

Prefab homes radar 2024

Tracking prefab housing production in the Netherlands



Marjet Rutten

**Roland
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Management summary

Prefab construction is making important headway in residential development in the Netherlands. Its speed and economic advantages over traditional construction make prefab one of the levers the Dutch residential construction industry can pull to address the country's ongoing housing shortage.

Roland Berger's prefab homes radar, building upon years of work by Marjet Rutten, will continue to track the sector and its development. Our latest findings indicate that even with the brief plateau in production share in 2024, the sector is on track to reaching 50 % of residential new build by 2030.

This 2024 report outlines the latest market developments in prefab production share and player landscape, and provides an outlook for 2025. Notable statistics from 2024, from costs to materials used, are also included.

Contents

Fast facts



>400 k

Housing shortage in the Netherlands in 2024



14.3 k

Prefab houses in residential new build in 2024



21%

Prefab share in all residential new build in 2024



16.2 k

Forecasted prefab houses in residential new build in 2025

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Definitions used in the radar

For the purposes of our radar, prefab housing is defined as houses that are:

- Made windproof and waterproof within 10 days on-site
- Completed within 50 days from the start of construction

Prefab housing producers are defined as any unique player or concept involved in the production of prefab houses

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Introduction

In tackling the Netherlands' housing shortage, prefab construction is one of many promising solutions to keep an eye on

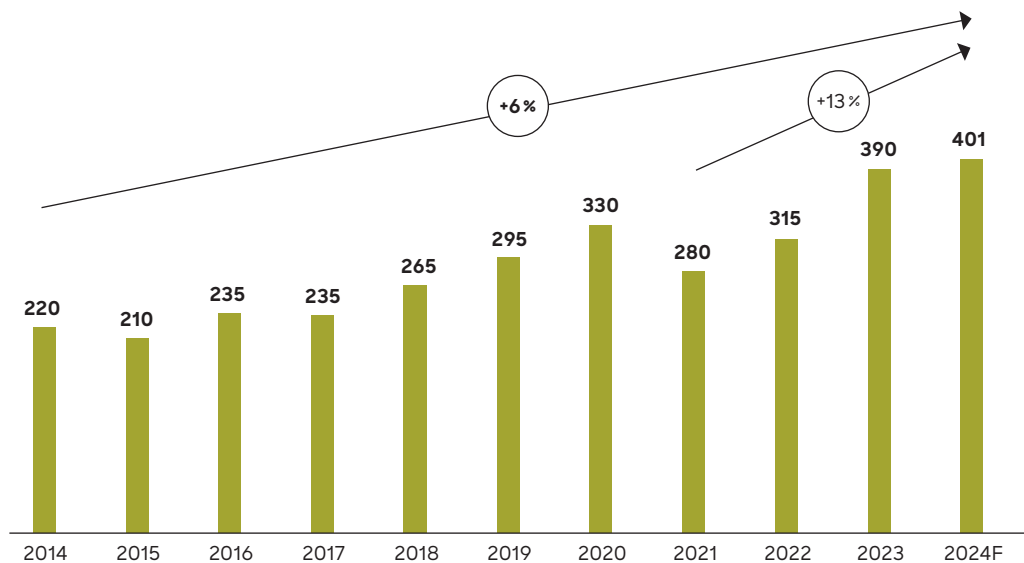
Since 2014, the Netherlands' housing shortage has grown at an annual 6%. After a brief abatement in the pandemic years, this growth accelerated to 13% per year, surpassing 400 k homes in 2024. ▶ **A**

Several strategies and tools are being deployed to address this problem, from regulatory improvements to incentives at the sector and civic levels. An increasingly interesting tool in the mix is prefab construction. With its benefits over traditional construction, market players expect prefab to reach a 50% share of residential new build by 2030, and around 80% by 2040.

Industry expert Marjet Rutten has long tracked developments in the prefab housing market. Her work since 1996 has helped the construction sector better understand its developments in an increasingly complex context. We have now joined forces with Rutten to launch this "prefab homes radar", which we will publish annually to monitor the sector's progress in its role in Dutch housing.

This prefab homes radar is based on an extensive survey and interviews with select prefab housing producers. We then collated this data and qualitative insights from the interviews to identify the latest market developments, sketch a short-term market outlook, and highlight a standard set of statistics from the sector that we will track over time. In this way, the prefab homes radar aims to provide both context and expectations for prefab housing in the Netherlands.

