



untying the wood industry's Gordian Knot:

*what architects need to know about wood
& how the global timber industry can
encourage them to use more of it*

Peter Wilson, Director, Timber Design Initiatives Ltd

the same obstacles are everywhere

insurers

fire departments

planning departments

building codes / regulations

mortgage providers / lenders

public and political perceptions

construction industry resistance

but also

lack of joined-up response from manufacturers & suppliers

lack of up-to-date, objective information

and

lack of knowledge about timber amongst architects

first question

who here works in a timber building?

answer

a timber building is your shop window

***potential customers will better understand the value of your product if
you can demonstrate your own use of it***

engineered timber & advanced timber technology is the future

the 21st century will be seen as the century of timber building

second question

***how many of you consider architects as important customers /
specifiers of timber?***

where are they positioned in your customer chain?

your customer chain

sawmillers / processors

traders

manufacturers

*designers / **architects** / engineers*

builders

end users

third question

how many architects do you think there are in europe?

answer

569,000

key customers you're not reaching

seeking the golden fleece

construction timber can be low or high value



innovation is the only sustainable route to high value



architects provide innovation

so what do we mean by innovation?

***before the invention of the internal combustion engine,
if you asked people what improvements they wanted in
transportation, they would probably have replied -
“a faster horse”***

Henry Ford

***but most use of wood is conventional -
and often low value***

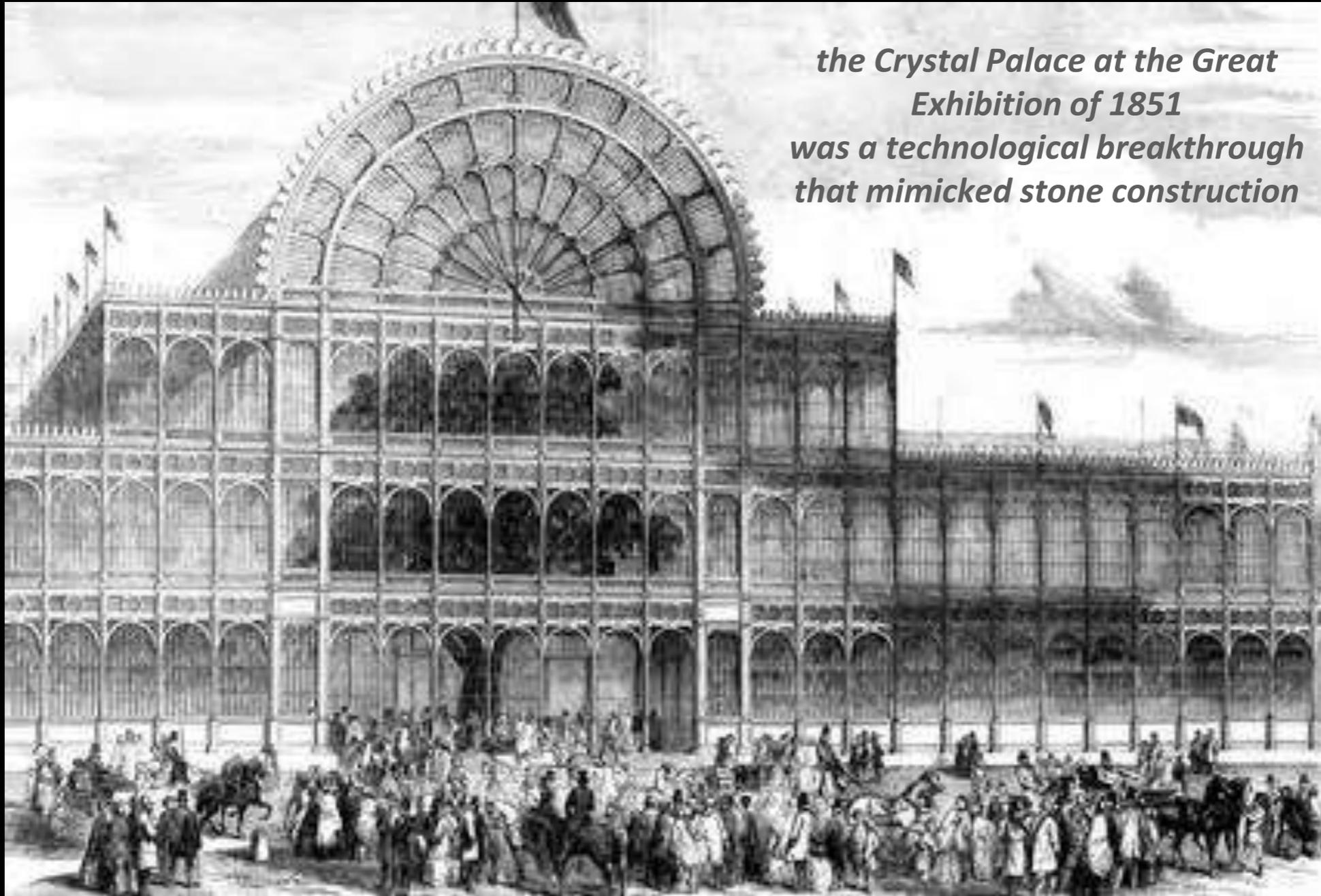
***there is always someone who can sell a similar product to yours at
a cheaper price***

