European Contractor Monitor H1-2022

Prefab September 2022



About European Contractor Monitor

THE GOAL

To get a picture of the economic situation in the construction market among contractors on a European scale and to get insights into the usage of prefabricated solutions by main contractors. This research is done bi-annually, with registered contractors divided over the 8 major European markets.

THE RESEARCH TOPICS

Recurring topic: Economic developments of construction companies in Europe (order book and turnover development)

Bi-annual theme topics in 2022: H1: Prefab H2: Digitalisation and BIM

COUNTRY SCOPE Total of 900 Phone interviews

Background characteristics of the interviewed respondents can be found in the country-specific profiling the contractor chapter.



THE TIMELINE



PROJECT TEAM



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About target group & methodology



Surveying construction companies...

Mid-sized (5 to 15 employees) and **large** (more than 15 employees) building contractors who are active both in residential and non-residential segments are interviewed. Most interviews are conducted with owners/ directors or with purchasers of these companies.

... selected from a country-representative database

USP possesses an **international database of construction companies**, which is constantly updated. Therefore, respondents are not part of a fixed panel; the sample varies from wave to wave.

... through phone interviews, by native-speaking agents

Phone surveys are the best approach for obtaining a sufficient sample in order to provide insights that can be relied upon. These phone calls are made **by fixed fieldwork partners**, **located in the respective countries**.

... centralised and continuous quality control

Results in each country are monitored by the USP project team throughout the fieldwork period. We implement our extensive experience in order to **make sure the answers are of high quality and provide the insights that meet the goal of the project.**

Dummy data has been used on the following slides, this means no real data of this edition is shown.

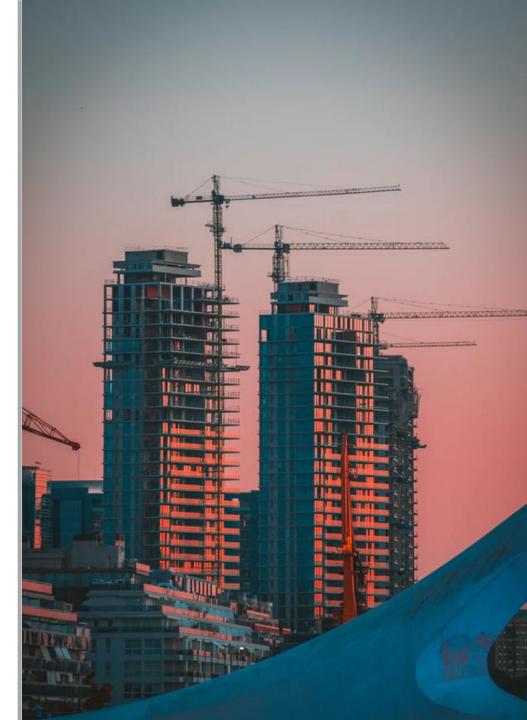
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Management Summary Profiling the Building Contractor

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Appendix



Business development

Turnovers XXX in most countries in the first half of 2022

European contractors experienced a XXX from the pandemic in 2021 and had XXX expectations regarding turnover for 2022. In the first half of 2022, most countries still experienced a XXX turnover development, although relatively XXX compared to 2021. Especially XXX had XXX in turnover developments. However, contractors are XXX about the second half of the year and the order book portfolios are XXX. Only the contractors in XXX are XXX and having XXX expectations for the near future.

On the average level, order book portfolios of European contractors are similar to the second half of 2021. Still, the portfolios show that XXX. However, most countries experience XXX. XXX and XXX are experiencing the most XXX outlook in their orderbooks. XXX is also experiencing XXX the least of all countries.

Effects of the Ukraine war are concerning for the European contractors

This year, the effects of the Ukraine war brought some insecurity and most European contractors are worried about the negative consequences on the delivery of construction products. Except for contractors in XXX, increasing oil and gas prices also create XXX expectations of the sustainability of the building stock.



