Description

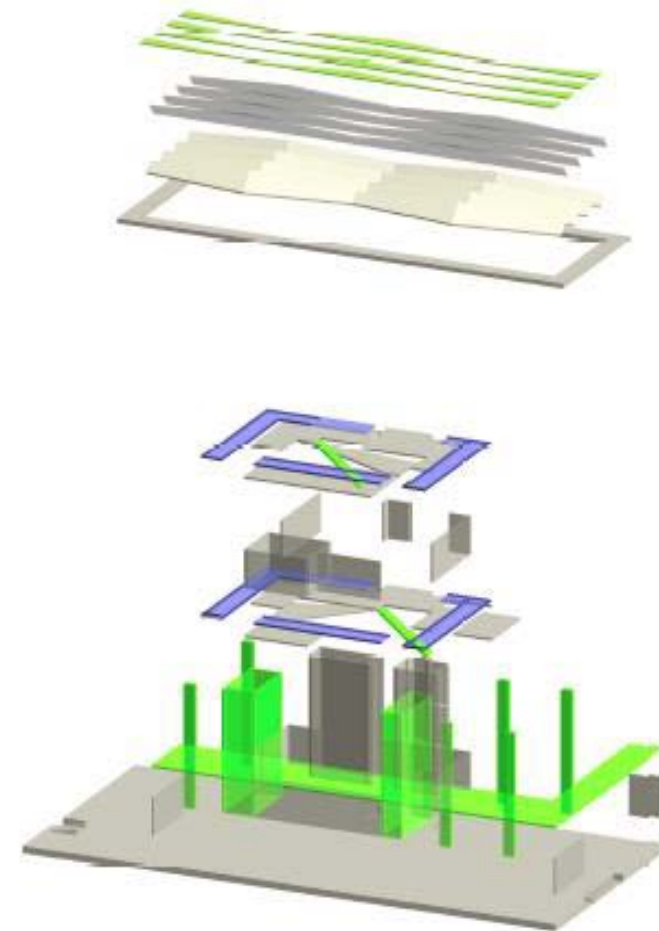
Construction start date

Operation date

Assessor

Assessor organisation

Add project Cancel



Complicated engine vs. Easy user experience

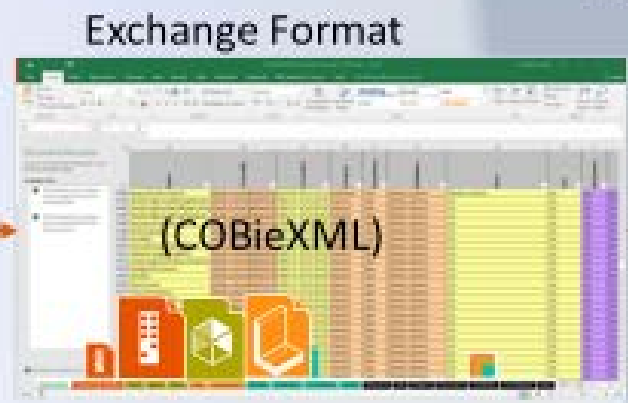




External BIM Model / Project definitions Stage 1 - 4



BIM export



BIM input

User

Manual input



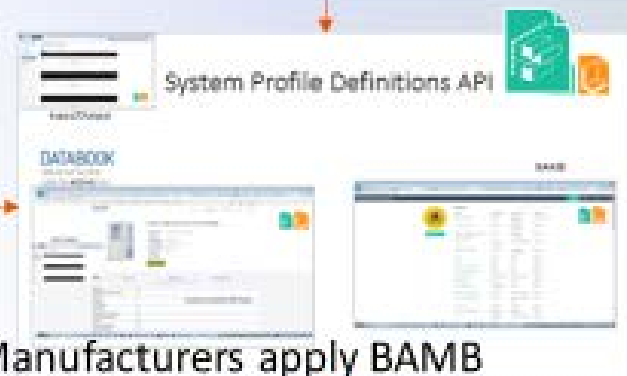
Assessment output



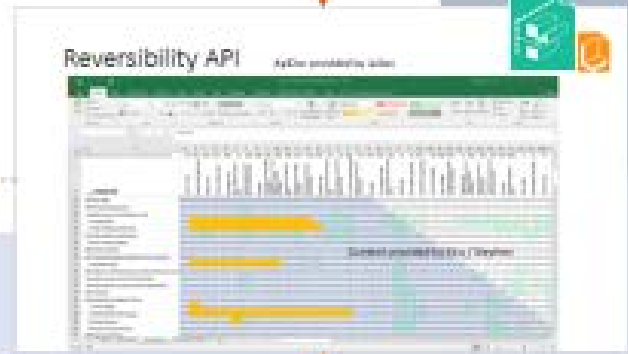
output calls from CBA (in absence of information)

Where there poor system definition in COBie
Default system definitions retrieved to user to
choose

Where geom information is present begin
to use, or compensate with geomEngine



Manufacturers apply BAMB
templates to their products

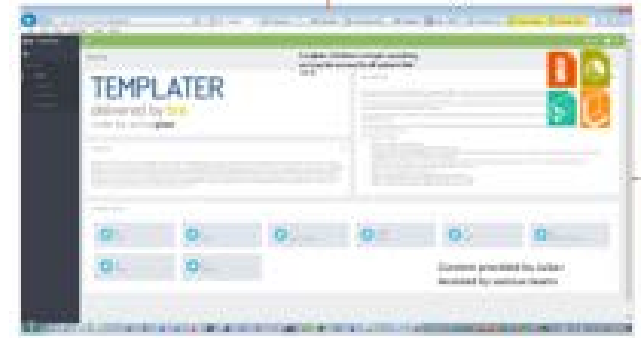


BAMB Templates inform the outputs returned by various APIs

Users begin to apply the
BAMB templates direct in
their models which can be
exportable in the Exchange
format

Schema Exchange

BAMB Templates





Properties

Basic Wall
Bre-BRE_Cav-102_100_130_p

Walls (1) Edit Type

Constraints

Location Line	Finish Face: Exterior
Base Constraint	00_Ground
Base Offset	0.0
Base is Attached	<input type="checkbox"/>
Base Extension Distance	0.0