A Housing shortage in the Netherlands, 2014-2024F [# '000 of houses]



Source: ABF Research

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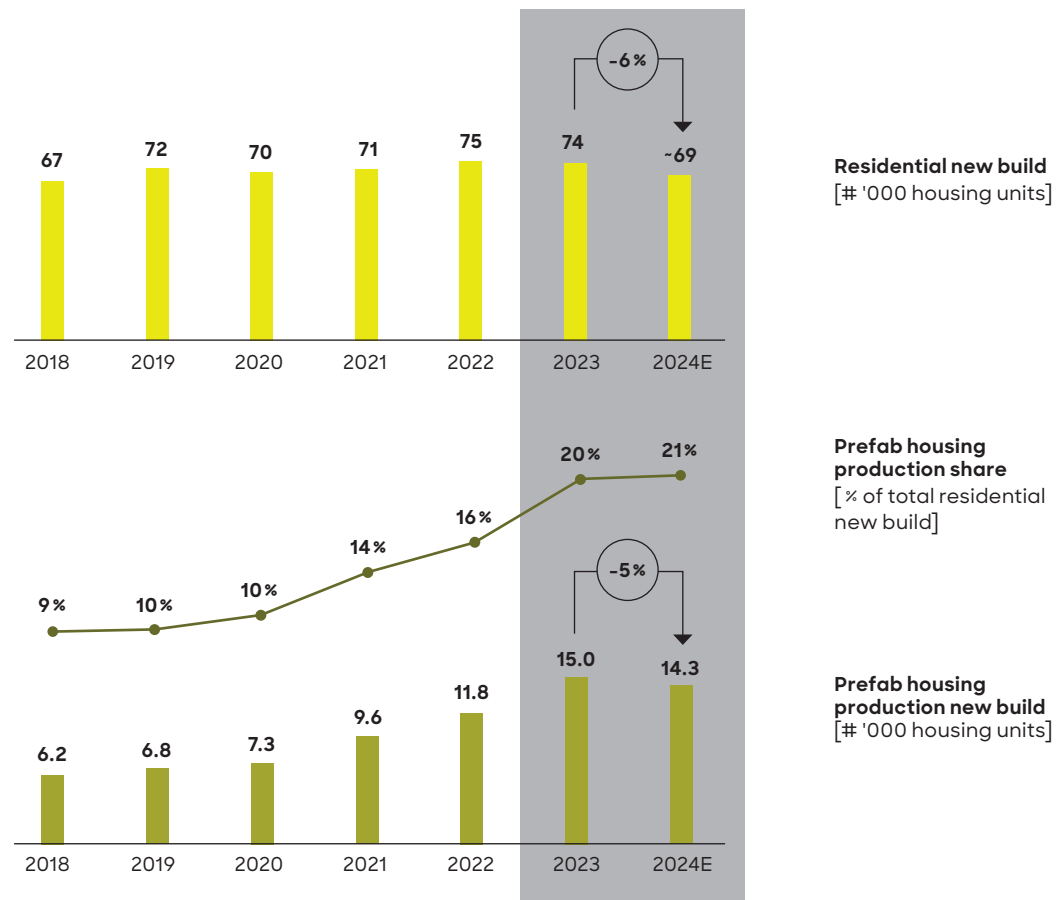
Latest market developments

Since 2018, prefab housing production has been on a continuous trajectory of growth. Despite a decline in total residential new build activity in 2024, prefab housing's share managed to continue to grow, albeit at a marginal pace.

2.1/ Prefab production share

Just four to five years ago, prefab housing accounted for only 10 % of all residential new build in the Netherlands. By 2023, that share had reached 20 %, with prefab housing maintaining the solid growth trajectory it had been enjoying since 2018. Last year, however, overall new build activity in the residential segment dropped by 6 %, and prefab production declined by 5 %. Despite this, we did see a marginal increase in prefab's penetration level in 2024, reaching a 21% share up from 20 % in 2023. ► **B**

B Prefab housing production share in total residential new build, 2018-2024E [% of total, # '000 housing units]

