

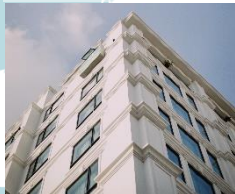
POWERING THE MAKERS OF A ZERO CARBON FUTURE

Johanna Jarvinen, BEng, MSc, BREEAM AP, MCIWEM, PIEMA
Regional BD Manager
One Click LCA

WORLD'S LEADING CONSTRUCTION & MANUFACTURING LCA SOFTWARE



BUILDINGS



MANUFACTURING



INFRASTRUCTURE GHG ACCOUNTING



OPERATIONS



Secure



WORLD
GREEN
BUILDING
COUNCIL

ADVANCING NET
ZERO



MEMBER OF

#1 WORLDWIDE 130+ COUNTRIES ALL GLOBAL DATA 15+ INTEGRATIONS 80+ STAFF 20+ YEARS

THE NEED TO REDUCE CARBON EMISSIONS

THE BUILT ENVIRONMENT – WHO NEEDS TO DO WHAT?

HOW ONE CLICK LCA CAN HELP YOU REPORT & COMPLY

QUESTIONS & ANSWERS





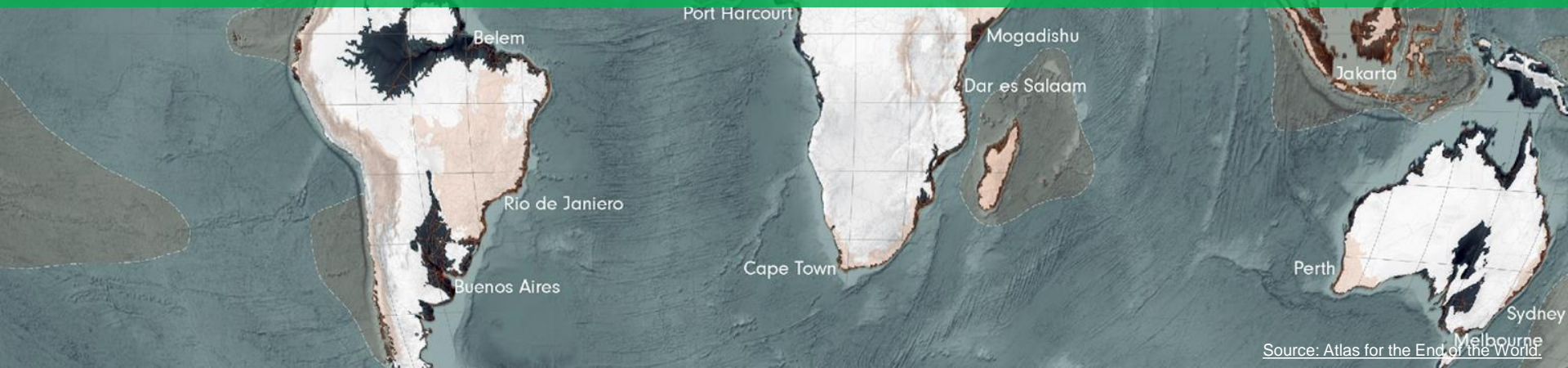
CLIMATE CHANGE IS CAUSING REAL, DRASTIC DAMAGE TODAY



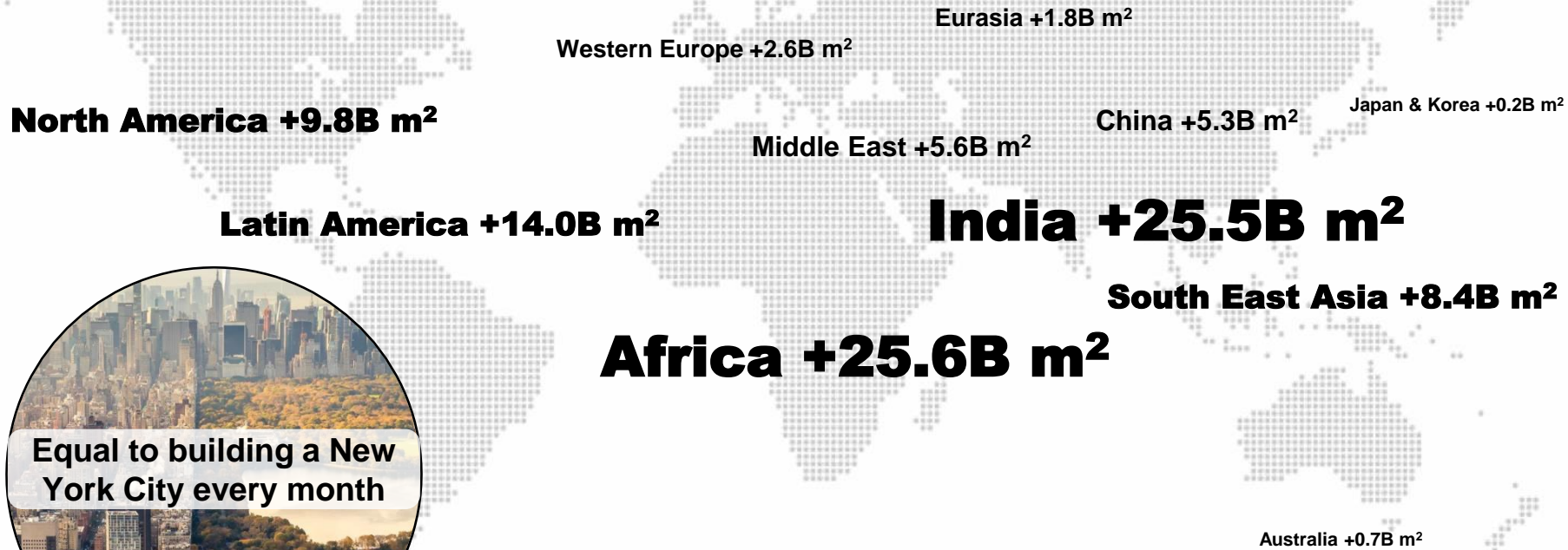
Climate change destroys cities, nature, food supply and lives across the world today. And without decisive action, it's only going to get worse. IPCC estimated 2100 damages exceed €50 trillion.



