



What is Industrialised Retrofit?

Ele George, Founder, Elevate

Why should we do it,
and
where is it already happening?

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A winter poem...

Shit, it's cold!

The end.

Author unknown



Home temperature loss after 5 hours

tado°

With a temperature of 20°C inside and 0°C outside



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Based on a sample of over 80,000 European homes

A summer poem...

Shit, it's hot!

The end.

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The scale of the problem...

...

80%

Of buildings
already exist

...

28 million

of homes
needing
retrofit

...

2 homes

Every minute
until 2050

...

15%

Not up to a
'decent'
standard



WICKED PROBLEM:

Social or cultural problem that is difficult to solve because of interconnected issues

SYSTEMS THINKING:

A holistic approach to analysis that focuses on how different parts of a system interact and influence each other

The case for industrialised retrofit



Transform-ER: “Define the Need ” – Why We Must Industrialise Retrofit



Retrofit is underdelivering, only meets 6% of what's needed



Up to £60 bn/year market potential



Current landscape hindered by fragmented systems and lack of standards



Manufacturing-led, platform approach – Aggregated demand + standardised kits-of-parts



New delivery model required –financeable, quality driven with digital tools



Barking &
Dagenham



energie
sprong
uk



KIN®

mtc

planarific



TATA STEEL

Ultrapanel®
The Efficient Way to Build



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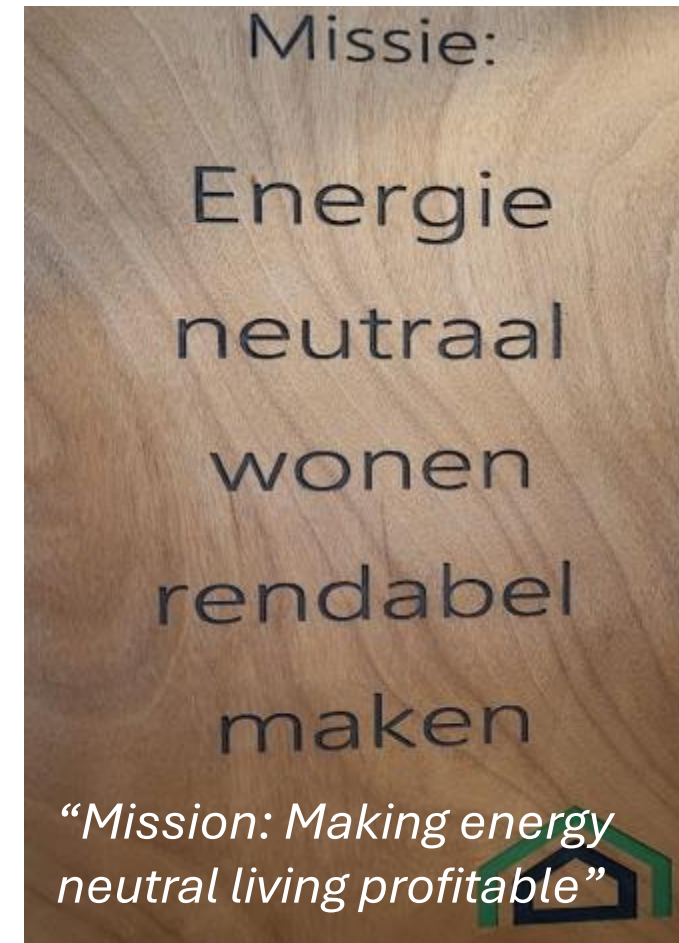
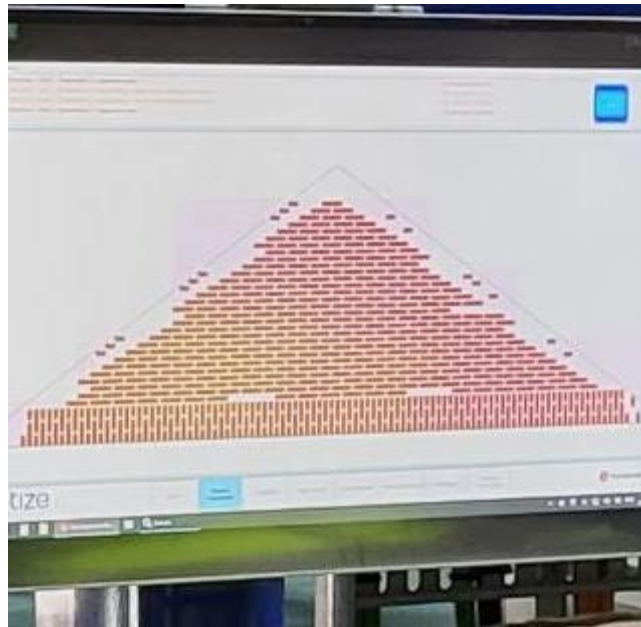


Didam, Netherlands – by Rc Panels





RcPanels - Netherlands



Energy module: Start point...