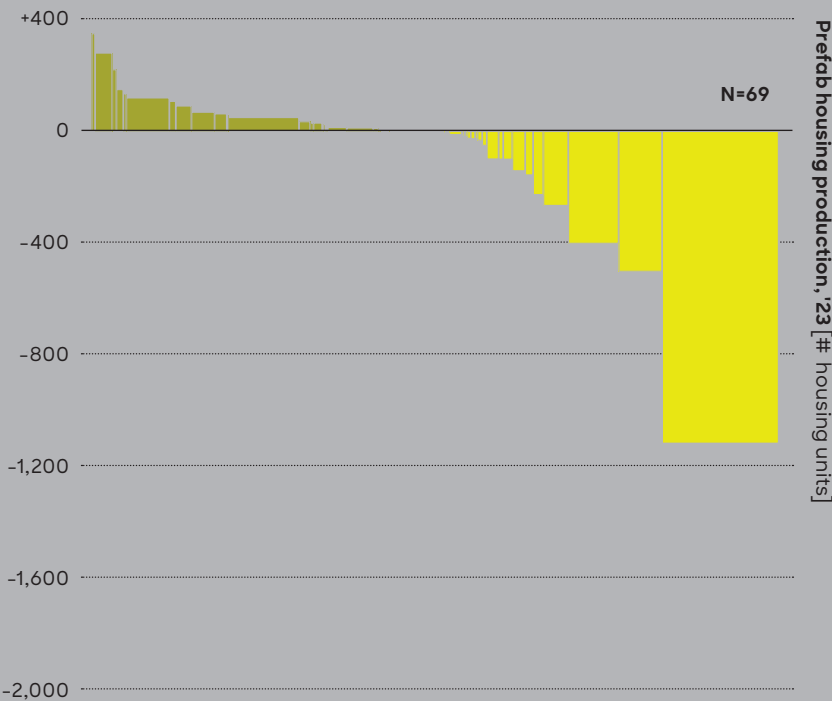


Source: Prefab housing production survey 2018-2024 - Marjet Rutten and Roland Berger, CBS, Ministry of Housing and Spatial Planning

The decline in absolute prefab production in 2024, however, was not shared by all producers. More than 60% of the players we track maintained or increased production levels for 2024 relative to their output in 2023. Notably though, almost all players produced fewer homes in 2024 than what they had forecasted they would at the end of 2023, indicating that last year's drop in prefab output was not foreseen. ► C + D

C Delta of prefab housing production by player, 2023-2024E
[# '000 housing units]

Share of number of players [% of total # of players]	67%	33%	N=69 players
Share of total production, '23 [% of total prefab housing production]	51%	49%	Σ 15,021 housing units
Delta of prefab housing production, '23-'24E [# housing units]	Σ +2,603	Σ -3,334	



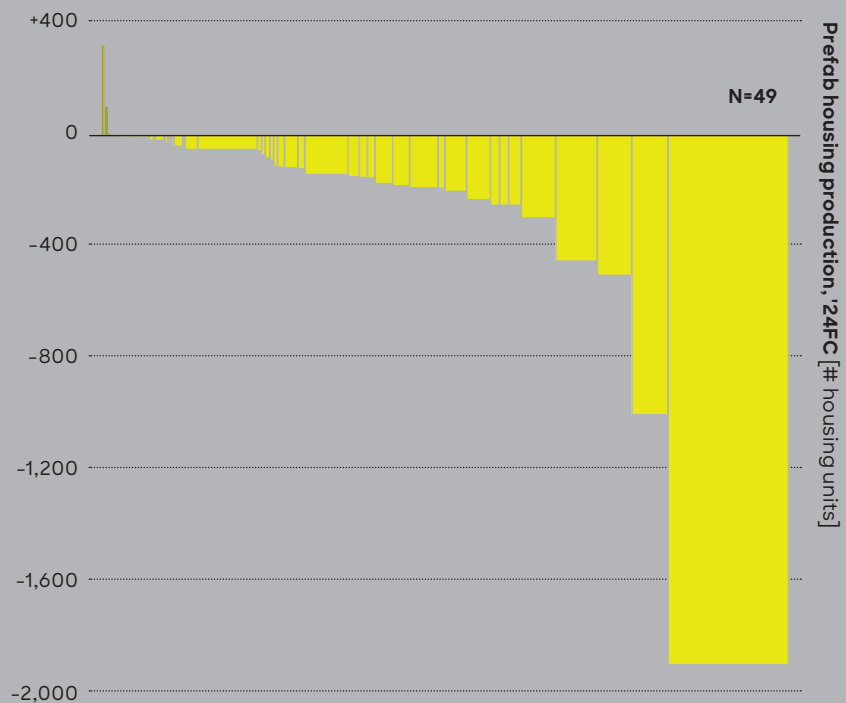
Source: Prefab housing production survey 2018-2024 – Marjet Rutten and Roland Berger

// The increase of prefab housing production to 50% of new build by 2030 is definitely possible. We don't have enough labor in the Netherlands to build homes otherwise."