Top Constraint	Up to level: Roof
Uncollected Height	10.164.0
Top Offset	0.0
Top is Attached	<input type="checkbox"/>
Top Extension Distance	0.0
Room Bounding	<input checked="" type="checkbox"/>
Related to Mass	<input type="checkbox"/>

Structural

Structural	<input type="checkbox"/>
Enable Analytical Model	<input type="checkbox"/>
Structural Usage	Non-bearing

Dimensions

Length	8185.5
Area	95.143 m ²
Volume	29.719 m ³

Identity Data

Image

Comments

Mark

Phasing

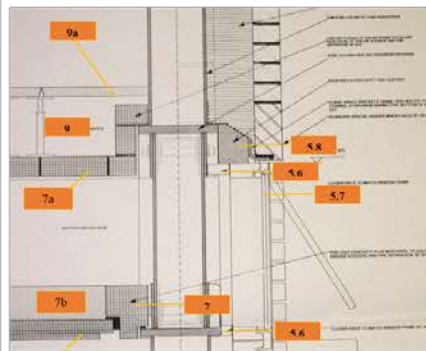
Phase Created	New Construction
Phase Demolished	None

Data

COBie	<input type="checkbox"/>
COBie.CreatedBy	gareth.sewell@bre.co.uk
COBie.CreatedOn	2016-07-05T11:58:42
COBie.Component.Name	Walls
COBie.Component.Space	

Properties help

Apply



- Roof Structure
- Roof Tiles
- External Walls
- Windows
- Upper Floor Types
- Internal Partitions
- Ground Floors

Circularity Indicators

1,570.00	Cost
52%	Reclaimed Content
41%	Virgin/primary resource indicator
67%	Recycled Content
7.24	Reuse Potential/ RBD score
60	Life cycle co-ordination
5.75	Transformation capacity
6.24	Recyclability



Thank you!

Contact

Name: Gilli Hobbs

E-mail: gilli.hobbs@bre.co.uk

Phone: +44 (0) 7800 622 899

