



# eTool – eToolLCD Software

**Presented to – ASBP – Life Cycle Analysis  
tools and datasets webinar**

Adrian Giles & Marios Tsikos

eTool

*Simply build better.*



# Who we are?



developed the **eToolLCD** software to model the **Environmental** and **Financial** performance of 'whole of building' projects.

1. Engage eTool as a Consultant (LCA modelling & reporting)



and/or

2. Subscribe to the eToolLCD software (to use it as a design /collaboration platform within your organisation).



# eToolLCD Compliance - International Rating Schemes

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BREEAM®

Green Star

ISQA



LIVING  
BUILDING  
CHALLENGE™



DGNB

Deutsche Gesellschaft für Nachhaltiges Bauen  
German Sustainable Building Council



ONE  
PLANET  
LIVING



CEEQUAL

UDIA – EnviroDevelopment



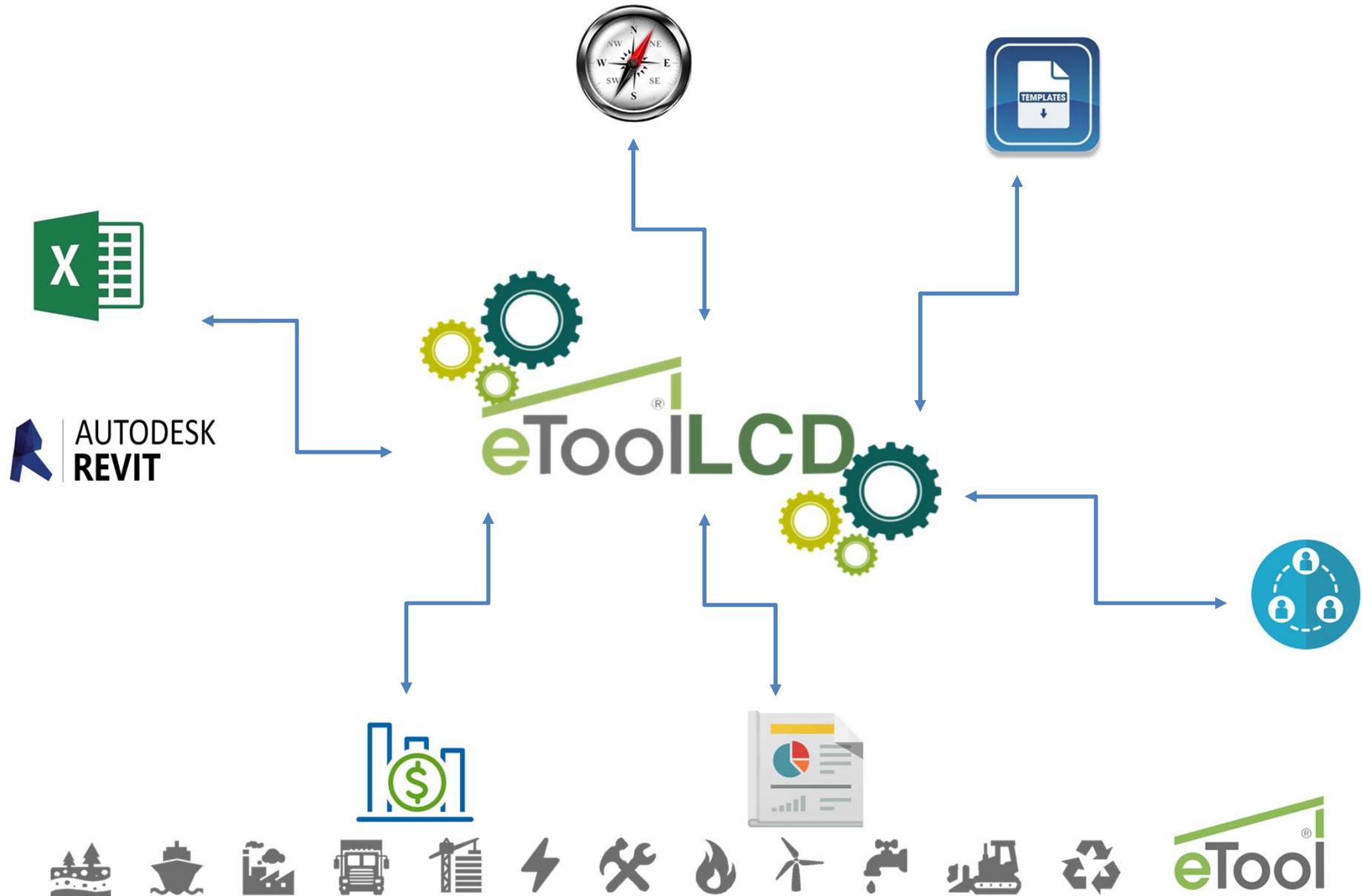
eTool®

# Who we work with:



# Features of eToolLCD software

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# An EN 15978 Compliant Software

- Categories
- Templates
- EPDs
- Details
- Functions
- Reports
- Recommendations
- EN 15978
- Alerts
- Docs
- Quality Checks
- Scale Costs
- Import
- Collapse Tabs

Life Cycle Stage	Detail Description	Code	Global Warming Potential, GWP (kg CO2 eq)
Materials and Construction Stage	Product Stage	A1-A3	-941,329
	Transport of Equipment and Materials	A4	3,097,047
	Construction	A5	627,541
Use Stage	Use of Products	B1	0
	Maintenance	B2	188,707
	Repair	B3	0
	Replacement	B4	6,634,546
	Refurbishment	B5	0
	Integrated Operational Energy Use	B6	14,943,524