Prefab housing major

D Delta of prefab housing production by player – Forecasts vs. actuals, 2024 [# '000 housing units]

Share of number of players [% of total # of players]	10%	90%	N=49 players
Share of total production, '24FC [% of total prefab housing production]	3%	97%	Σ 18,986 housing units
Delta of prefab housing production, '24FC-'24E [# housing units]	Σ +430	Σ -7,804	

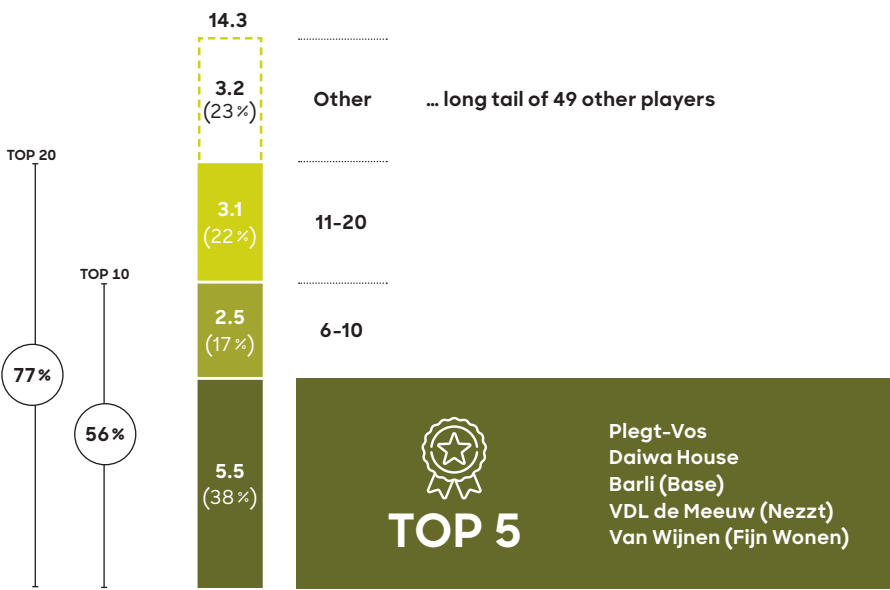


Source: Prefab housing production survey 2018-2024 – Marjet Rutten and Roland Berger

2.2/ Player landscape

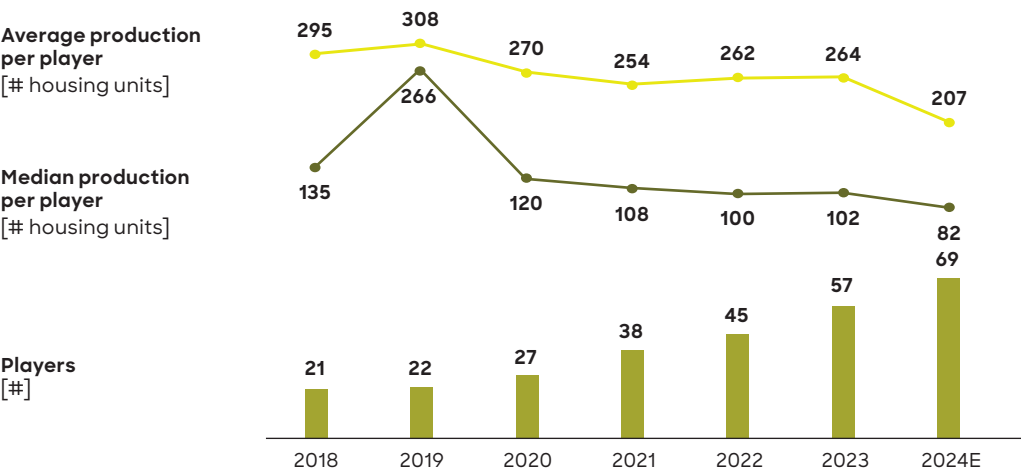
In 2024, the top 20 prefab housing players accounted for almost 80 % of prefab housing construction. Over the years, the market has attracted a lot of interest from producers, and participation is increasing. In 2018, there were 21 players in prefab housing; in 2024, that number reached nearly 70. ► E + F

E Prefab housing production by housing concept, 2024E
[# '000 housing units]



Source: Prefab housing production survey 2024 - Marjet Rutten and Roland Berger

F Average and median production [# housing units]
and number of players per year, 2018-2024E [# players]



Source: Prefab housing production survey 2018-2024 - Marjet Rutten and Roland Berger, CBS, Ministry of Housing and Spatial Planning