OUR SEASIDE CITIES MAY BECOME SEABED IN A CENTURY



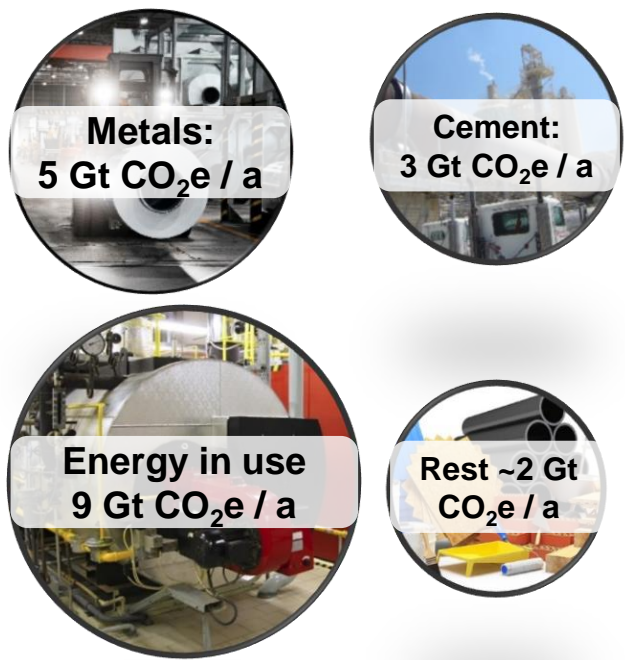
THE GLOBAL BUILDING STOCK WILL DOUBLE IN 40 YEARS



Embodied carbon from this expansion alone will accelerate climate change by six years



CARBON EMISSIONS



GLOBAL CLIMATE IMPACT



RESOURCE DEPLETION



YOUR CLIMATE IMPACT AT WORK IS 1000 X BIGGER

RECYCLE

0,5 tons CO₂e

GO VEGAN

2 tons CO₂e

STOP DRIVING

3 tons CO₂e

**DESIGN, BUILD,
MANUFACTURE
LOW CARBON**

-2500 tn CO₂e/a





YOUR CUSTOMERS & COMPETITORS ARE **ACTING NOW!**

"We expect that share of our assets with Science Based Targets rises to 75 % by 2030" – Blackrock, the world's largest investor

BlackRock



TO HAVE AN IMPACT, YOU NEED TO DEAL WITH

LACK OF TIME

LACK OF
TRAINING

NATIONAL
REQUIREMENTS

**COMPLEXITY
& COST**

INCOMPATIBLE
BIM TOOLS

DOCUMENTATION

**LIMITED &
SCATTERED
DATA**

WORKFLOW
INTEGRATION

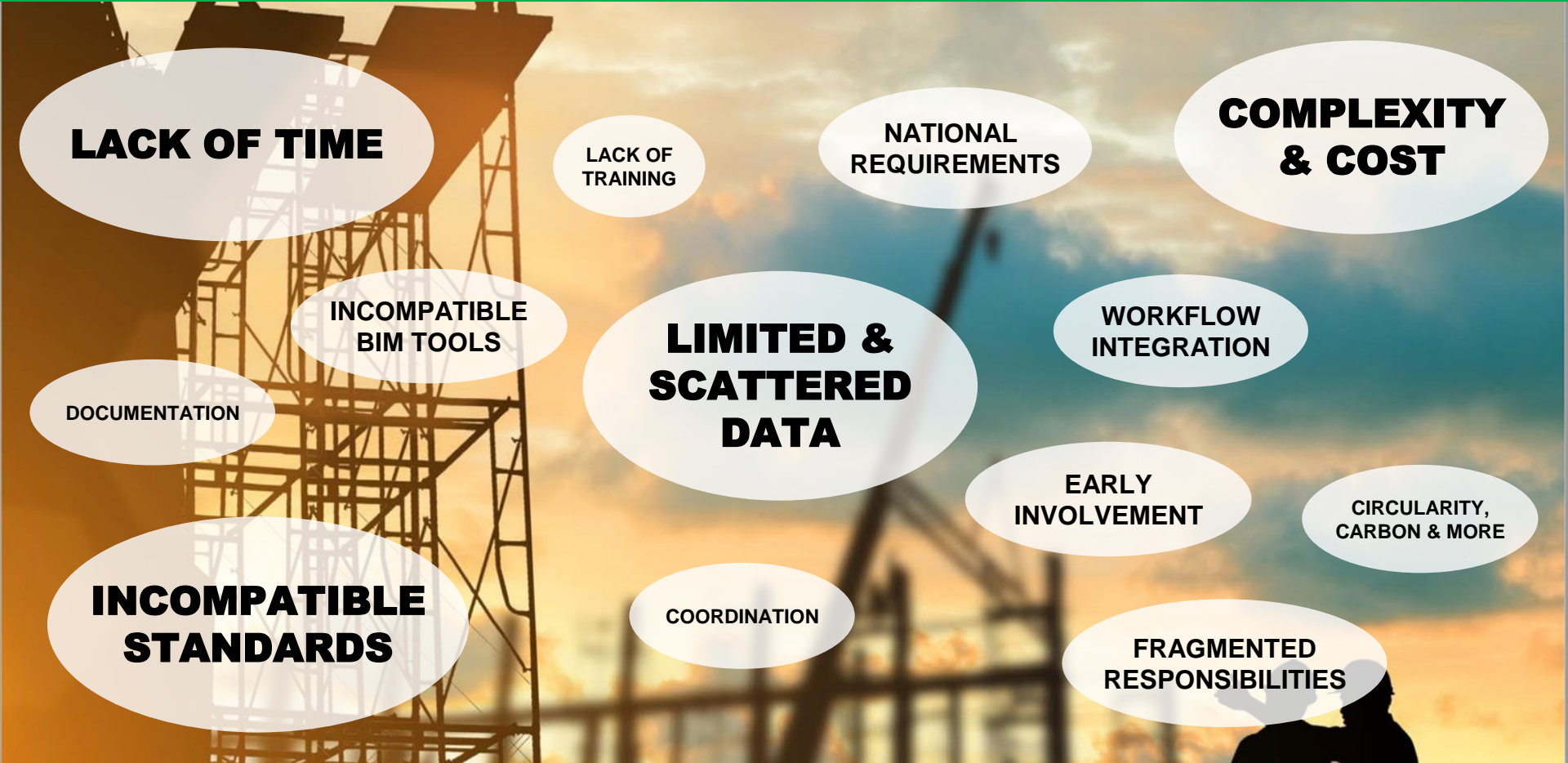
EARLY
INVOLVEMENT

CIRCULARITY,
CARBON & MORE

**INCOMPATIBLE
STANDARDS**

COORDINATION

FRAGMENTED
RESPONSIBILITIES





ACT NOW TO AVOID FAILURE AND STAY COMPETITIVE



THE NEED TO REDUCE CARBON EMISSIONS

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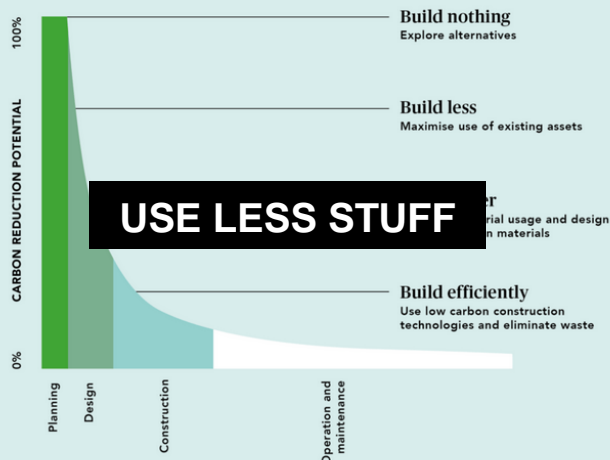
HOW ONE CLICK LCA CAN HELP YOU REPORT & COMPLY