- Early iterations were built on site, each component individually sourced and installed.
- Uses substantial space within a 'utility area'.
- Equipment looks 'untidy' even when the install is neat (as in this case).
- Site install takes substantially longer than desirable.





HomeZERO

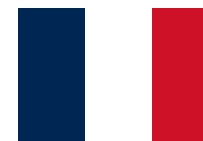


 Monodraught

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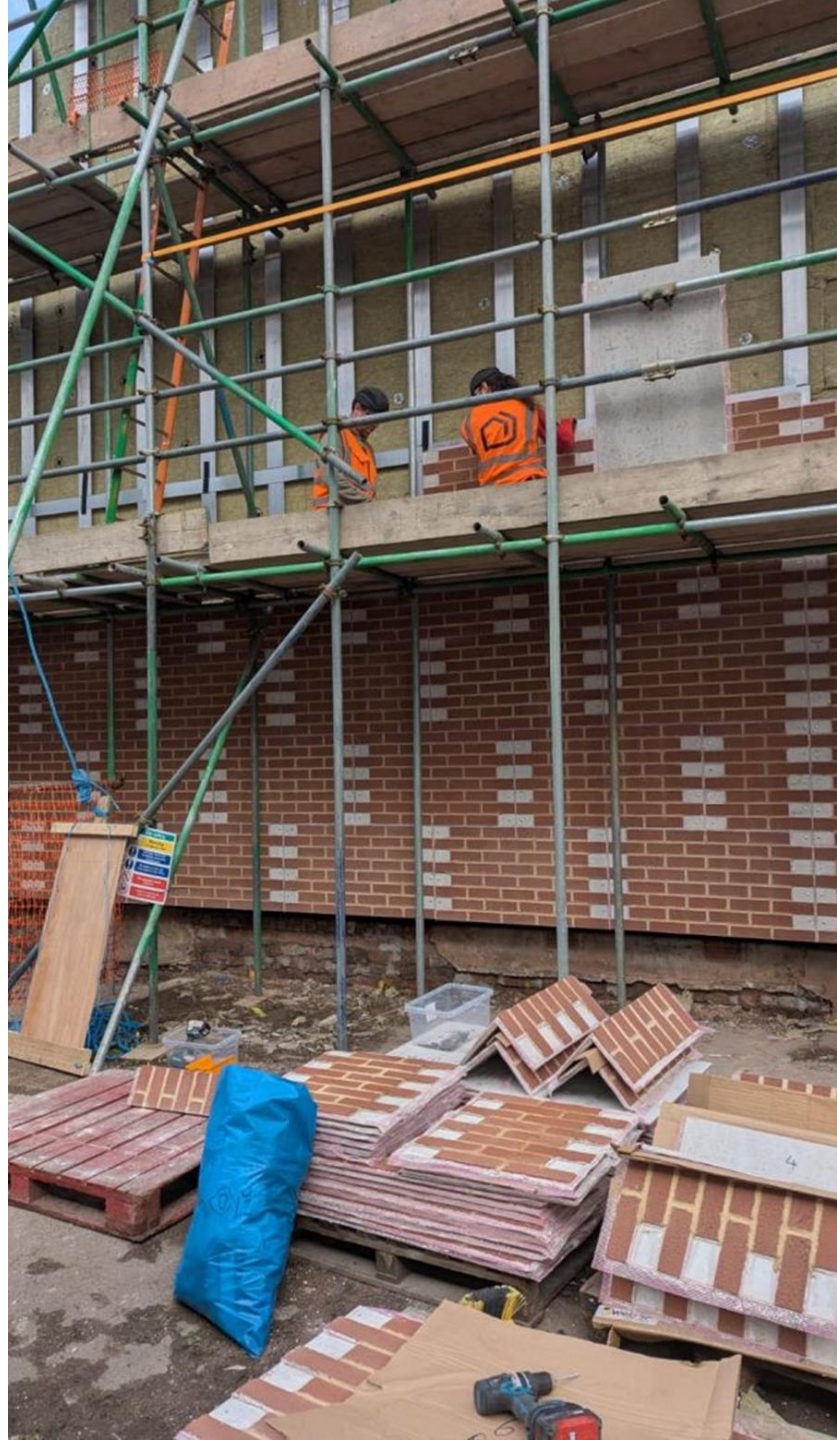