we live in a fast changing world

***the forest and timber industries in many countries are slow to
anticipate change - & slow to invest in innovation***

***investing in education will lead to genuine innovation -
& greater, higher value sales***

new technologies take time to evolve



*the Crystal Palace at the Great
Exhibition of 1851
was a technological breakthrough
that mimicked stone construction*

transforming the city with wood



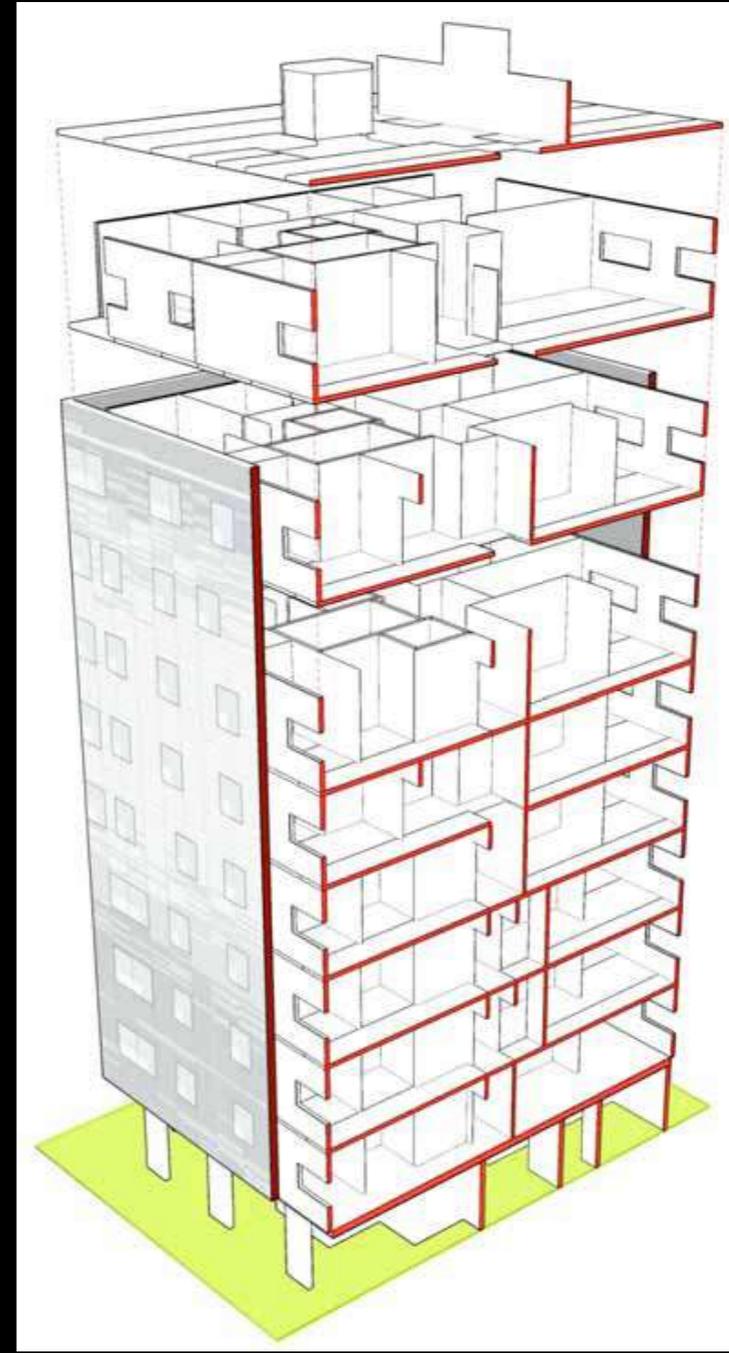
why timber cities, why now?



