



Performance based specification

Dr. Ed Suttie
BRE

Durable wood construction in the public realm

01 MARCH 2023



Public realm

Urban rethink

Car less streets

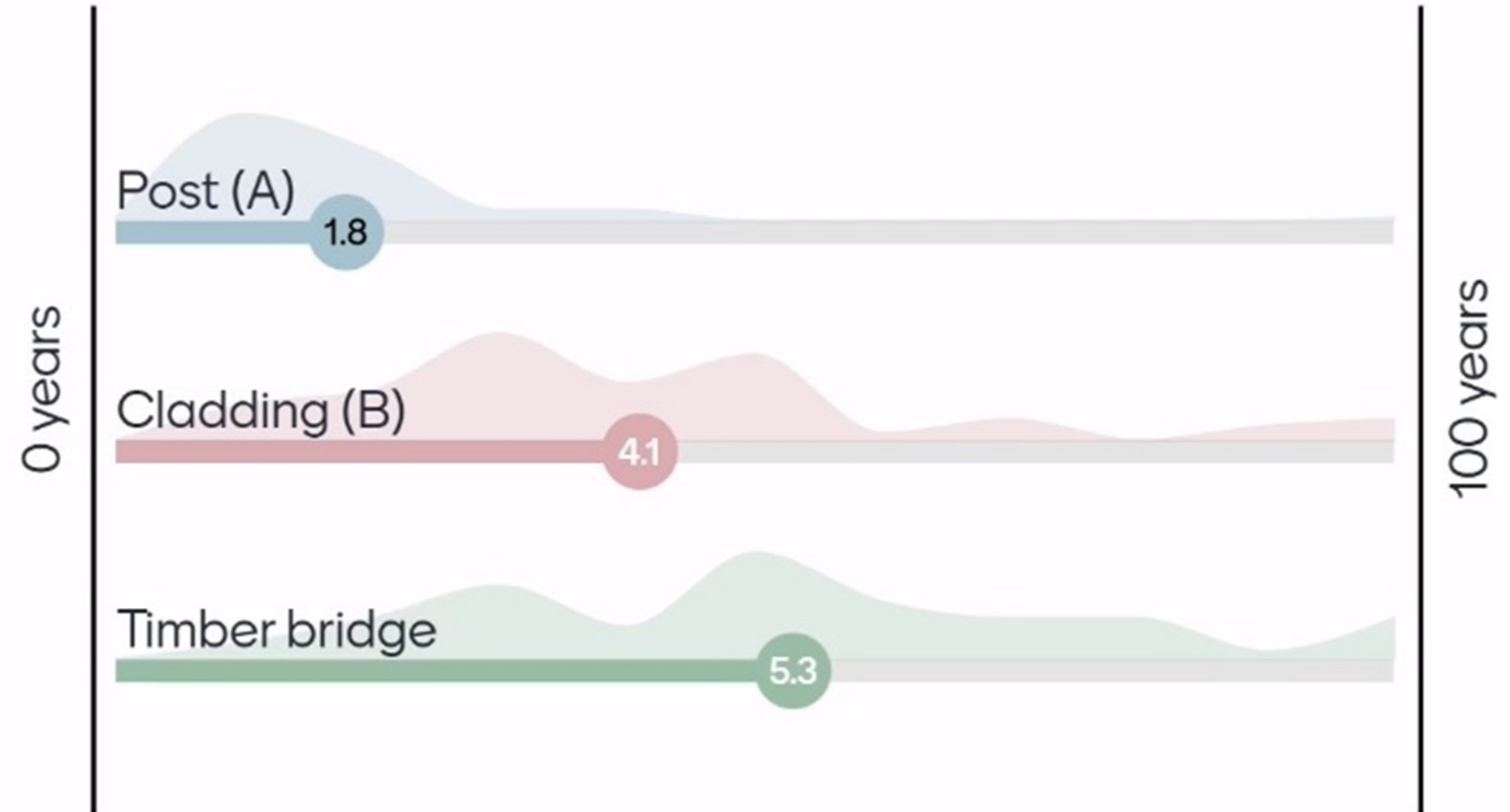
Active travel

Connection to nature

Improved air quality



User expectations of service life



Performance based specification



- Complex to answer questions about durability and performance of wood products
- Disadvantage for timber compared to steel, aluminium, plastic and concrete
- Wrong product, wrong place
- Misses vital technical specifications detail in LCA
- Enable performance specification for wood