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2025 market outlook

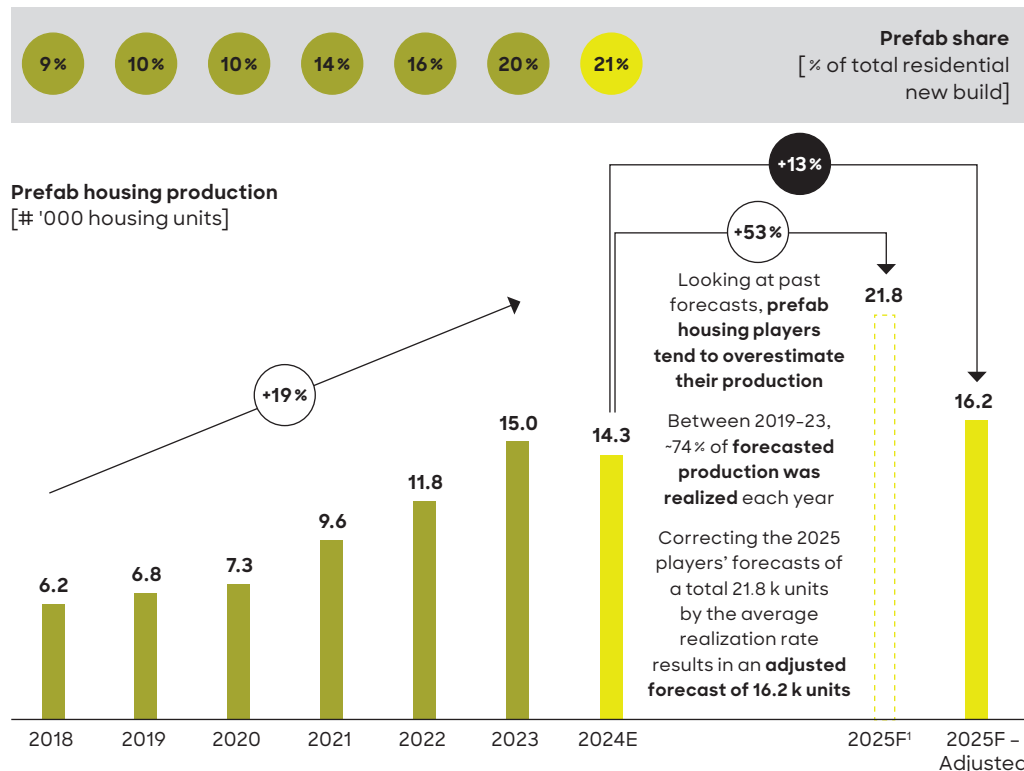
The market is optimistic that prefab housing production will resume its growth path in 2025

Moods are optimistic among players in prefab housing. In 2025, producers expect to increase their output by 53% to a total of nearly 22 k housing units. Across the board, a positive outlook is shared among almost all prefab housing players. Only one large player has projected production declines.

If we look at past forecasts, however, we see that producers often overestimate here. From 2019 to 2023, actual production averaged around 74% of forecasted production each year. For the purposes of our outlook, we have therefore adjusted the 2025 forecast accordingly, coming to 16.2 k units, or a 13% increase compared to 2024. ► G

Corrected or not, there is plenty of room for more. Our adjusted projection accounts for only 44% of the sector's almost 37 k unit capacity. If players were to implement capacity enhancements such as additional shifts, another 19 k units could be built – a total of almost 56 k units. Prefab players have the means – and sufficient supply chains – to multiply their output and once again take more share in residential construction.

G Prefab housing production, 2018-2025F [# '000 housing units]



¹An average growth rate based on all forecasts received was assumed for those players that did not provide forecasts

Source: Prefab housing production survey 2024 – Marjet Rutten and Roland Berger

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Notable stats in 2024

Prefab housing is more environmentally efficient, cheaper, increasingly design-flexible and more automated

4.1/ Key stats

Most prefab houses built in 2024 were apartments, and most were sold to housing corporations. The houses were predominantly made of wood, modules were almost equally split between 2D and 3D, and homes with over 30 % biobased materials accounted for 22 % of total units. ► **H**

4.2/ Observations

Notable observations that arose from our survey and interviews are:



For both ground-level homes and apartments, prefab construction achieves higher environmental efficiency than is mandated.



The majority of prefab housing players estimate that prefab production costs are equal to or cheaper than conventional building methods.



Despite perceptions otherwise, prefab housing concepts offer flexibility in multiple aspects. Everything from façade design and the floorplan to how energy is utilized in the space can be customized to some degree.