80% of the world's population of eight billion will live in urban situations by 2050

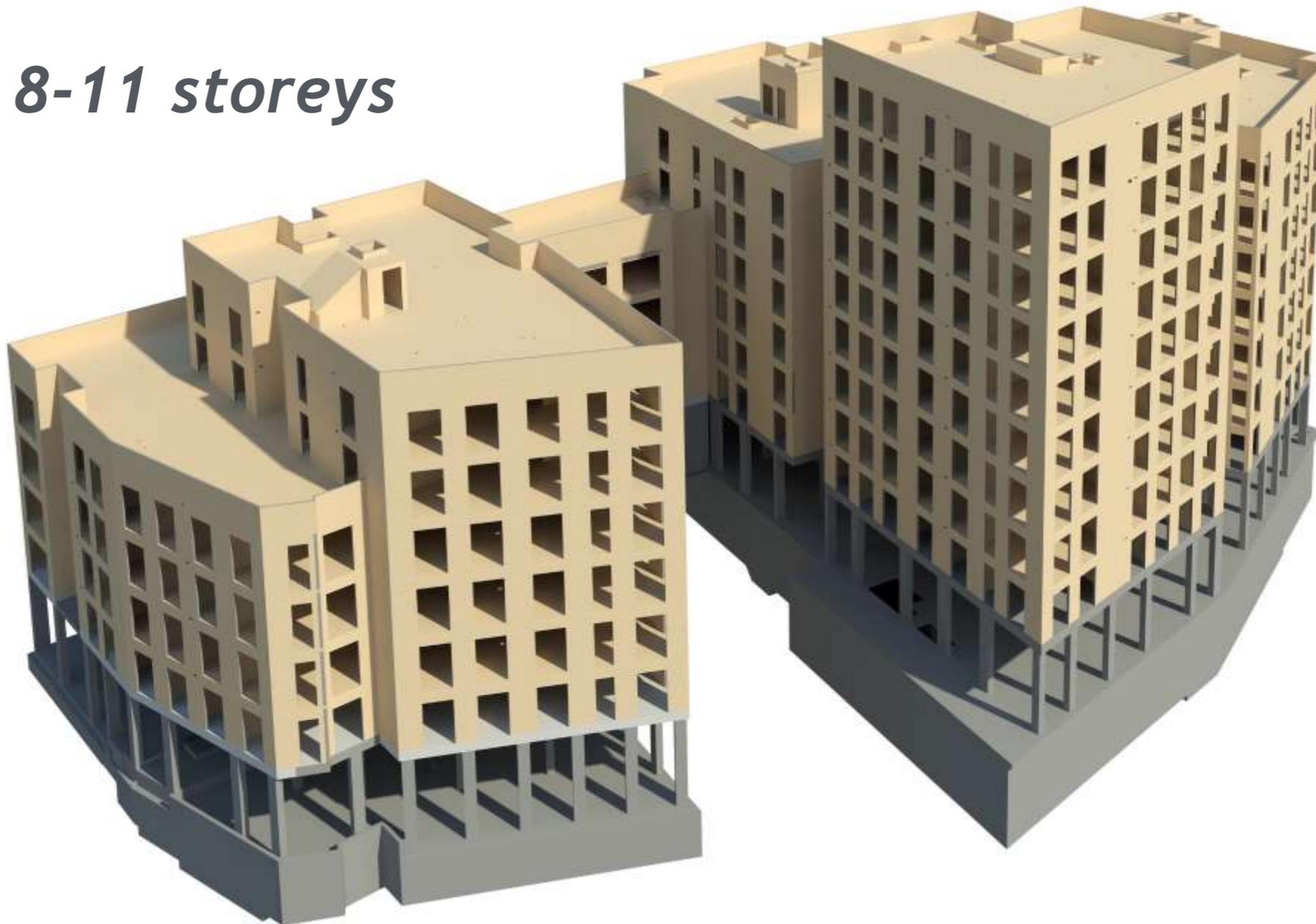
international concerns over rapidly accelerating climate change & the scale & nature of extraction processes demands a paradigm shift in the way we conceive buildings & cities