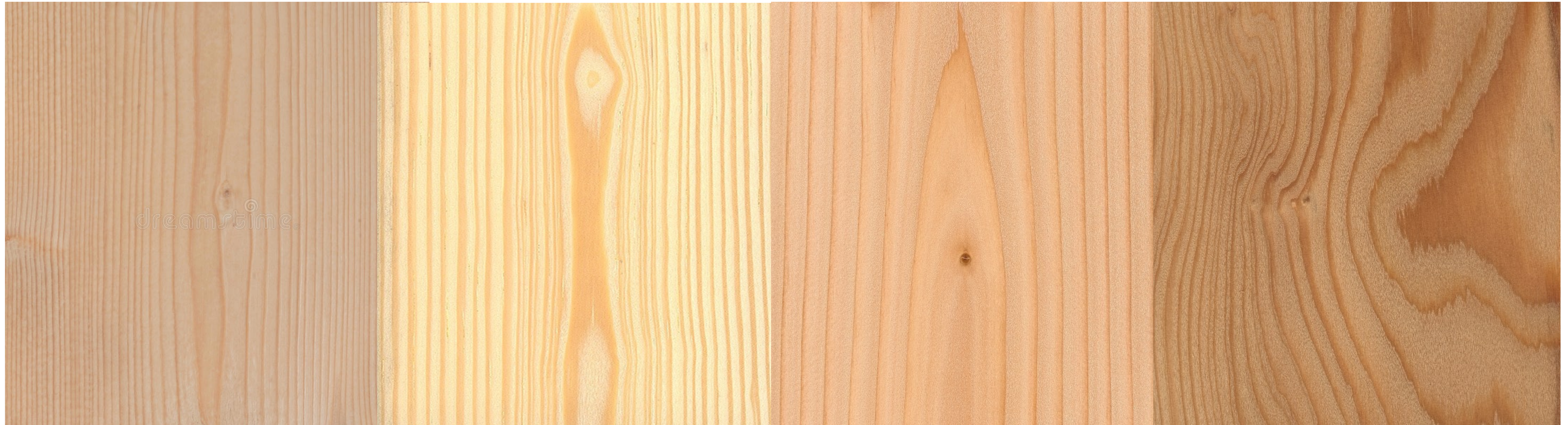
European softwood species

Norway spruce

Scots pine

Douglas fir

Larch

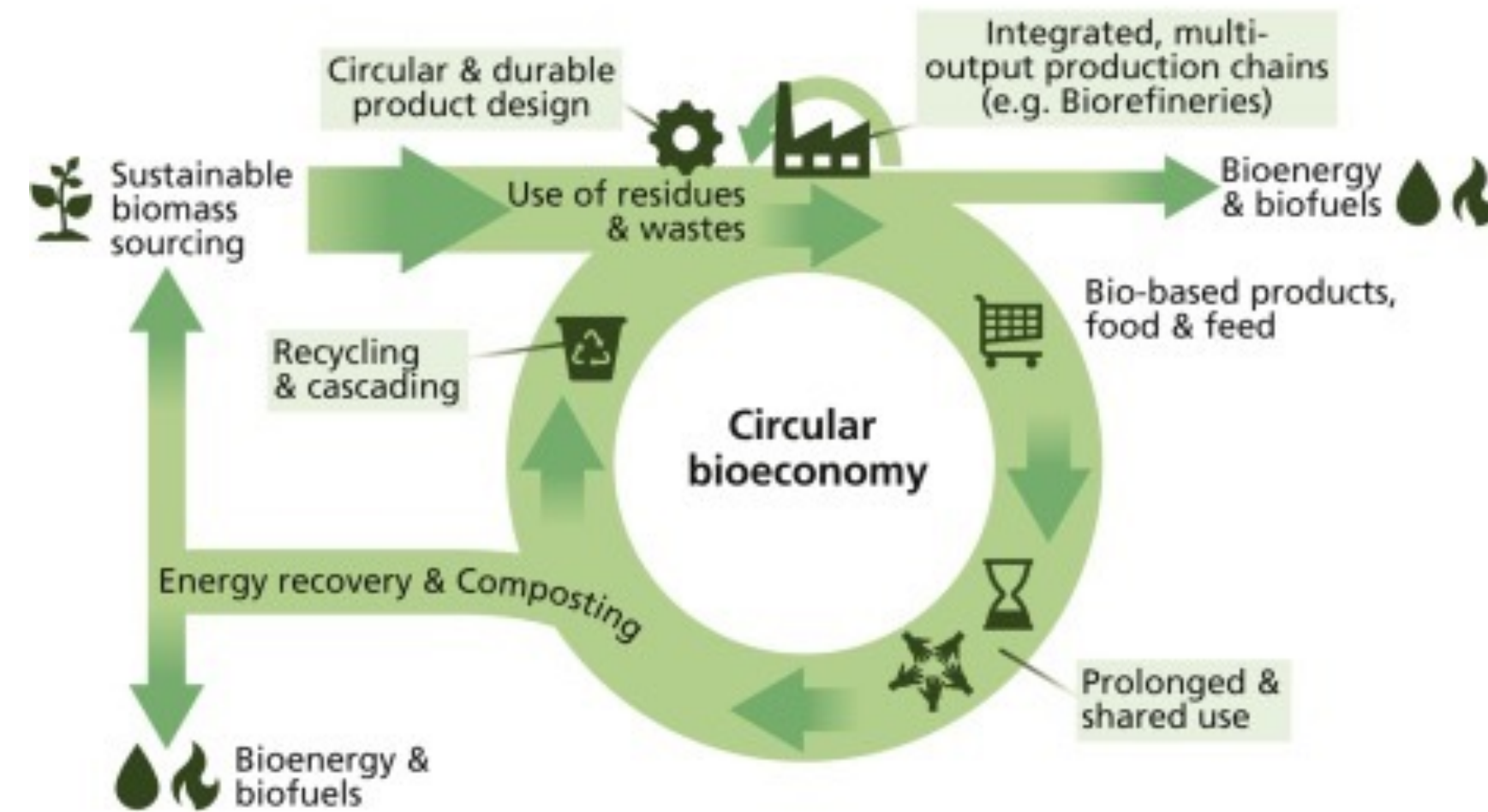


Circular bio-economy

Waste hierarchy



Overarching CBE principles
Resource-efficiency, Optimizing value of biomass over time, Sustainability



