INCREASE BUILDING WITH WOOD: A DUTCH EXAMPLE

Michelle Stede

Network Manager Construction Sector
FSC Netherlands
m.stede@nl.fsc.org

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WE'RE NOT KNOWN FOR OUR TIMBER CONSTRUCTION…

Challenges:
- Build 100,000 homes/year
- Decarbonize construction sector

41.850 km^2
Forest area ~10%
18 million inhabitants
1/4 houses by social housing corporation
housing shortage: 900,000

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Paris Climate Goals

Global CO_2 budget

1.5 400 Gt

The Netherlands

909 Mt

Based on number of residents

Dutch construction sector

100 Mt

The construction materials industry (incl. civil engineering) accounts for 11% of national emissions

Source: NIBE

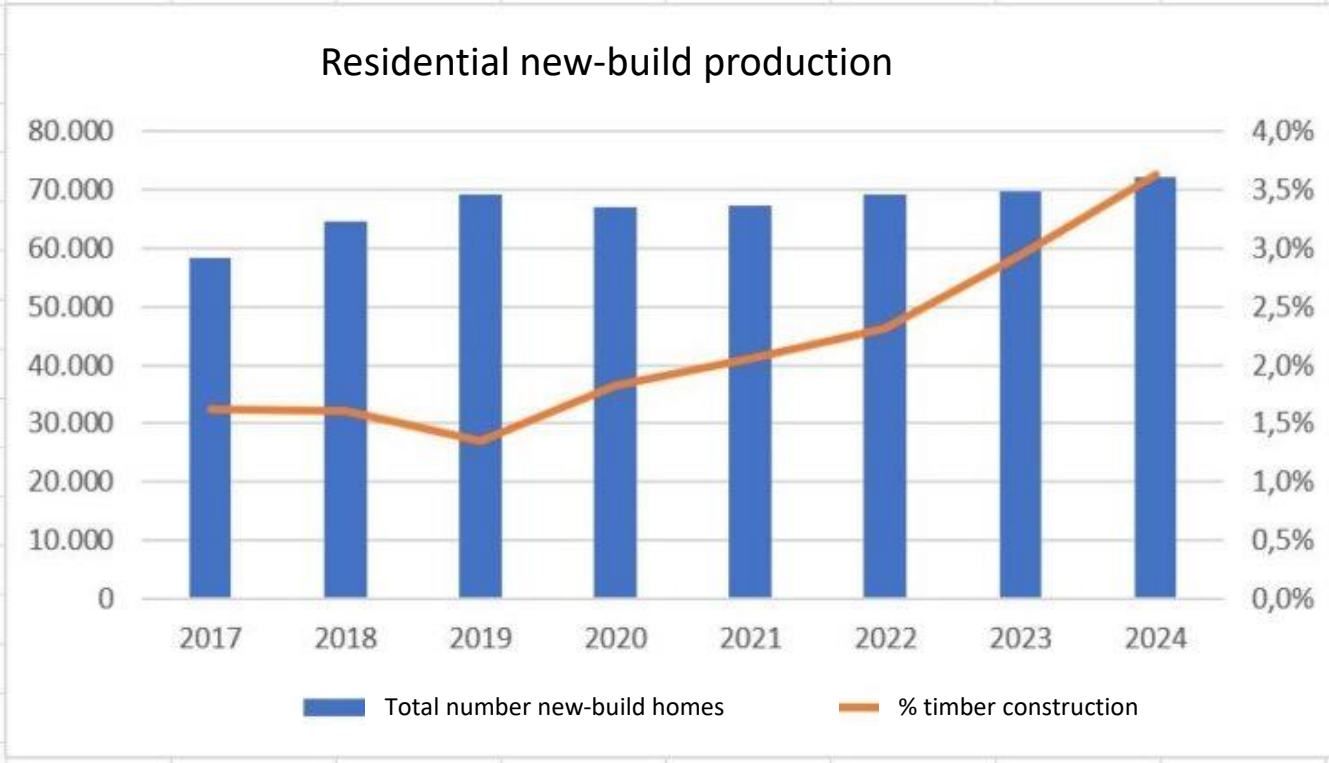
A documentary ‘wood builders’ (2019) set the wheels in motion…