first tall, solid wood residential building

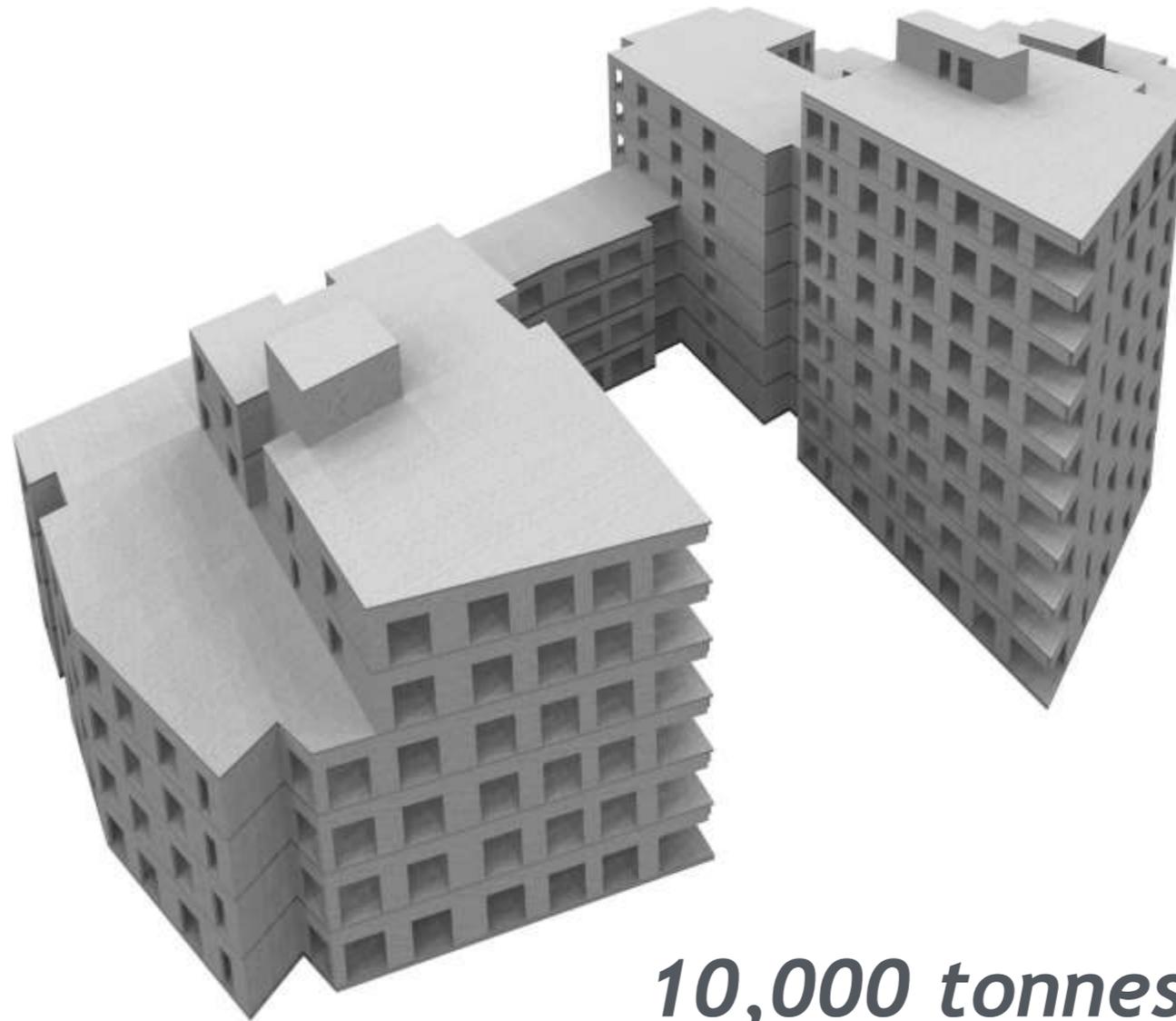


large urban block, dalston lane, london

8-11 storeys



traditionally concrete structure



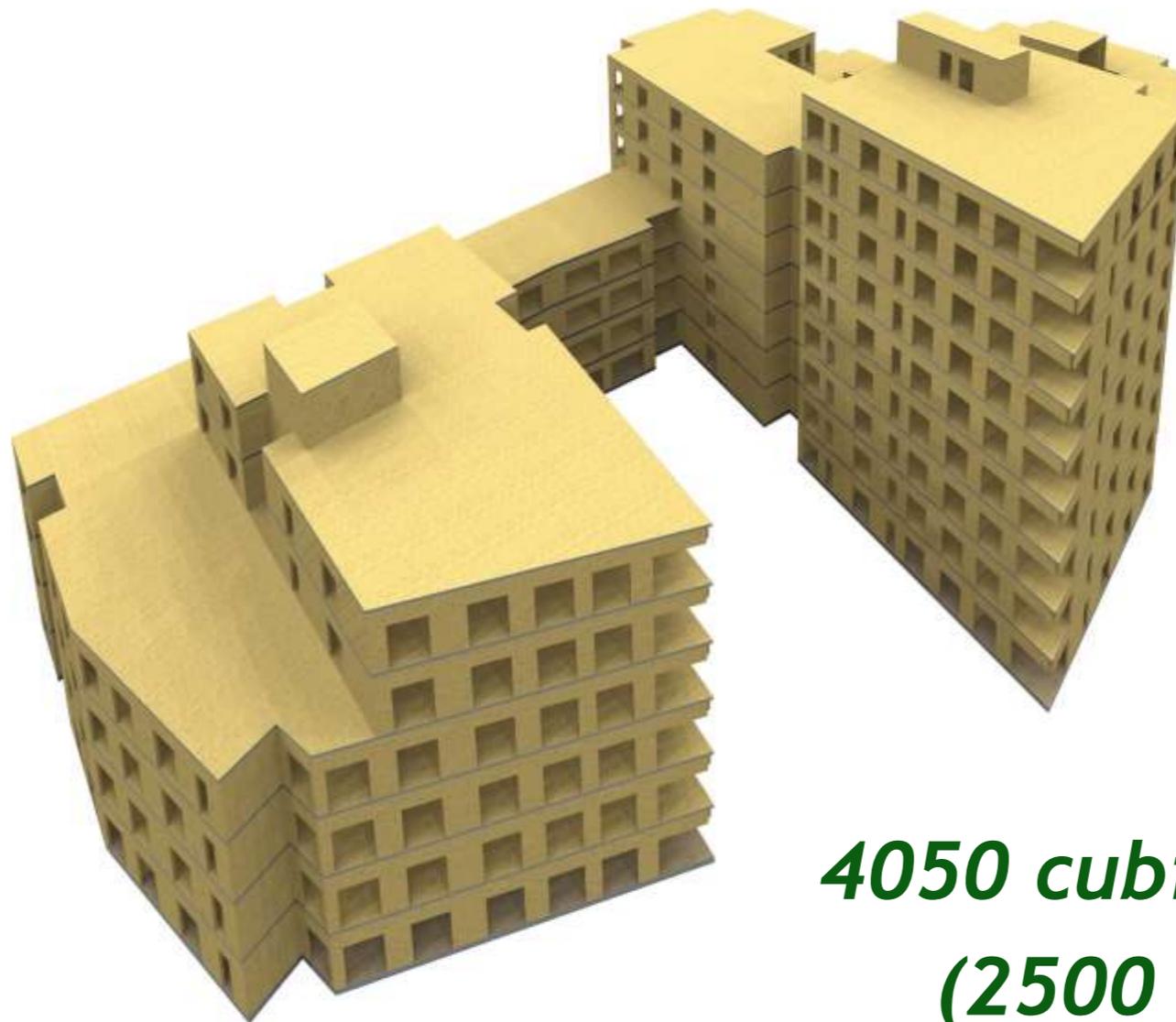
10,000 tonnes of concrete

lighter structure, less material



1,930 tonnes of timber

still a large volume of wood



*4050 cubic metres
(2500 trees)*

dense urban block



*16,000 square metres -
homes for 800 people*

*lighter foundations, faster construction,
fewer deliveries, less noise, less waste*