SYNERPOD



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VundaHaus



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Housewrap



Ultra[®]panel
Building Technologies

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Wrapt



wrapt

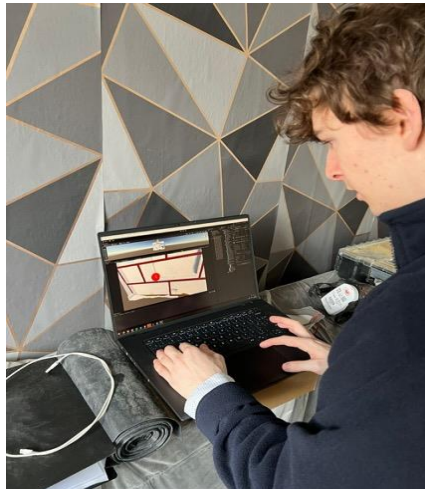


The University
Of Sheffield.

/AMRC
Advanced Manufacturing
Research Centre



Data Capture



Automated Cutting List



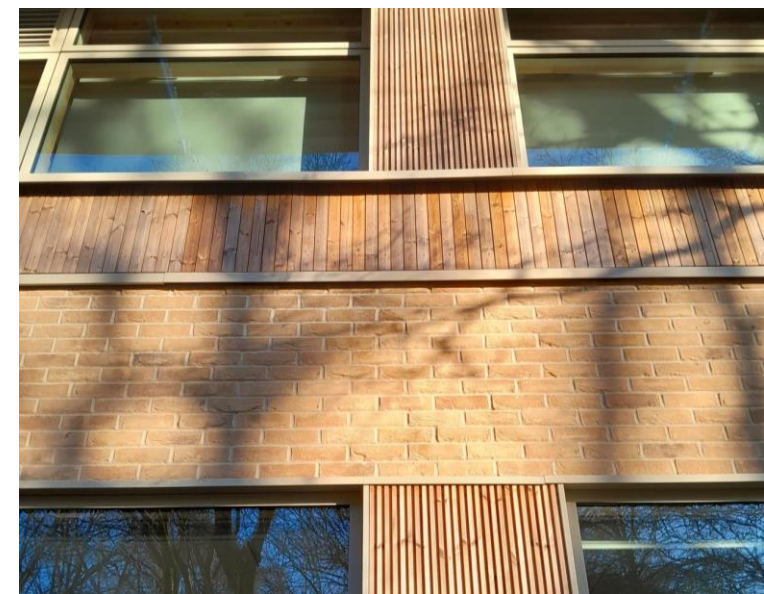
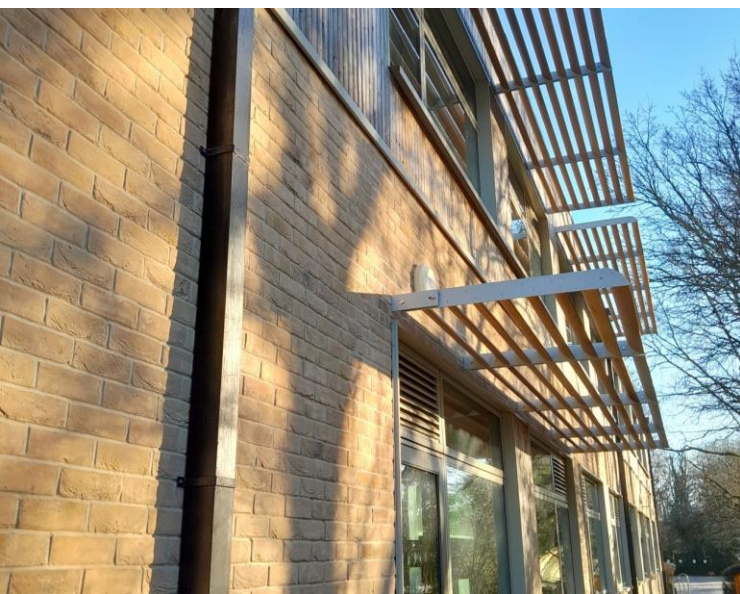
Preparation of Wall



Insulated Room

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Photos courtesy of Hampshire County Council



Making a case for industrialised retrofit programmes for UK schools: lessons from Europe

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