QUESTIONS & ANSWERS





CLIENT BRIEFS



CIRCULARITY

ZERO CARBON DESIGN & DELIVERY – WHAT IT TAKES



REFURBISH



DESIGN FOR CARBON



INNOVATIVE PRODUCTS

Construction & design market requires carbon cuts

EMBODIED CARBON MEANS BUSINESS

Embodied carbon plays a dominant role already

75 % of all building-related GHGs



88 % of all upfront / as-built GHGs



99 % of all non-future GHG scopes

ARUP

LCAs are required by regulations



Taxonomy +
Draft EPDB

LCAs are required by certifications



BY 2030, EMBODIED CARBON TO BE CUT BY 40 %*

Just being 'less bad' no longer cuts it on the market

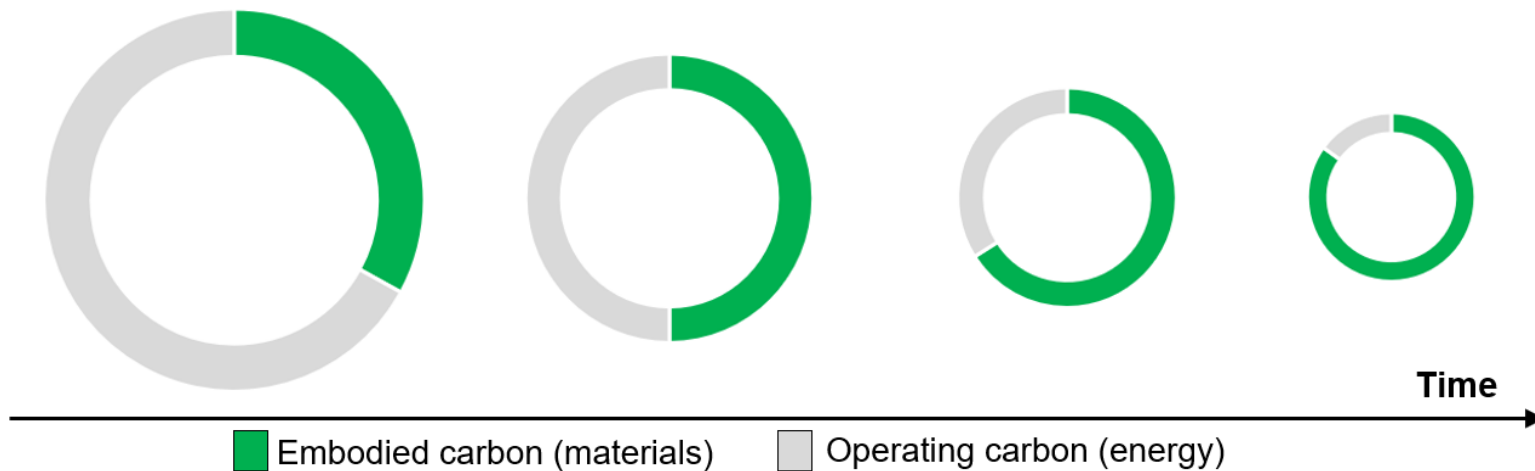


Embodied carbon = CO₂e from manufacturing, transporting, replacing and disposing of materials

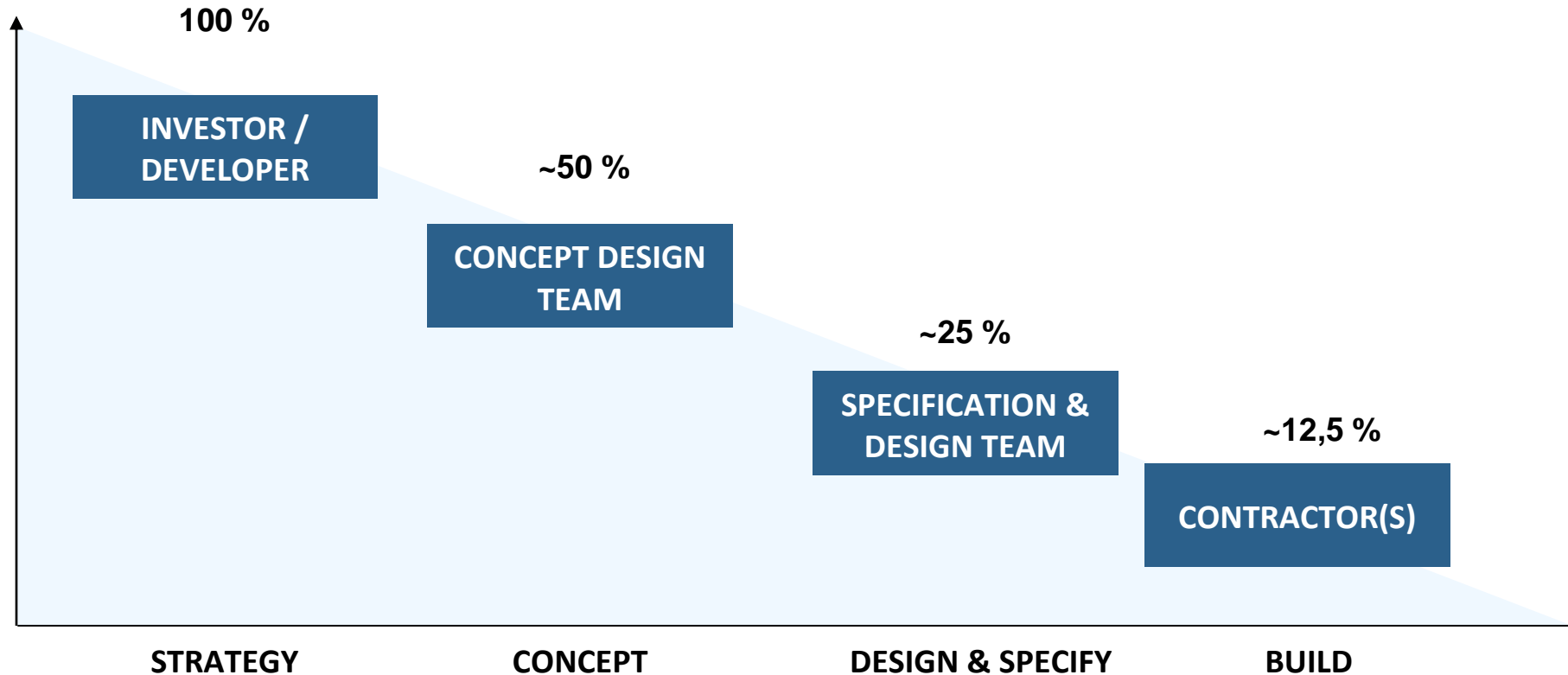
*WorldGBC: Bringing embodied carbon upfront