	Other Operational Energy Use	B6+	0
	Operational Water Use	B7	0
End of Life Stage	Deconstruction / Demolition	C1	0
	Transport of Waste Offsite	C2	225,111
	Waste Processing	C3	389
	Disposal	C4	2,768,996
Benefits and Loads Beyond The System Boundary	Operational Energy Exports	D1	-994,500
	Closed Loop Recycling	D2	-493,823
	Open Loop Recycling	D3	2,453
	Materials Energy Recovery	D4	-218,158
		D5	0
			25,840,504

### Impact Summary

Global Warming Potential, GWP

Category	Global Warming Potential, GWP (kg CO2 eq)
Products	-941,329
Transport	3,097,047
Construction	627,541
Recurring	6,823,253
Energy	14,943,524
Water	0
End of Life	2,994,495
	-994,500
	-709,528
<b>Total</b>	<b>25,840,504</b>

Global Warming Potential, GWP

+ Material Efficiency Metrics

Circular Economy



# An EN 15978 Compliant Software

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EPDs



# eToolLCD unique modelling approach

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## The material by material approach

- X kg aluminium
- Y kg of plasterboard
- Z kg of Insulation

## The BIM approach

- X m2 of “External Wall – Steel cladding on SFS, Insulation, Plasterboard”
  - Steel Cladding
  - SFS
  - Metal Studs
  - Insulation
  - Vapour Barrier
  - Plasterboard
  - People
  - Equipment



# eToolLCD unique modelling approach

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# eToolLCD unique modelling approach

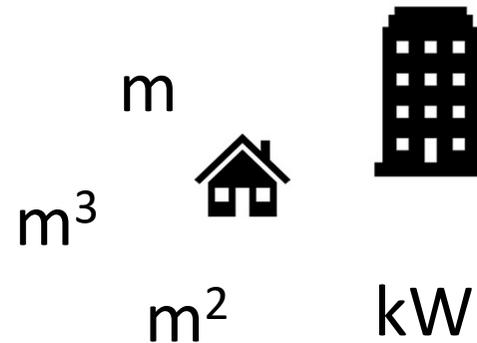
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# eToolLCD unique modelling approach