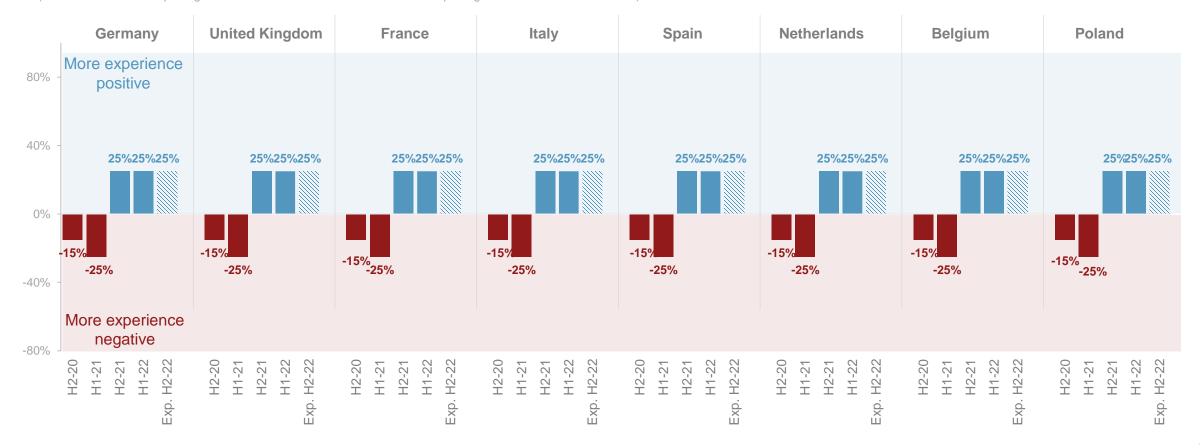


Turnover development

Most countries show a XXX turnover and XXX expectations, except for XXX which is staying XXX like the previous years

Net share of contractors' experience regarding turnover

If you compare your turnover of **H1-22** to **H1-21**, how did your turnover develop? (Share of contractors reporting INCREASE minus the share of contractors reporting DECREASE in their turnover)



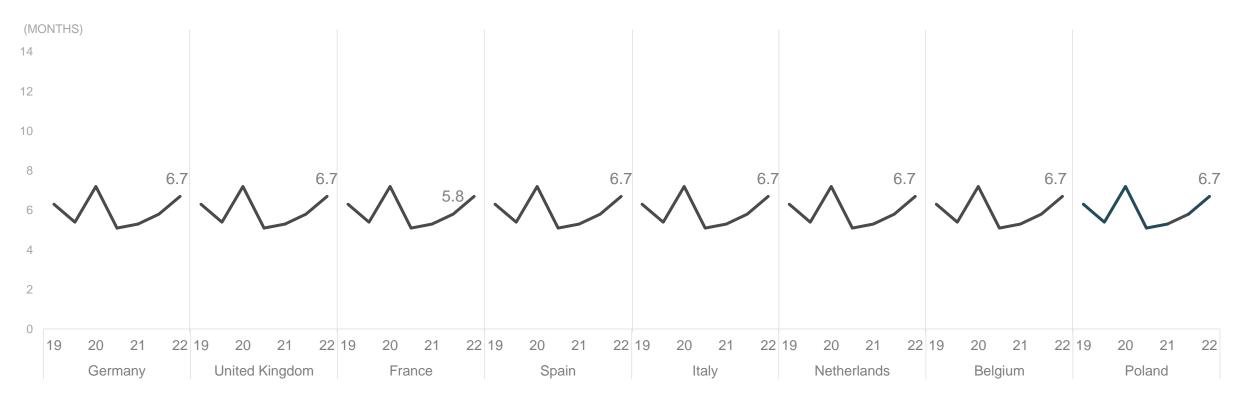


Orderbook portfolio

Orderbook portfolios are XXX for the coming months

Order book portfolio

Question: How big is your current order book portfolio? For how many months will you be able to keep your current staff working?



Labour shortage

Most countries experience labour shortage XXX degrees, except for XXX

Labor shortage

To what degree do you face labor shortage for this year in your company?

| | | Not at al | I A little bit | Moderate | Some Ext | reme | Total some or extreme shortage |
|-------------|-------|-----------|------------------|----------|----------|------|-----------------------------------|
| Total | N=900 | 20% | 20% | 20% | 20% | 20% | Х% |
| Germany | n=125 | 20% | 20% | 20% | 20% | 20% | X% |
| UK | n=125 | 20% | 20% | 20% | 20% | 20% | X% |
| France | n=125 | 20% | 20% | 20% | 20% | 20% | X% |
| Italy | n=125 | 20% | 20% | 20% | 20% | 20% | X% |
| Spain | n=125 | 20% | 20% | 20% | 20% | 20% | X% |
| Netherlands | n=75 | 20% | 20% | 20% | 20% | 20% | Χ% |
| Belgium | n=75 | 20% | 20% | 20% | 20% | 20% | Χ% |
| Poland | n=125 | 20% | 20% | 20% | 20% | 20% | Χ% |