Embodied carbon's importance grows

EMBODIED CARBON IMPORTANCE GROWS CONSTANTLY

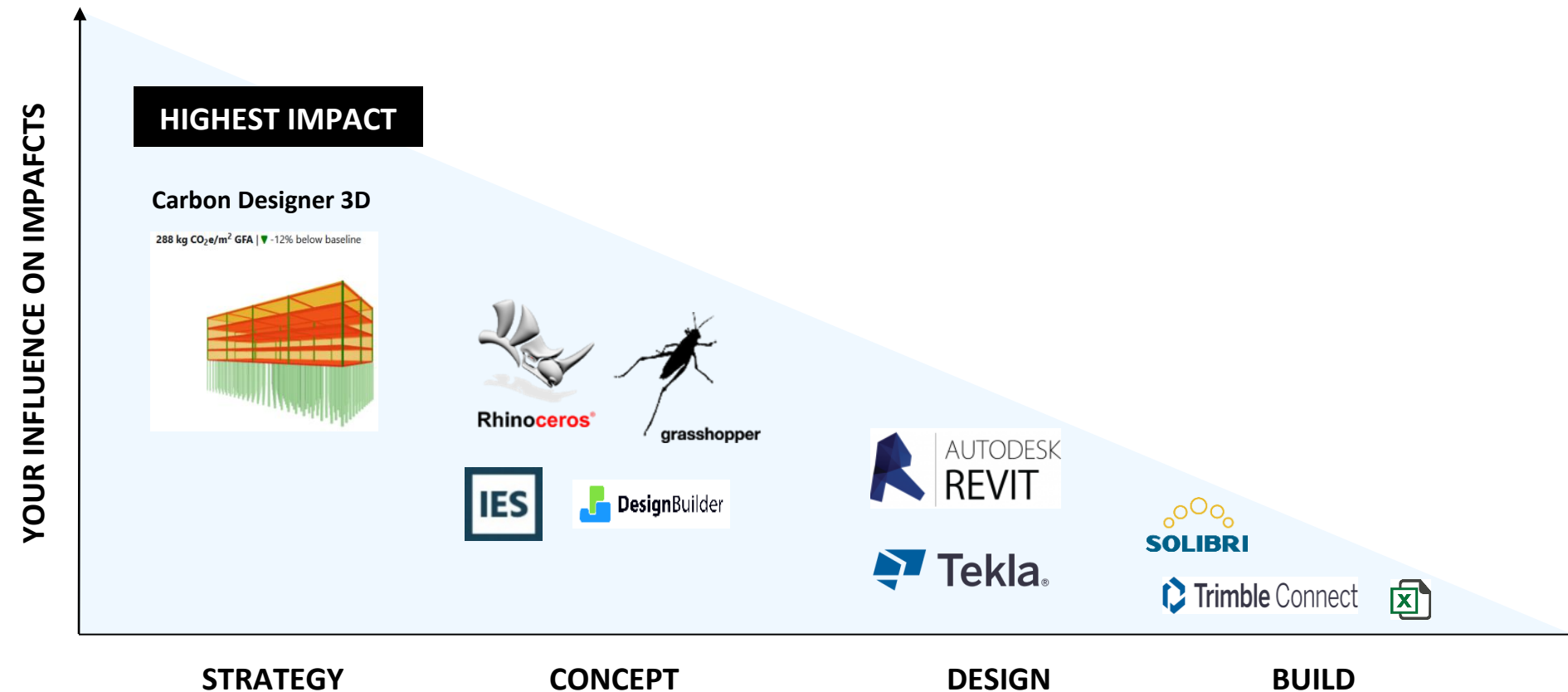


Decarbonization potential halves after each project stage as do the chances to get better products specified



Changing the project direction becomes increasingly difficult and costly when the project progresses. This limits decarbonization potential, as well as the ability to influence specifications.

Early decisions have the highest impact and lowest cost;



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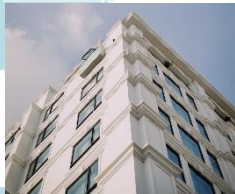
QUESTIONS & ANSWERS



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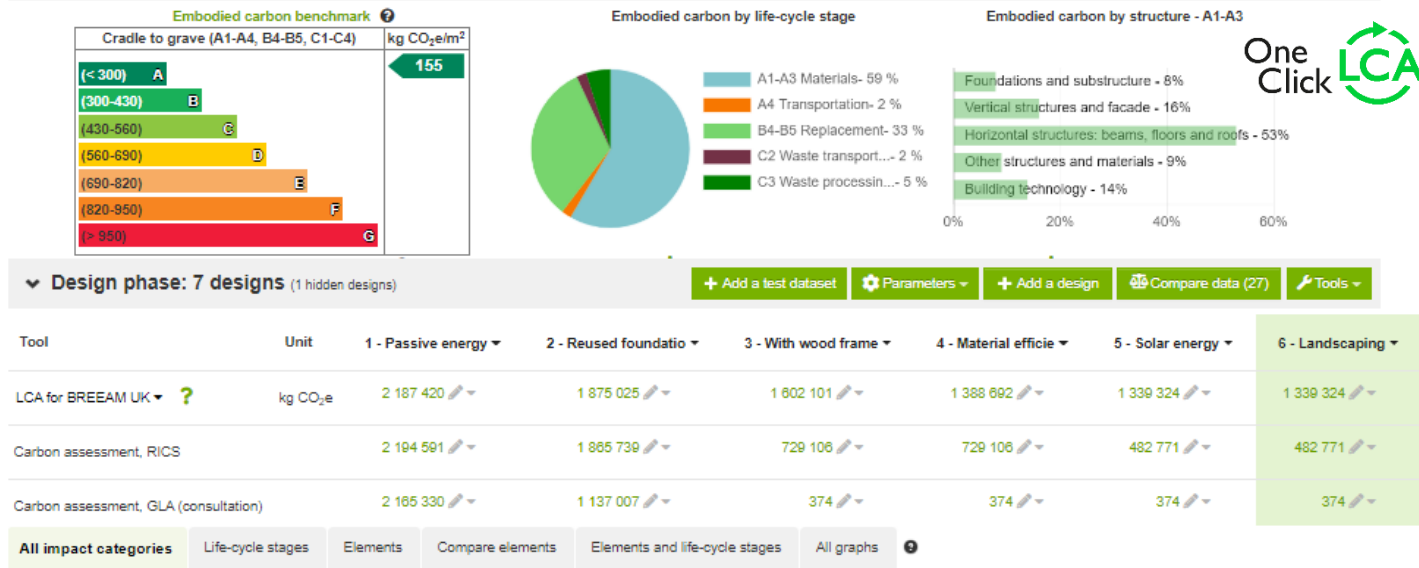
ADVANCING NET
ZERO