Reliable, predictable performance

Identify, deconstruct, stewardship – first life product

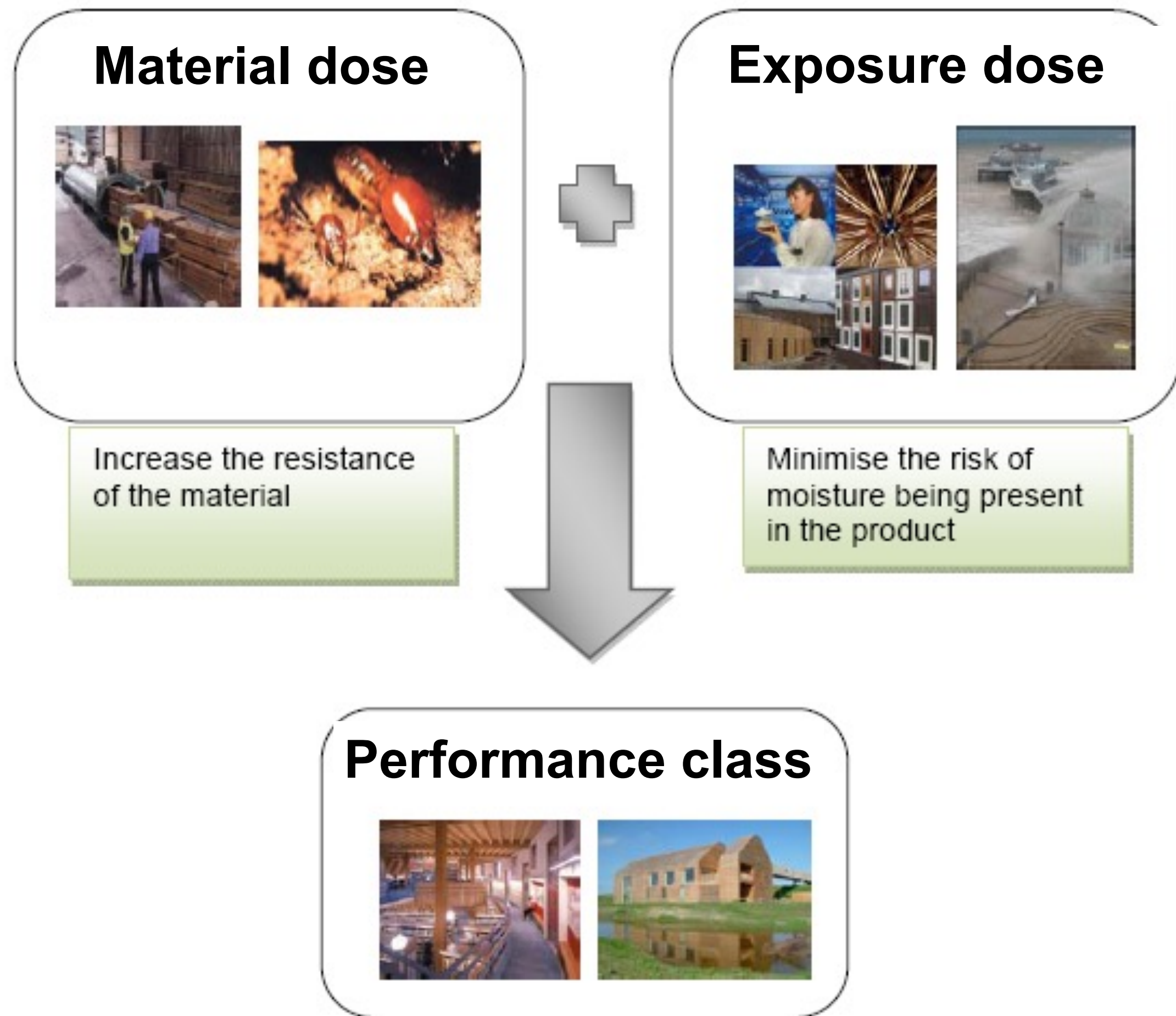
Process and return - second life product

Energy recovery

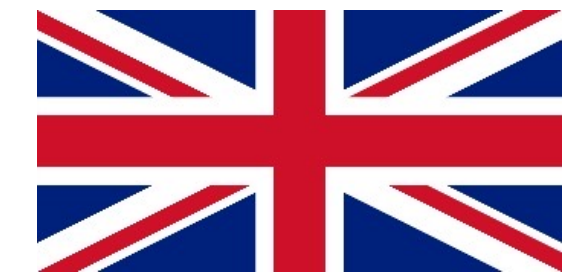
Incineration or landfill

Reliable, predictable performance

Service life information



BS 8417



FD P 20-651



TVBK-3066



DIN 68800



Reliable, predictable performance

EN460 (2023) Durability of wood and wood-based products — Guidance on performance