Prefab housing players, especially the larger ones, are achieving relatively high levels of automation.



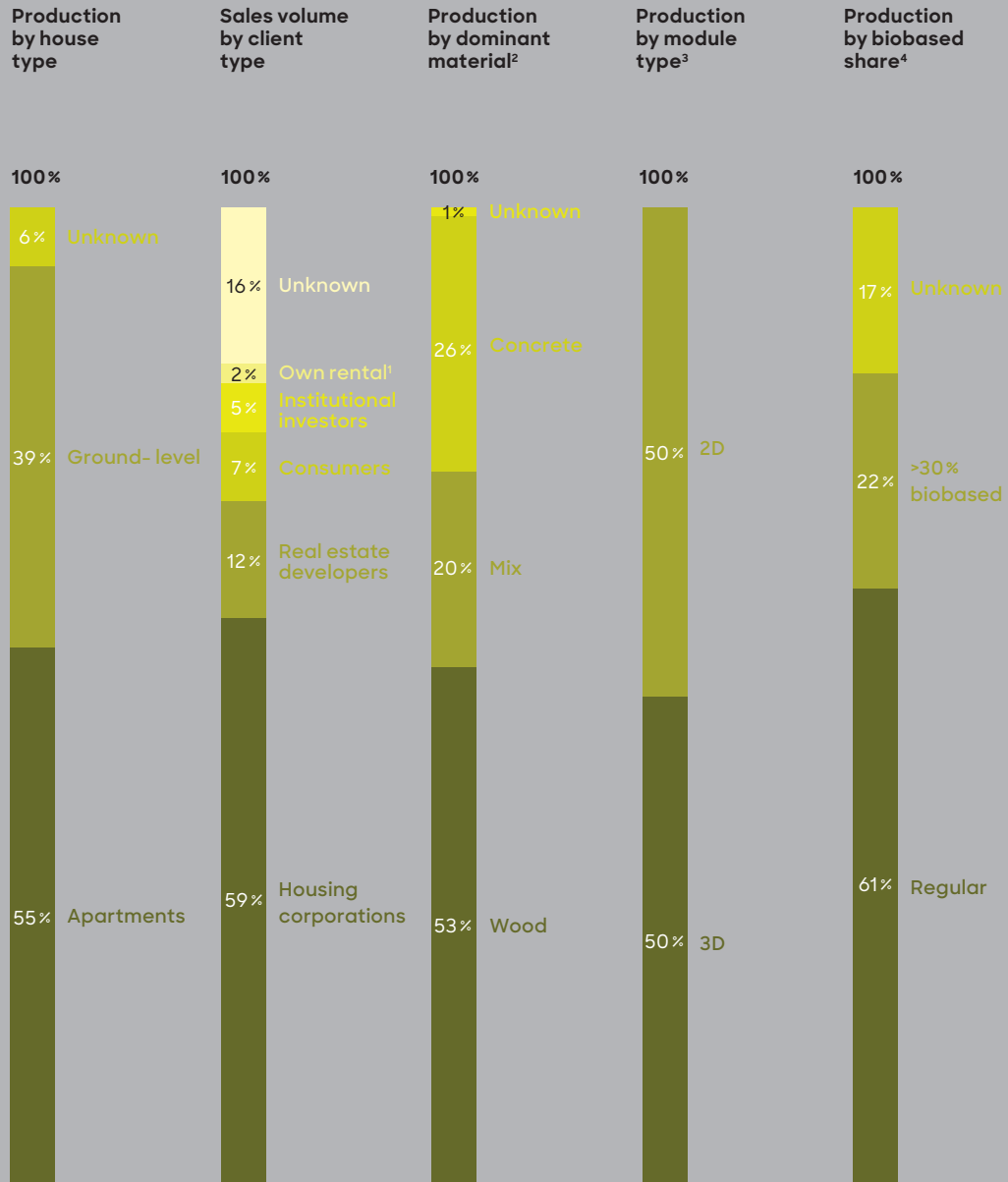
Most players put sustainability and biobased materials at the top of their lists as they continue to develop their companies and processes.

// We are currently looking to maximize biobased materials, following the motto 'concrete where needed, wood where possible'."