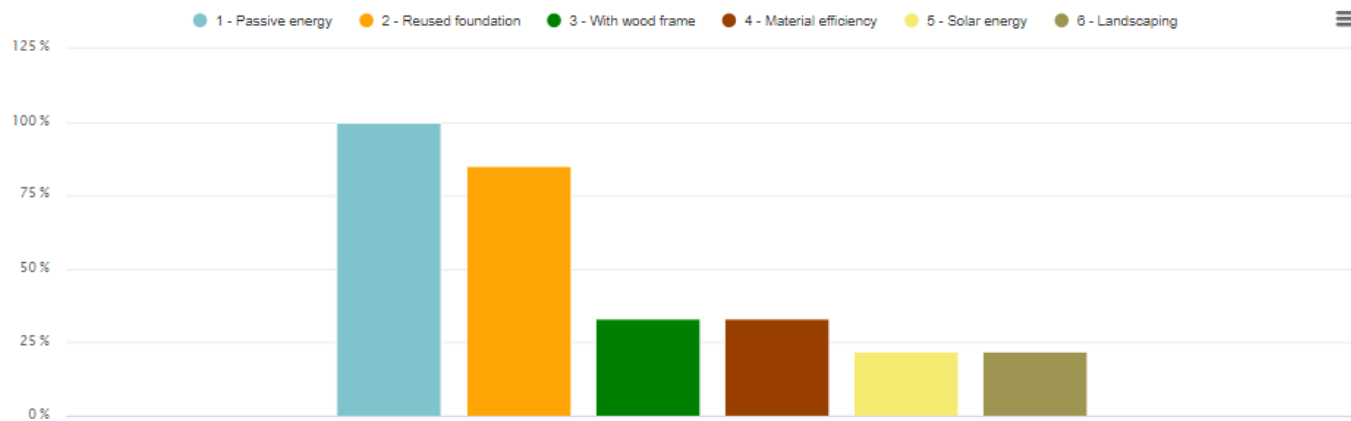
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One Click LCA is a web application



Whole life carbon assessment, RICS - All impact categories



LCA Made Easy

Workflow Results Guidance

Select workflow:

General LCA workflow

- + Verify your LCA parameters
- + Set your building area
- + Set your calculation period
- + Input materials to your design manually
- + Input materials through data import
- + Include material transportation distances

External walls and facade

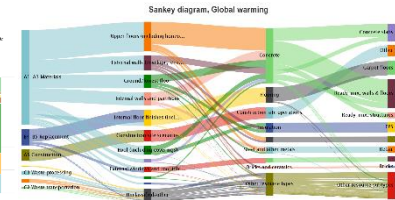
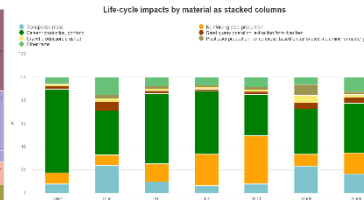
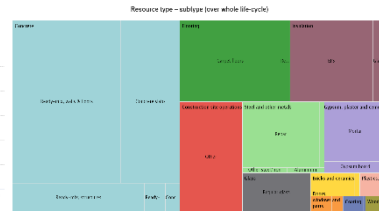
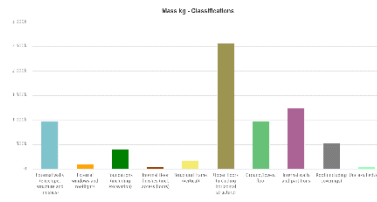
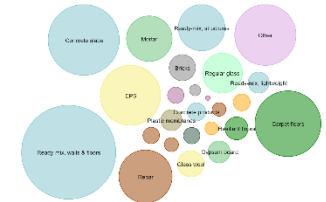
Start typing or click the arrow

Resource	Quantity	CO ₂ e	Comment
Timber frame external wal	2113.0 m ²	28t - 2%	198 mm wooden studs, with
Brick wall, incl. mortar,	2479.0 m ²	120t - 10%	
Fiber cement sheet claddi	500 m ²	11t - 0,9%	

Columns and load-bearing vertical structures

Start typing or click the arrow

Resource	Quantity	CO ₂ e	Comment
Glue laminated timber, 500.33 kg/m ³	30.0 m ³	4,2t - 0,3%	190 mm x 360 mm (GL30c)