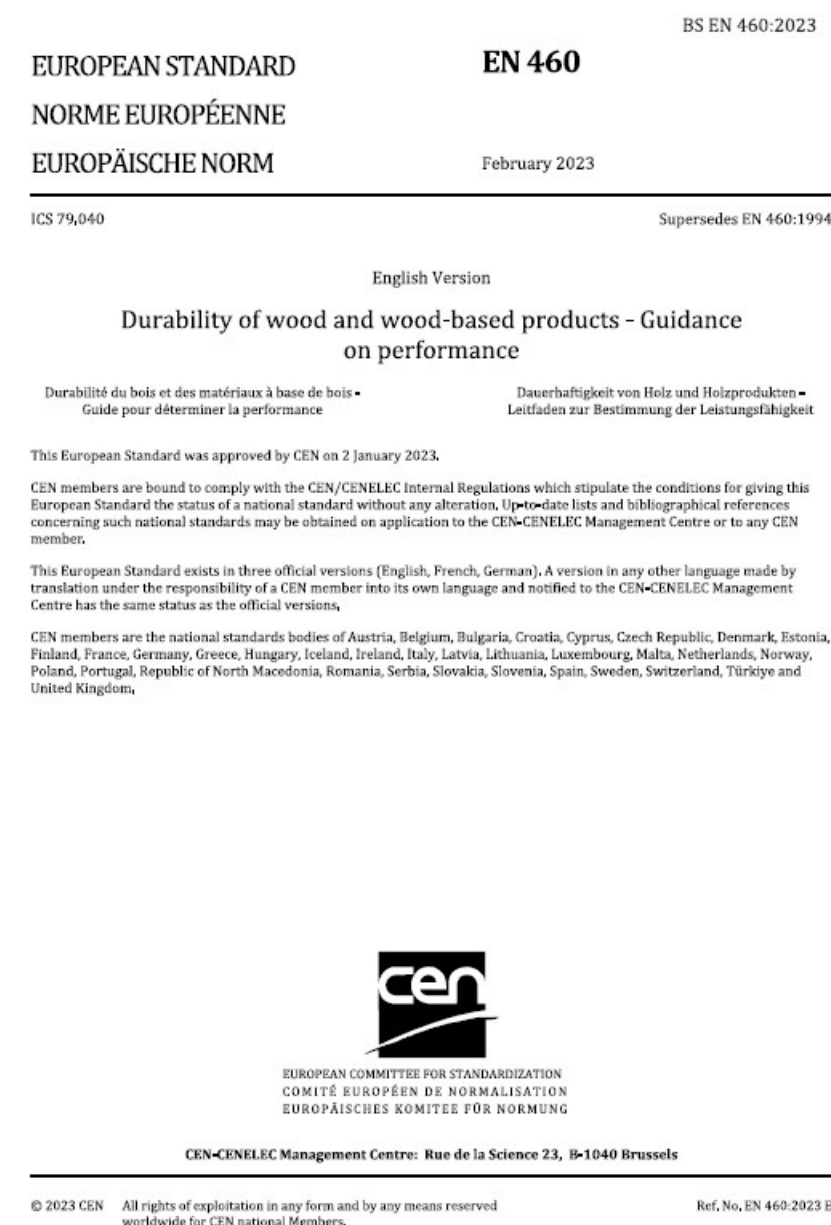