(Click image to play)

“Timber construction seems to have the wind in its sails, yet a true nationwide transition has yet to materialize” – Peter Fraanje, Built by Nature

Forecast
June 2022

	2017	2018	2019	2020	2021	2022	2023	2024
Number of new-build homes	58.250	64.500	69.250	67.000	67.300	69.150	69.750	72.250
% timber construction	1,6%	1,6%	1,3%	1,8%	2,1%	2,3%	2,9%	3,6%



*Data pertains to new housing construction production, based on permits for permanent residences, excluding recreational homes.

Source: BuildSight

Examples of modular social housing in timber (GeWOONhout and Finch Buildings)

Project Koelmalaan in Alkmaar is the biggest timber housing project to date, with 129 appartments
> Now 4 larger projects under way…

We see predominantly timber cladding, but also our traditional brick facades are possible.

WHAT HAS CONTRIBUTED TO THE GROWTH OF TIMBER HOUSING?

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Scaling up timber construction in The Netherlands

Barriers	Solution	Status
• Knowledge gap (engineering)	• Information platforms e.g. HOME for the future, Built by Nature	• Largely overcome
• Fire safety concerns	• Large-scale fire safety testing, timber performs well	• Overcome
• Costs	• Government policies (Amsterdam) Scaling-up timber facilities	• Costs timber construction is almost break-even to concrete/steel
• Unexperienced housing corporations (risk-averse)	• Collaborations knowledge sharing initiatives	• Flywheel-effect

FSC NL/DK aim: 15% social housing in wood

HOME for people for forests for the future

Co-funded by the European Union

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Towards 15% Social Housing in Wood
Who: FSC Netherlands & Denmark, TU Delft, VIA University College,
branche organization timber and construction companies
Target group: social housing corporations

Grassroots work:

- LCAs of wooden building materials (e.g. CLT, LVL) in European environmental database
- Free online course "Sustainable Building with Timber" with TU Delft on edX
- Course for housing corporations

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Green Deal Timber Construction Sustainably Out of the Crisis

Focused on Implementing the Scale-Up of Timber Construction in the Amsterdam Metropolitan Area 2021-2025

Green Deal Timber Construction (2021-2025)

goal of **20% of new residential builds** made from wood by 2025.

Key Stakeholders

Municipalities in the MRA, the Dutch government, developers, investors, housing corporations, builders, and research institutions commit to boosting wood construction as part of achieving emission reduction goals aligned with the Paris Climate Agreement.

Sustainable and Innovative Goals

emission reduction, innovation in construction practices, faster housing production, and modernization of employment in the building sector.

Biobased and Circular Economy

Wood construction is a core component of biobased building, emphasizing renewable materials, dismantlable designs, and reuse of materials to minimize waste and environmental impact.