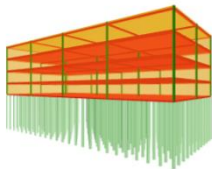


Improve at every project phase, sharing & connecting data

CONSTRUCTION

Carbon Designer 3D

288 kg CO₂e/m² GFA | ▼ -12% below baseline



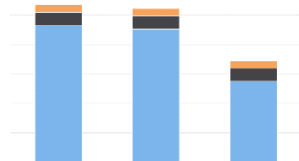
Parametric / energy



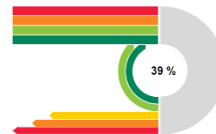
BIM / BoQ / web



Specify & compare



Building Circularity



Carbon Strategy



STRATEGY

CONCEPT

DESIGN

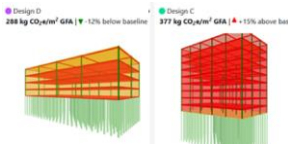
CONSTRUCT

REFURBISH

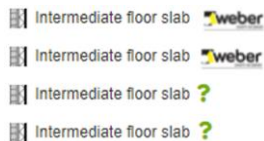
REPORT

MANUFACTURING

Pre-sales comparisons



Product discovery



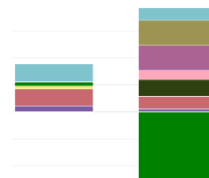
EPD generation



Project specific data



Carbon footprint



GHG reporting



Carbon footprint, Tn CO₂e

By Element By Material By Classification Total

✓ Design A **Baseline**

327 kg CO₂e/m² GFA

✓ Design C | ▲ +15% above baseline

377 kg CO₂e/m² GFA

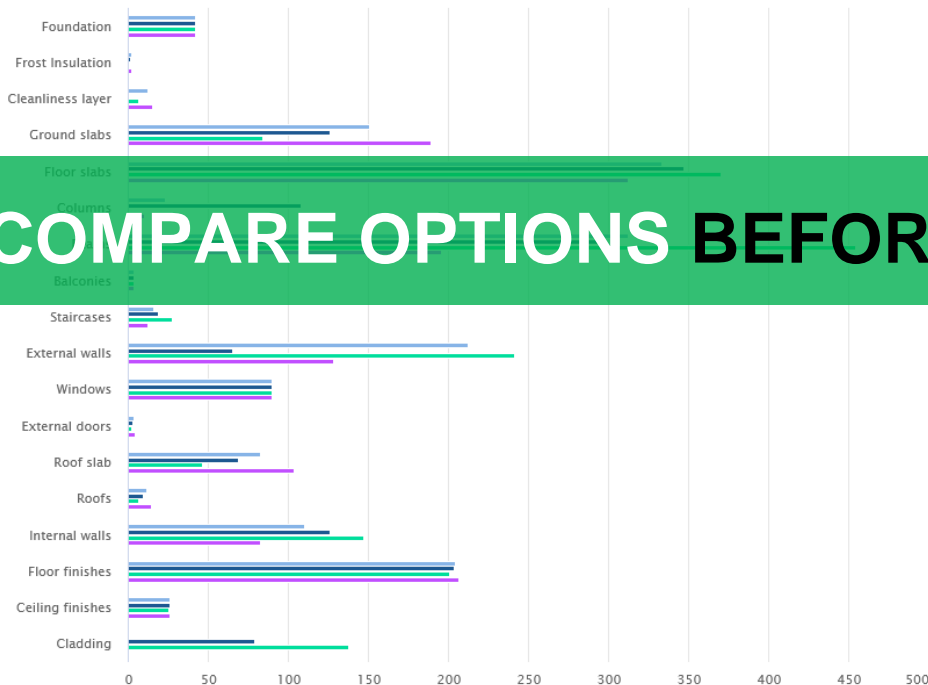
✓ Design B | ▼ -1% below baseline

323 kg CO₂e/m² GFA

✓ Design D | ▼ -12% below baseline

288 kg CO₂e/m² GFA

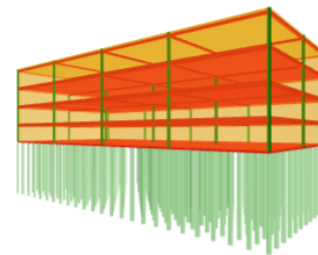
Carbon footprint Tn CO₂e – By Element



3D View

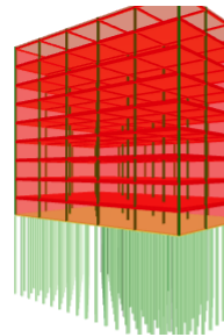
Design D

288 kg CO₂e/m² GFA | ▼ -12% below baseline



Design C

377 kg CO₂e/m² GFA | ▲ +15% above baseline



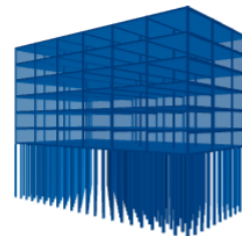
Transparency

Carbon view

Transparency

Design B

323 kg CO₂e/m² GFA | ▼ -1% below baseline



Transparency

Carbon view

Transparency

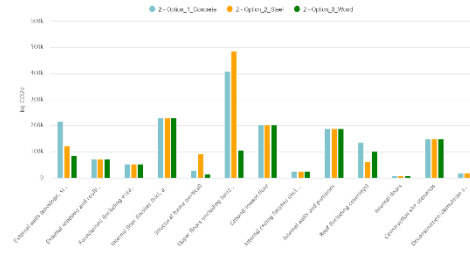
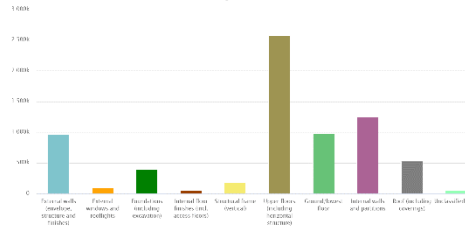
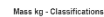
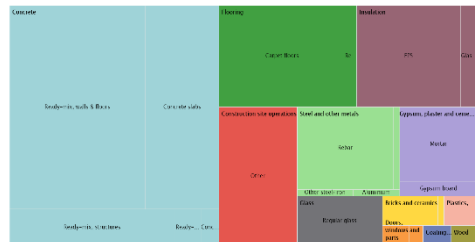
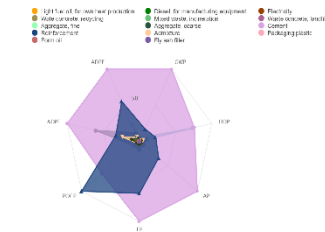
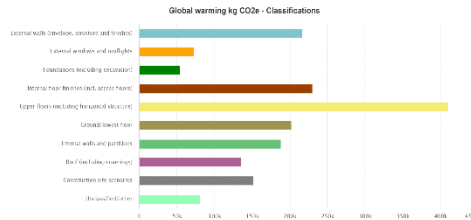
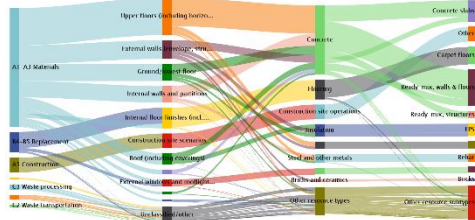
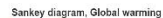
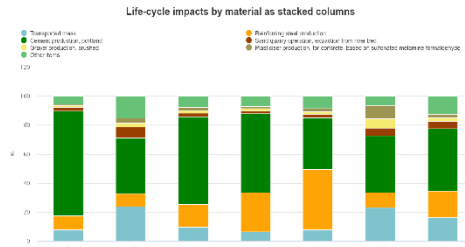
COMPARE OPTIONS BEFORE DRAWING A SINGLE LINE