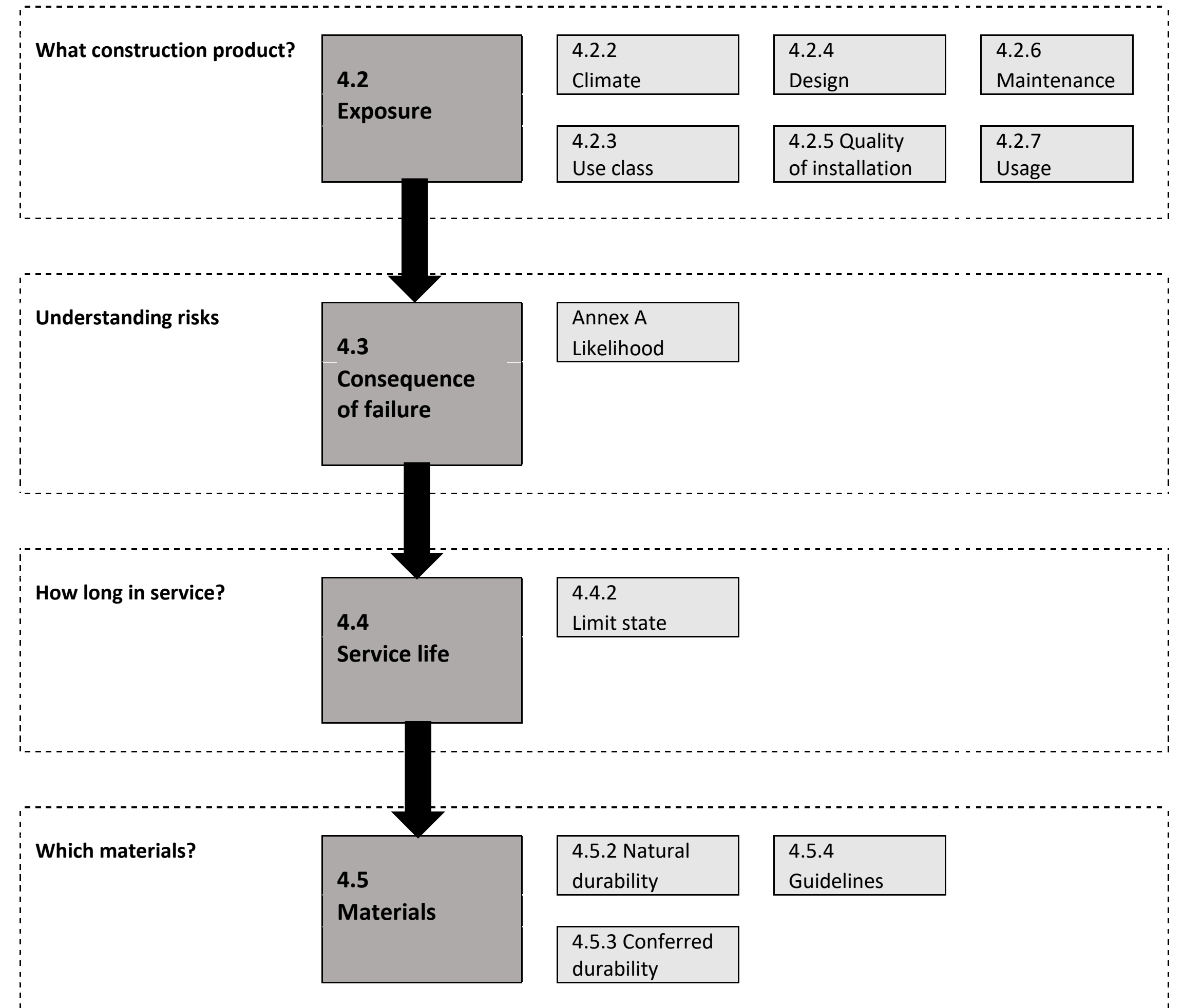