Prefab housing major

H Key stats on prefab housing in 2024

[% housing units]



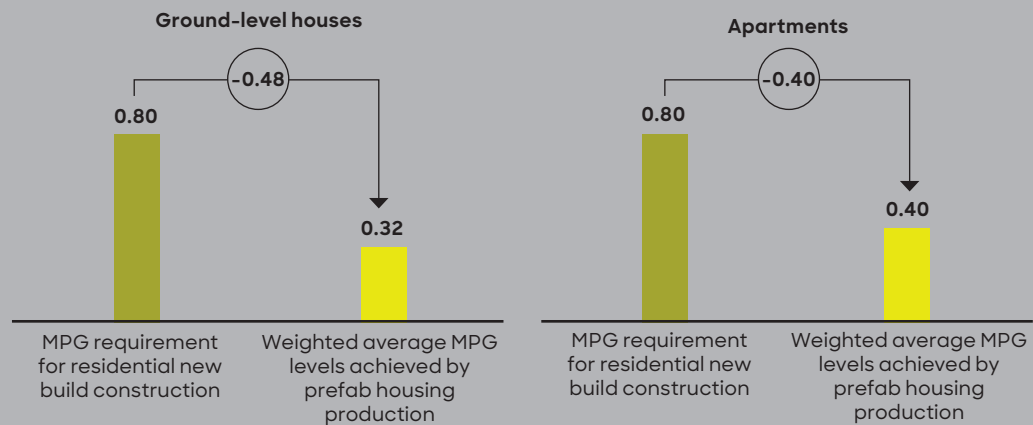
¹Own rental refers to housing production that has not been sold but is instead rented out directly by the producer

²A unit is classified as dominant wood if the majority of the building elements are made from wood (ground floor excluded from assessment). A unit is classified as dominant concrete if the majority of elements are made from concrete or steel. If no single material clearly dominates, the unit is considered mixed

³2D housing production involves the on-site assembly of individual components, such as walls, floors and roof panels, while 3D production involves the installation of entire pre-built cubic building modules on-site

⁴>30% biobased refers to units where the players themselves indicate that more than 30% of the materials used (by weight) are derived from biobased sources

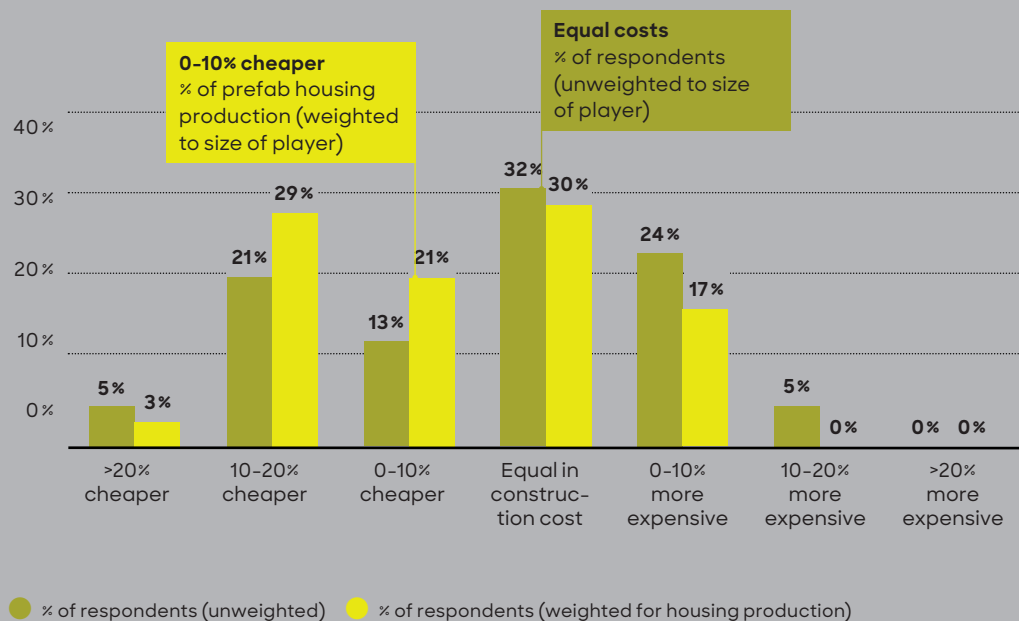
Required MGP⁵ levels vs. MGP⁵ levels achieved by prefab housing production [EUR/m²/year]