One Click LCA

FIND OPPORTUNITIES

Legend:

- Concrete
- Doors, windows
- Flooring
- Steel and other
- Insulation
- Plastics, membranes
- Cypress, stainless
- Coatings and paint
- Bricks and masonry
- Roofs
- Stairs
- Construction site
- Ready-mix, walls & floors
- Ready-mix, slabs
- Ready-mix, structures
- Ready-mix, lightw.
- Ready-mix, girts
- Ready-mix, partitions
- Ready-mix, floors
- Ready-mix, stairs
- Ready-mix, roof



Fully operational portfolio tools for projects

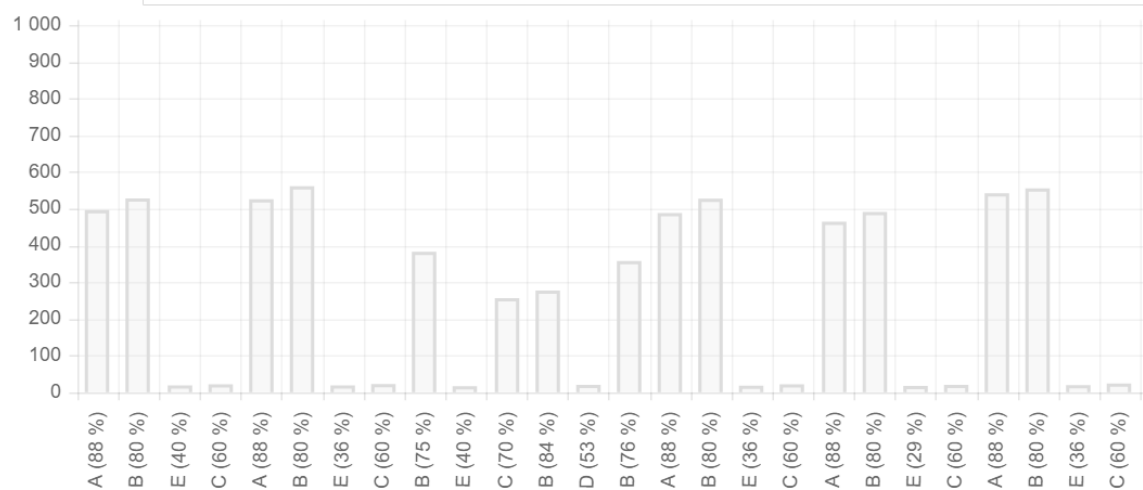


PORTFOLIO FOR A RANGE OF PROJECTS (NEW/REFURB)

PORTFOLIO REPORT BY STAGE

Level(s) life-cycle assessment - kg CO₂e / Per gross internal floor area m²

Graph view Table view



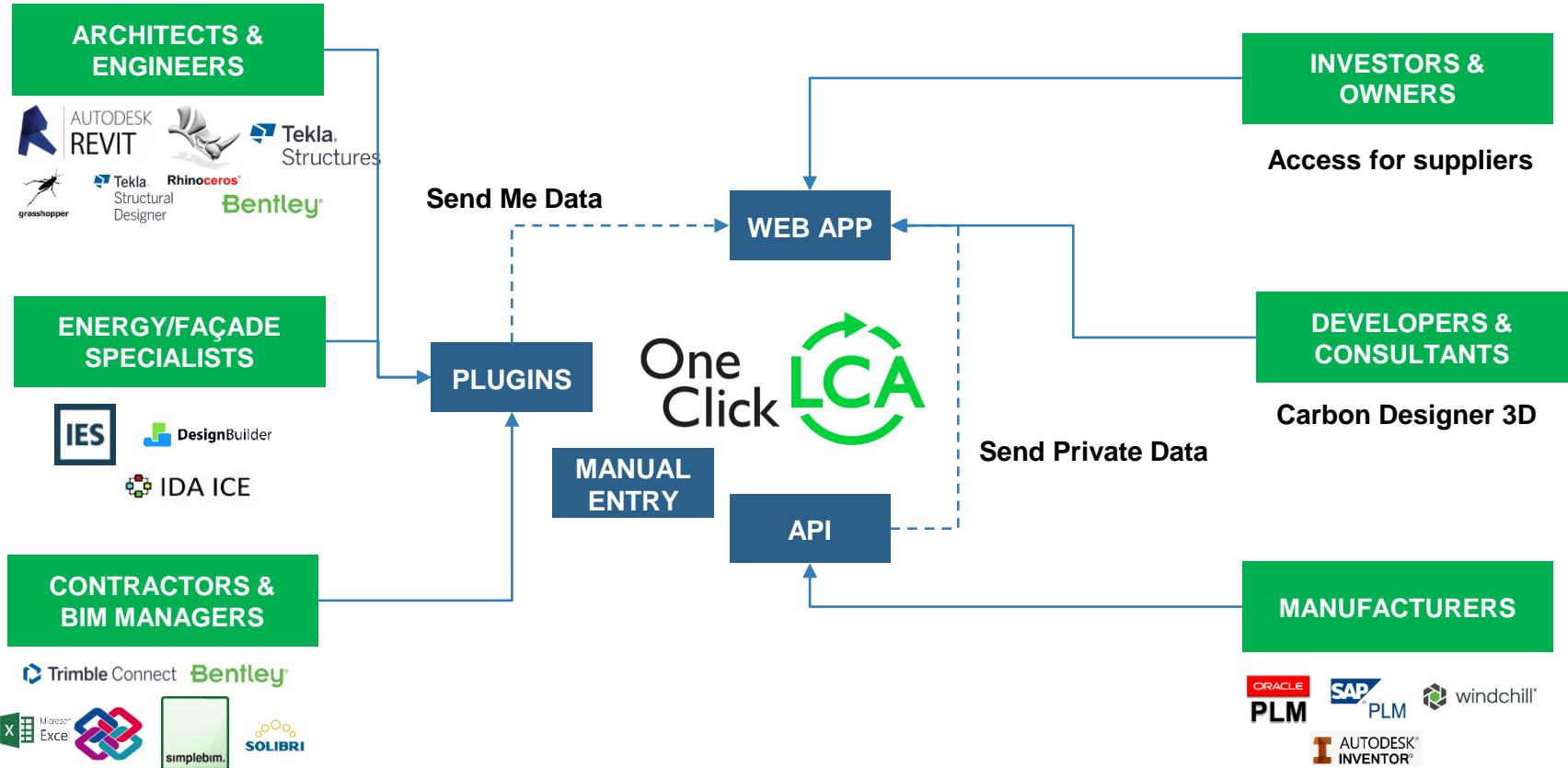
Baseline building portfolio - Level(s) life-cycle assessment