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## The BIM approach

- X m2 of “External Wall – Steel cladding on SFS, Insulation, Plasterboard”
  - Steel Cladding
    - Steel Sheet
    - Fasteners/Nails
  - SFS
    - Frame
    - Brackets and fasteners
  - Metal Studs
    - Tracks, Studs, Noggins
    - Brackets and fasteners
  - Insulation
  - Vapour Barrier
  - Plasterboard
    - Plasterboards
    - Paint
      - Primer
      - Undercoat
      - Top coat
  - People
  - Equipment



# eToolLCD unique modelling approach

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  - People
  - Equipment

### Module A5 Construction and Installation

People  
Equipment



# eToolLCD Templates

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 External Wall - Plbrd/Metal studs/Fiberglass Insulation/SFS/Steel Cladding (12.5/65/280)



# eToolLCD Templates

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 External Wall - Plbrd/Metal stud and Fiberglass Insulation/Brick (12.5/65/110)

 External Wall - Plbrd/Metal studs/Fiberglass Insulation/Cement board/Texture coating (12.5/130/65/12.5)

 External Wall - Plbrd/Metal studs/Fiberglass Insulation/SFS/Concrete Panel (12.5/65/280/60)

 External Wall - Plbrd/Metal studs/Fiberglass Insulation/SFS/Steel Cladding (12.5/65/280)



# eToolLCD Templates

External Wall - Plbrd/Metal stud and Fiberglass Insulation/Brick (12.5/65/110)

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Properties

Basic Wall

External Wall - Plbrd/Metal studs/Fiberglass Insulation/SFS/Steel Cladding (12.5/65/280)

Walls (1) Edit Type

Layers				
EXTERIOR SIDE				
	Function	Material	Thickness	W
1	Core Boundary	Layers Above Wrap	0.0	
2	Structure [1]	Placeholder	350.0	
3	Core Boundary	Layers Below Wrap	0.0	



# eToolLCD Templates

External Wall - Plbrd/Metal studs/Fiberglass Insulation/SFS/Steel Cladding (12.5/65/280) 🌐👍

Action		Template	Unit	Quantity	GWP (kg CO2 eq)		
<ul style="list-style-type: none"> <li>Categories</li> <li><b>Nested Templates</b></li> <li>EPDs</li> <li>Details</li> <li>Alerts</li> <li>Collapse Tabs</li> </ul>		Bulk Insulation - 75mm Fibreglass (R1.5)	m2	0.8667	32	<input type="text"/>	<a href="#">Edit</a> <a href="#">Delete</a>
		Internal Wall - Framing, 64mm Steel Stud (600mm Centres)	m2	1	32	<input type="text"/>	<a href="#">Edit</a> <a href="#">Delete</a>
		Internal Finish - Plaster 13mm and Paint	m2	1	423	<input type="text"/>	<a href="#">Edit</a> <a href="#">Delete</a>
		Ceiling Lining - 2mm polyurethane vapour barrier	m2	1	43	<input type="text"/>	<a href="#">Edit</a> <a href="#">Delete</a>
		Wall Cladding - 0.6BMT Colorbond Steel Sheeting (Maxline profile)	m2	1	89	<input type="text"/>	<a href="#">Edit</a> <a href="#">Delete</a>
		Framing - 280mm SFS (600mm c/c)	m2	1	51	<input type="text"/>	<a href="#">Edit</a> <a href="#">Delete</a>
		Other		0	0	<input type="text"/>	
		<b>Total</b>			<b>670</b>		