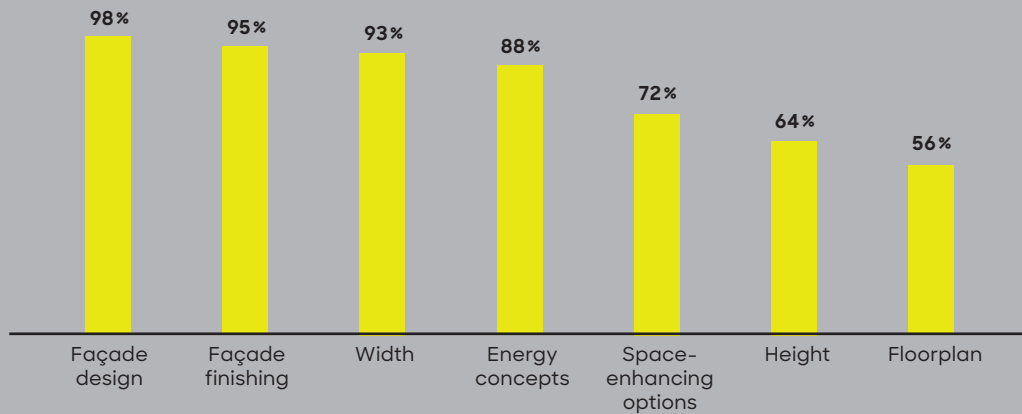
⁵MilieuPrestatie Gebouwen (MPG), a Dutch government metric which measures the environmental impact of construction per square meter in monetary terms (EUR)

Prefab housing is more environmentally efficient, cheaper, ...

Prefab vs. traditional housing production cost [% of respondents]

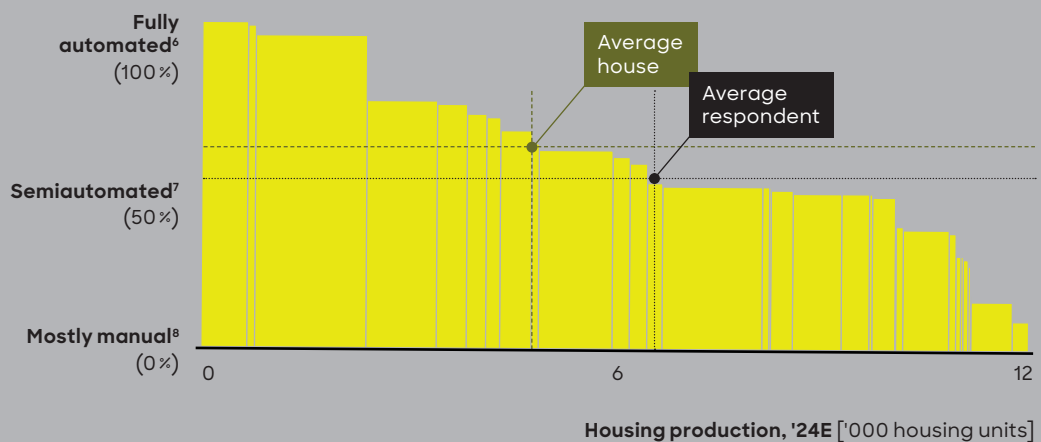


Flexibility offered by building aspect [% of prefab housing production]



... increasingly design-flexible and more automated

Level of automation of production lines at prefab housing players [% of automation]



⁶Fully automated production line with robots and only system operators / ⁷Tightly organized production stations with partial support from machines / ⁸Few machines (e.g. computer numerical control) but mostly manual work

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Conclusion

The consensus among players in residential prefab is that prefab should account for 50 % of all residential new build by 2030, and even beyond in the longer term. Housing and labor shortages in the Netherlands underscore the necessity of prefab and other levers being pulled by the construction industry and governments.

Players also maintain that these targets are feasible – and the numbers back them up. Today's 21% penetration share implies plenty of room for growth, and given current capacity volumes among players, that growth can be realized.

Our prefab homes radar will continue to track prefab housing as the sector develops. It will be interesting to see how prefab makes headway towards a 50 % share in residential new build by 2030.

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Methodology

The prefab homes radar is based on the results of a survey and interviews.

The online survey was completed by prefab housing players in the Netherlands. Twenty-five questions addressed a variety of topics, including production, capacity, clients and automation.

For example:

- How many housing units for ground-level homes did you realize in 2024, and do you expect to realize in 2025?
- What is your maximum production capacity for housing units that you can achieve in 2025 under normal conditions, without major changes or additional capital investment?
- How is your sales volume distributed between housing corporations, institutional investors, real estate developers, consumers, and own rental?
- To what extent is your production line highly automated and robotized?

Five prefab housing majors also sat with us for in-depth follow-up interviews. These interviews allowed us to develop qualitative insights on the current market and projections for the near term. In total, these five players realized 4,595 prefab housing units in 2024, or 32 % of all residential prefab that year.

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