Costs

Construction costs per housing type

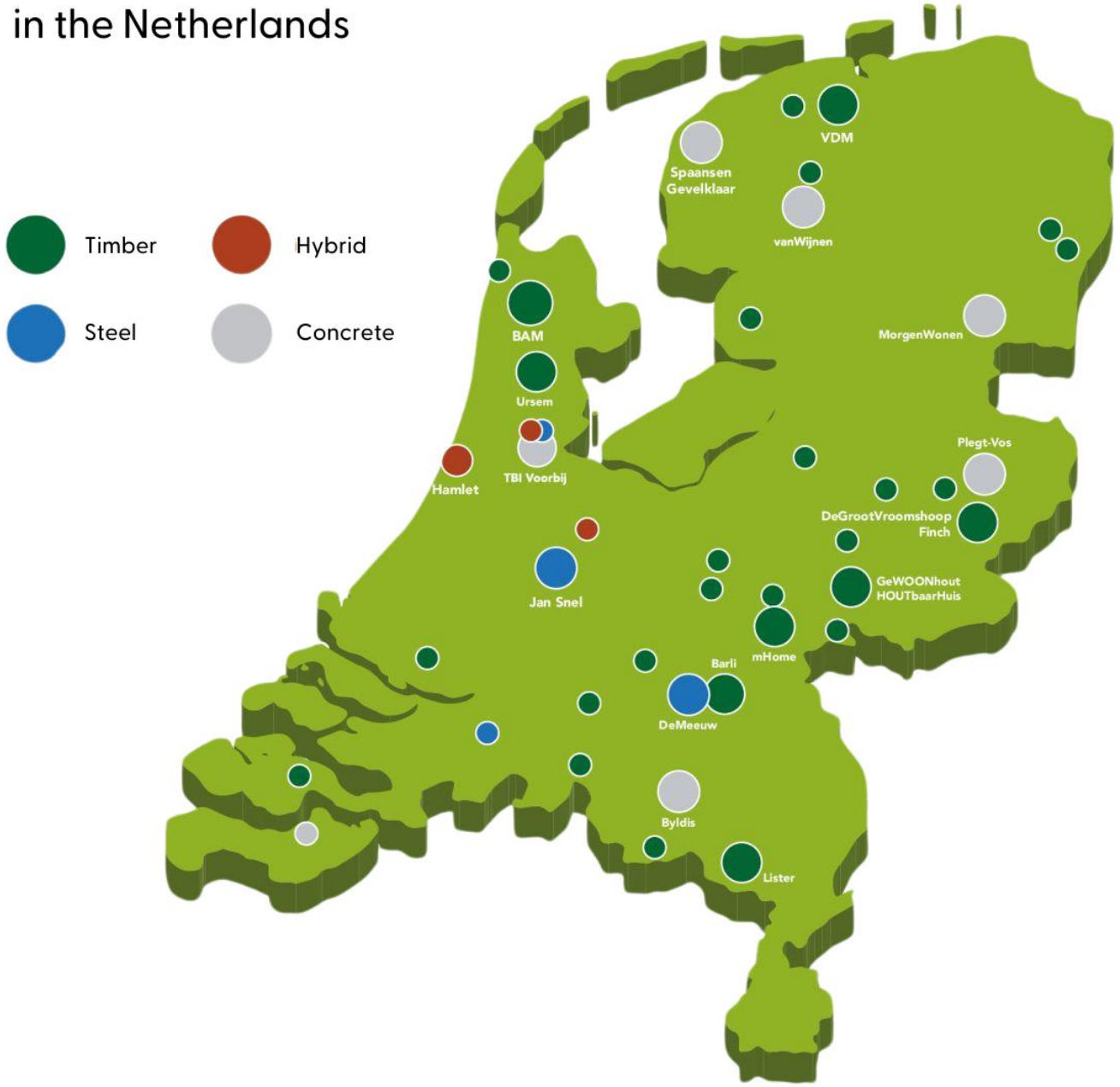
	Timber Frame	CLT	Total
Single-family home	96%	127%	104%
Multi-story building	79%	109%	103%
Eindtotaal	**92%**	**113%**	**103%**

Construction costs per timber construction method

	Timber Frame	CLT	Total
2D elements	101%	129%	118%
3D modular	86%	97%	91%
Eindtotaal	**92%**	**113%**	**103%**

Source: Woningbouw in Hout (Lente Corporations) 2024

Growth of industrial production facilities in the Netherlands



Source: Built by Nature 2023

Housing corporations collaborate

“Lente” housing corporations
8 regional housing corporations working together on the topic of timber construction.

In 3 years time they increased from 2 to 36 housing projects under development.

https://houtbouwlente.nl/

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“Wood is both the most and the least environmentally friendly material. It all depends on its origin. Choose certified timber.”

Thank you

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Forest Stewardship Council®

FSC® Global Development

Adenauerallee 134, 53113 Bonn, Germany
T +49 (0) 228 367 66-0
F +49 (0) 228 367 66-30
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www.fsc.org