Figure 1. Schematic illustration of a decision process for performance specification linked to clauses in this standard.



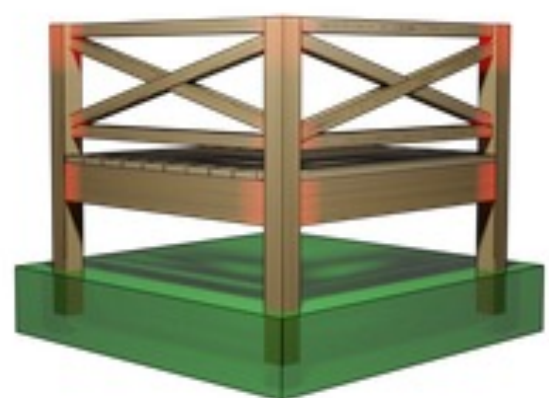
Reliable, predictable performance



https://jklewski.github.io/CLICKdesign/

90%

CLICKdesign resources



Fungal decay

How does woody materials perform under different environmental conditions?

[Go to app](#)



Aesthetics

How does the color of woody materials change over time due to environmental effects?

[Go to app](#)



Termite mapper

Is your project in a termite-infested region and which national rules apply?

[Go to app](#)



Structural integrity

How does the material strength and capacity of timber change over time?

[Go to app](#)

Reliable, predictable performance



Summary

Durable wood construction in the public realm

The performance of wood should be specified

- EN460 available (in some cases national guidance)
- Specification tools available
- Product data delivering to build confidence

Timber treatment upgrades European softwood durability

Lifecycle benefits – reliability, social, responsible sourcing



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