Level(s) life-cycle assessment

Life-cycle assessment for Level(s) - overarching assessment tool 7: Cradle to cradle Life Cycle Assessment (LCA)

Result category		Global warming kg CO ₂ e ⓘ	Biogenic carbon storage kg CO ₂ e bio ⓘ	Ozone depletion kg CO ₂ e ⓘ
A1-A3	Construction Materials	1E7	9,56E5	
A4	Transportation to site	2,97E5		
A5a	Site operations & site waste handling			
A5b	Site waste transportation			
A5	Construction/installation process			
B4-B5a	Material replacement - materials	2,56E6		
B4-B5b	Material replacement - transport	2,03E4		
B4-B5	Material replacement and refurbishment	2,72E6		
B6	Energy use			
B7	Water use			
C1-C4	End of life	6,11E5		

Bring your data seamlessly on board from any source



One Click LCA allows you to import, update, merge, mix and match data from any sources to a single project. You can change design toolchain during the project without stopping tracking.



ALL THE WORLD'S LCA DATA QUALIFIED & UP TO DATE









ONE CLICK LCA PROPRIETARY DATA



REGULATORY AND GENERIC DATA



PRIVATE DATA

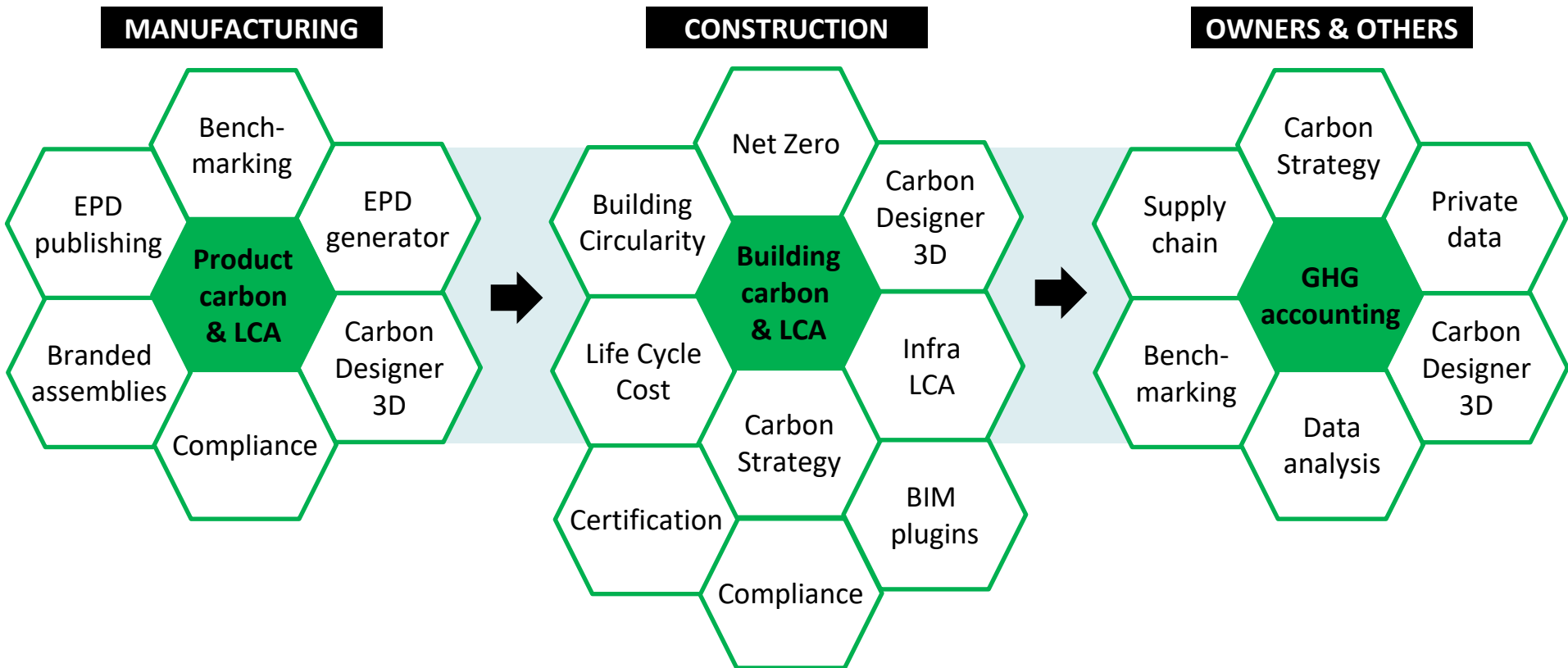
-  Floor below the bathrooms, hollow-core concrete,
-  Floor below the machine room next to air-raid she
-  Floor below the machine room, kindergarten and :
-  Glass balustrade with steel handrail - 1200mm hig
-  Green roof assembly, with hollow-core concrete d
-  Green roof assembly, with timber joists, Green roc
-  Ground Floor, kindergarten and school, with 30%
-  Ground Floor, kindergarten and school, with regul



SUPPORTING LOCAL REGULATIONS & CERTIFICATIONS



Tools for all your needs and a seamless data exchange



DECARBONIZATION IS NECESSARY

TRAINING & TOOLS FOR ALL



Master Life Cycle Assessment
at **summer school**

Free Course | 30th May - 20th June 2022

Enroll now

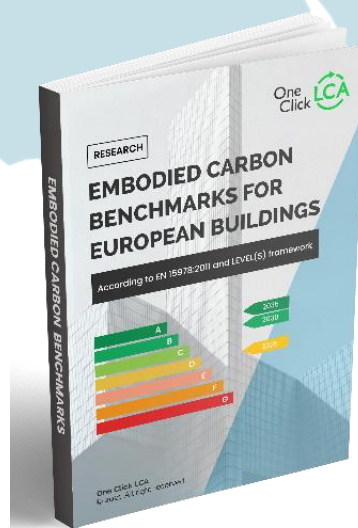
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The banner features a green background with a blue circular graphic on the left containing a building icon. Two people, a man and a woman, are smiling and holding blue folders. The One Click LCA logo is in the top right corner.



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RESEARCH & POLICY FOR ALL



EXPERT SUPPORT FOR YOU



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QUESTIONS?



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+44 74643 50081

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