and large volumes of sequestered carbon



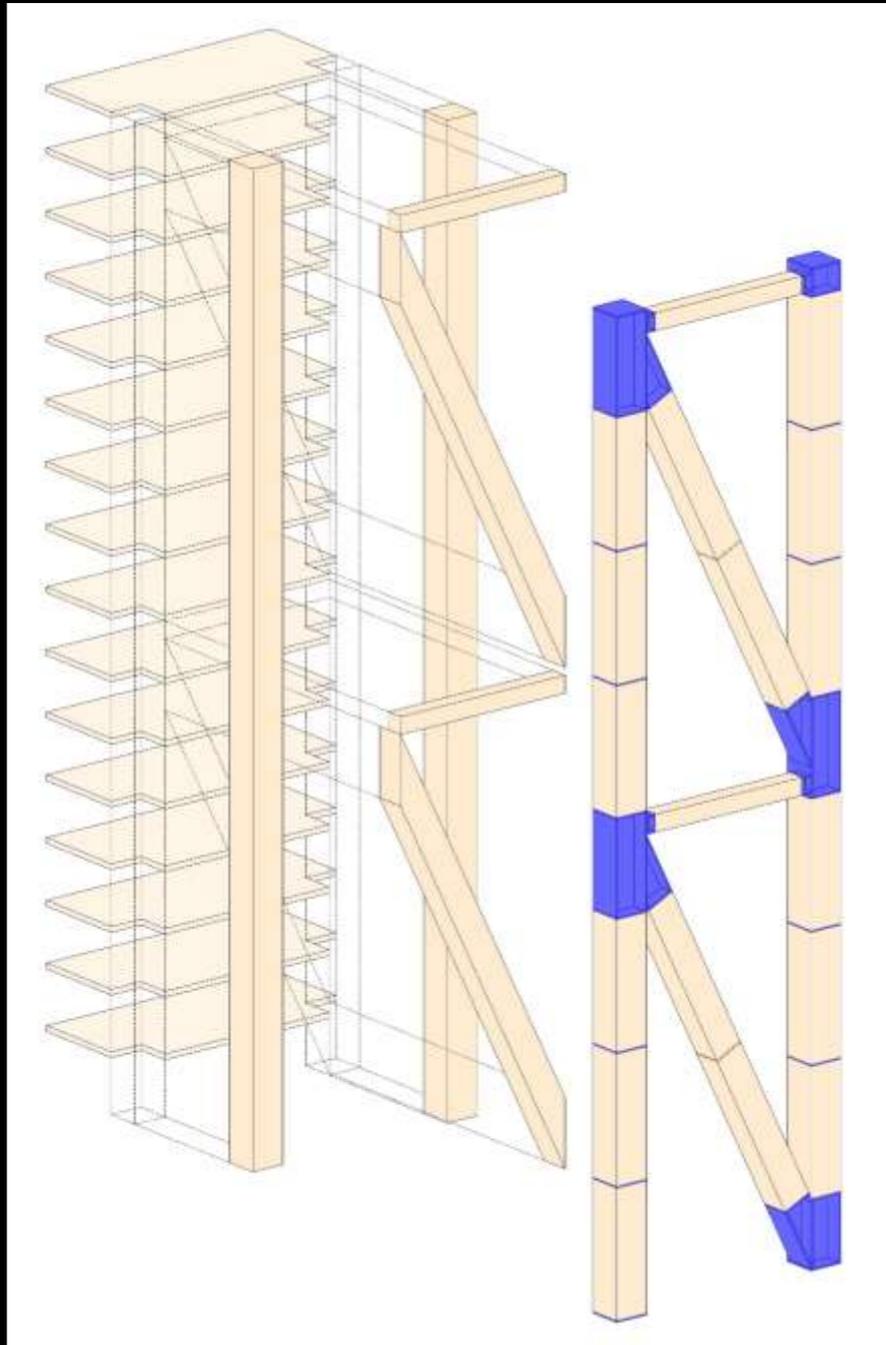
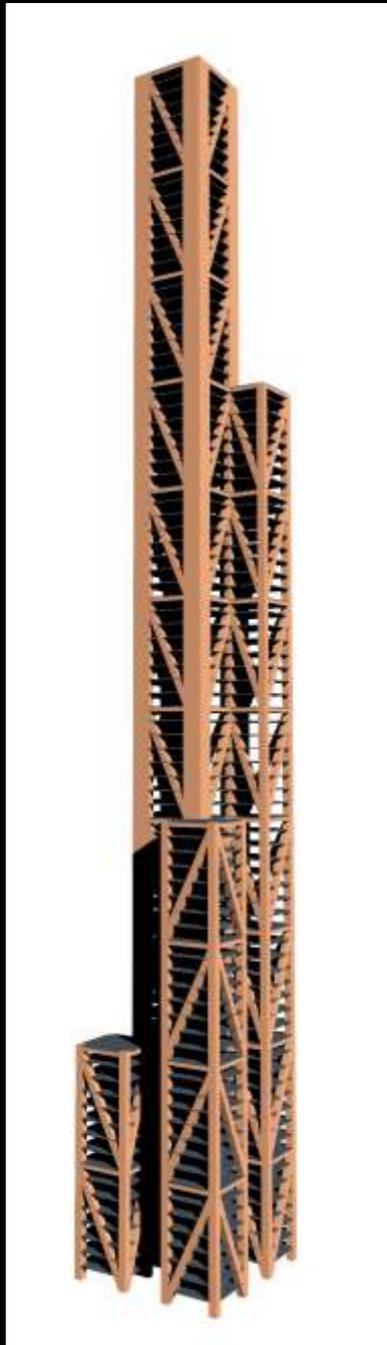
*solid wood, vertical timber:
the 21st century city lies ahead*