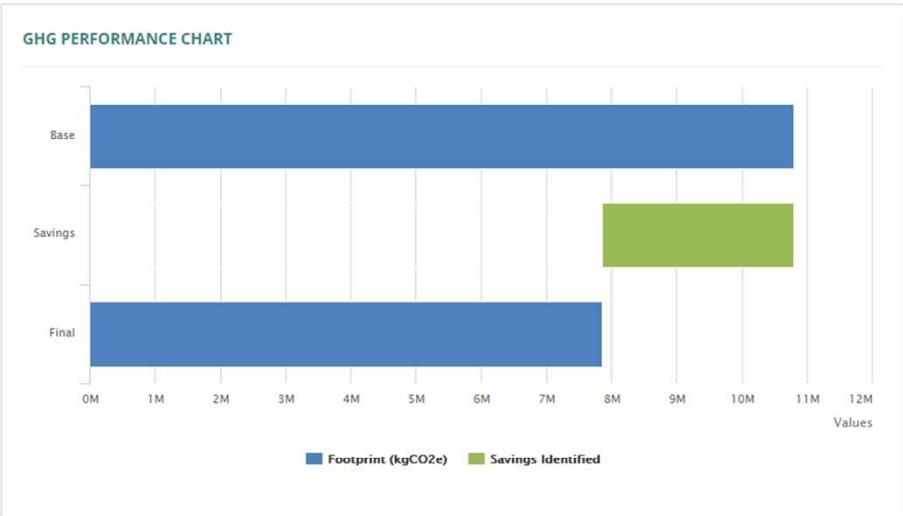
# eToolLCD Templates

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- Single Element Templates
  - Plasterboard
  - Concrete wall
- Element Type Templates
  - Internal Wall Type 1
  - Internal Wall Type 2
  - Internal Wall Type 3
- Systems Templates
  - ASHP (embodied + operational)
  - Gas boiler (embodied + operational)
  - Bathroom (fixtures, plumbing, water consumption etc)
- Construction method Templates
  - Concrete Frame per m2 GIFA
  - Steel Frame per m2 GIFA
- Target Setting Typology Templates



# Live Demonstration



### MY PROJECTS

Include Archive 
 + - + New Project

	State
<input type="checkbox"/> eToolLCD UK Training	England
<input type="checkbox"/> 19 Clydesdale - LCA	WA
<input type="checkbox"/> MT eTool Infrastructure Test	England
<input type="checkbox"/> Footscray Hospital	VIC
<input type="checkbox"/> Exeter College IoT Building	England
<input type="checkbox"/> MT eTool UK Test	England
<input type="checkbox"/> MT IMPACT Test	England
<input type="checkbox"/> ISCA Materials Calculator	WA
<input type="checkbox"/> Sydney Football Stadium Redevelopment	NSW
<input type="checkbox"/> 12 Smith street, Perth	WA
<input type="checkbox"/> Example Project	ENG

[More](#)

- ### MESSAGES
- ✉ A new certification has been requested [Certification](#)  
04/05/2020 08:46 AM
  - ✉ A new certification has been requested [Certification](#)  
04/05/2020 03:42 AM
  - ✉ A new certification has been requested [Certification](#)

### SHARED PROJECTS

There are no shared projects



# Subscriptions to suit your needs

## Open Use - £0.00

- Individual licence
- Full project fees
- Global warming indicators
- Online training resources
- Online help

## Consultant - \*£40 pm

- Individual license
- 20% project fee discount
- All environmental indicators
- Basic training
- Phone and e-mail support
- BIM integration
- Design features
- Life Cycle Costing
- Expanded report suite

## Enterprise - \*£257 pm

- Floating license – 4 x seats
- 40% project fee discount
- All environmental indicators
- Advanced training
- Phone and e-mail support
- BIM integration
- Design features
- Life Cycle Costing
- Full report suite
- Collaboration tools
- Custom Branding
- Manage teams and project access
- Unrestricted read only users
- Centralised ownership

## Specialist - \*£401 pm

- Floating license – Single seat
- 100% project fee discount
- All environmental indicators
- Advanced training
- Phone and e-mail support
- BIM integration
- Design features
- Life Cycle Costing
- Full report suite
- Collaboration tools
- Custom Branding
- Manage teams and project access
- Unrestricted read only users
- Centralised ownership

\* Based on current exchange rate \$ USD - £ Pound Sterling



# Let's simply build better.

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