80 storeys, timber structure



advanced timber engineering



***60,000 m²
floor area***

***55,000 m³
timber***

provocative proposals



drive timber research & development



***be assured:
tall wood buildings are coming***

To accelerate the use of wood in buildings, especially tall wood buildings,
and for other purposes.

IN THE SENATE OF THE UNITED STATES

Ms. STABENOW (for herself, Mr. CRAPO, Ms. KLOBUCHAR, Mr. DAINES, and
Ms. CANTWELL) introduced the following bill; which was read twice and
referred to the Committee on _____

A BILL

To accelerate the use of wood in buildings, especially tall
wood buildings, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Timber Innovation Act
5 of 2016”.

***to design them, we need architects
who are better educated about timber***

***architects receive little information on timber in their
formal education***

***post-qualification timber education is ad-hoc and
varies from country to country***

***much of the information by manufacturers / suppliers
offered is inaccurate, out-of-date & focused on sales***

***for timber specification / use to increase, architects
need to know more about the material's properties &
possibilities***

continuing professional education in timber

should be from qualification to retirement

and should offer -

cumulative value of knowledge gained

individual choice of subject matter and path

individual pace of learning

specialism value to employer

EU objective

to ensure Europe's construction industry has better educated, better skilled & more mobile professionals available to it

precedent

the Wood Products Innovation Gateway (WPIG) -

three year programme 2011-14

ERDF supported (2mn Euros) + match funding from industry

*developed 20+ new products/systems from locally
(Scottish) grown timber; instituted 20+ research networks;
engaged with 600+ companies*

legacy:

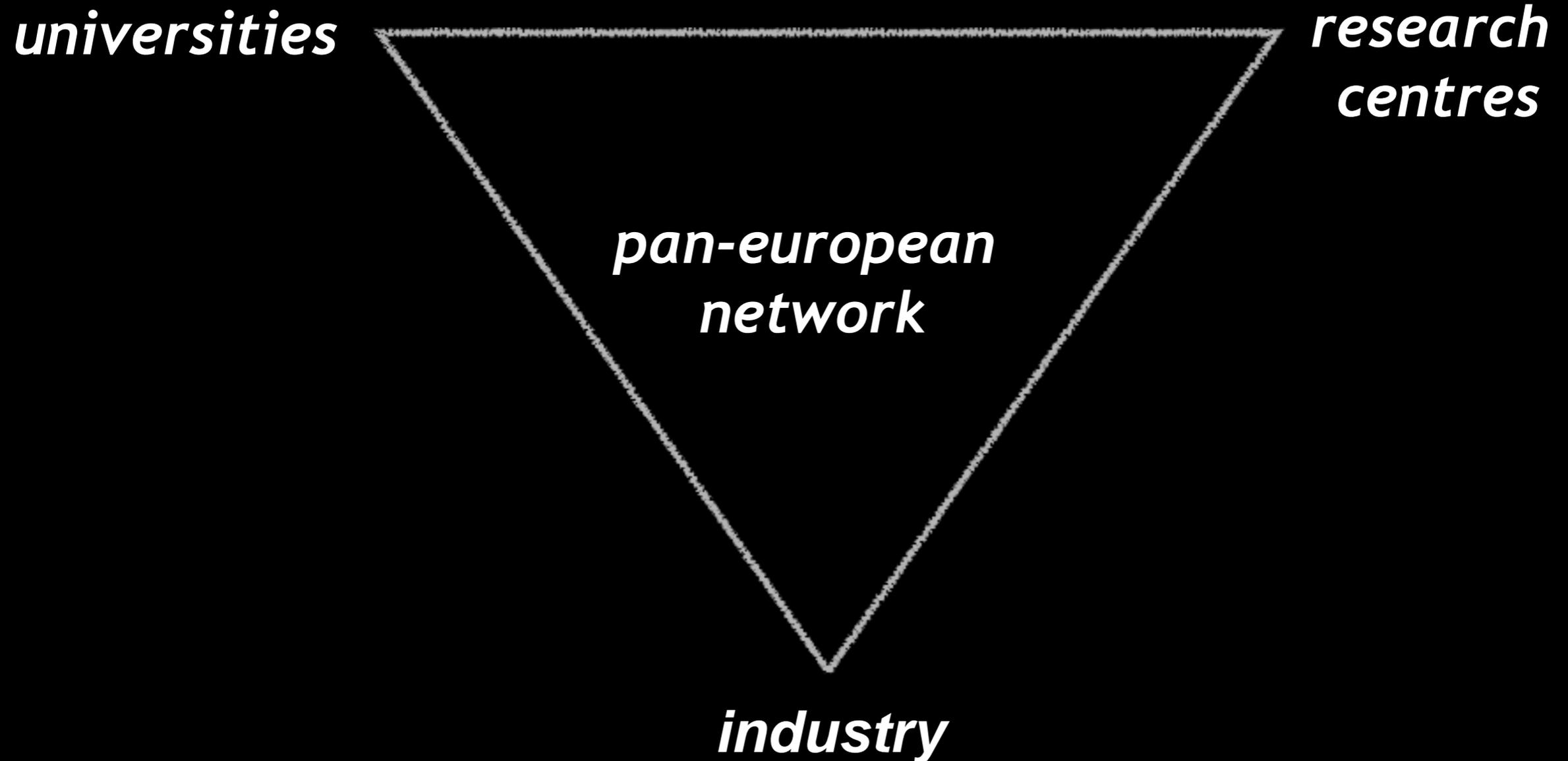
the (11mn Euros) Scottish Construction Innovation Centre

forest & timber industries' solution

the european forest, timber design, manufacturing & construction sectors to work together to provide an exemplar system of Continuing Professional Education (CPE)

but these sectors won't achieve this on their own

the knowledge triangle is required to deliver high-quality timber education



***via pan-european
continuing professional education***

free online material



massive open online courses (moocs)



individual modules



masters courses



PhD level

European Qualifications Framework (EQF)
European Credit Transfer System (ECTS)

participants tested on knowledge gained

participants awarded credits under ECTS

credits can be accumulated and are transferable

***credits count towards additional qualifications under
EQF***

***cross border recognition of european qualifications
encourages job mobility***

the incentives for individuals

the potential to manage & plan own career path

to demonstrably increase skills & competence

enhances earning potential

enhances prospects and job mobility

enhances attractiveness to employers & clients

incentives for employers

a coherent programme of lifelong learning available to staff: up-to-date & state-of-the-art material

a low cost incentive scheme to encourage staff to become better qualified

supporting employee development helps to keep good staff

staff become specialists in timber design & construction

company is able to sell these additional specialist services to clients

incentives for industry participation

drives research & development

gives companies access to research, development & testing facilities throughout europe

provides access to EU / national / regional /funding support

ensures objective information about products & systems reaches a pan-european audience of specifiers

provides companies with continuous feedback on the quality of their products, technical information & services

incentives for academic institutions & research centres

- ***opportunity to develop short, medium & long term applied research programmes with industry***
- ***opportunity to share in intellectual property rights relating to new developments***
- ***able to develop industry-led modules & courses & offer them to a pan-european market of architects***
- ***focused marketing programme to assist in reaching high quality postgraduate and PhD students***

how will it be paid for?

individual

employer

public funding training grants

industry sponsorship

education awards / grants

crowdfunding

combination of all of above

***a paradigm shift
in the way CPE is perceived & delivered***

***there is no other continuing professional education
scheme like it available anywhere in the world***

***the opportunity exists to create a world class lifelong
learning programme focused entirely on the use of
timber in construction***

***establishing this will give the forest and timber
industries a competitive advantage over other sectors
such as steel and concrete***

so let's look out to the world



new opportunities await



with education, we can build them!



thank you!



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