Effects of oil & gas prices

In general, contractors XXX that oil and gas prices will be beneficial for the sustainability of the building stock

Oil and gas prices

To what degree do you agree with the statement; the high oil and gas prices will have a positive effect on the sustainability of the building stock?

| | | Strongly agree | Agree | Neither agree nor disagree | Disagree | Strongly Disagree | Don't know | |
|-------------|-------|----------------|-------|-------------------------------|----------|-------------------|------------|--|
| Total | N=900 | 20% | 20% | 20% | 20% | 20% | 20% | |
| Germany | n=125 | 20% | 20% | 20% | 20% | 20% | 20% | |
| UK | n=125 | 20% | 20% | 20% | 20% | 20% | 20% | |
| France | n=125 | 20% | 20% | 20% | 20% | 20% | 20% | |
| Italy | n=125 | 20% | 20% | 20% | 20% | 20% | 20% | |
| Spain | n=125 | 20% | 20% | 20% | 20% | 20% | 20% | |
| Netherlands | n=75 | 20% | 20% | 20% | 20% | 20% | 20% | |
| Belgium | n=75 | 20% | 20% | 20% | 20% | 20% | 20% | |
| Poland | n=125 | 20% | 20% | 20% | 20% | 20% | 20% | |



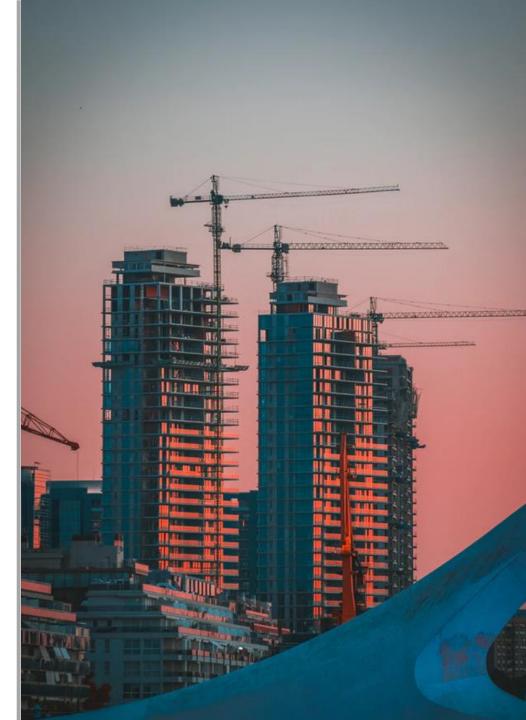
Negative effects of the Ukraine war

European contractors XXX due to the Ukraine war

Ukraine war

To what degree do you agree with the statement; due to the war in Ukraine we expect that delivery issues of building products will increase?

| | | Strongly agree | Agree | Neither agree nor disagree | Disagree | Strongly Disagree | Don't know |
|-------------|-------|----------------|-------|-------------------------------|----------|-------------------|------------|
| Total | N=900 | 20% | 20% | 20% | 20% | 20% | 20% |
| Germany | n=125 | 20% | 20% | 20% | 20% | 20% | 20% |
| UK | n=125 | 20% | 20% | 20% | 20% | 20% | 20% |
| France | n=125 | 20% | 20% | 20% | 20% | 20% | 20% |
| Italy | n=125 | 20% | 20% | 20% | 20% | 20% | 20% |
| Spain | n=125 | 20% | 20% | 20% | 20% | 20% | 20% |
| Netherlands | n=75 | 20% | 20% | 20% | 20% | 20% | 20% |
| Belgium | n=75 | 20% | 20% | 20% | 20% | 20% | 20% |
| Poland | n=125 | 20% | 20% | 20% | 20% | 20% | 20% |



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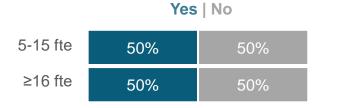
Background characteristics

Company profile

How many **full-time employees** does your company have?

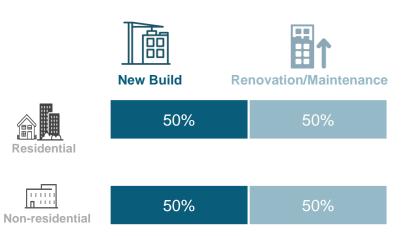


Does your company develop and build projects themselves?



Project segmentation

What percentage of your residential/ non residential turnover do you get from new build projects?



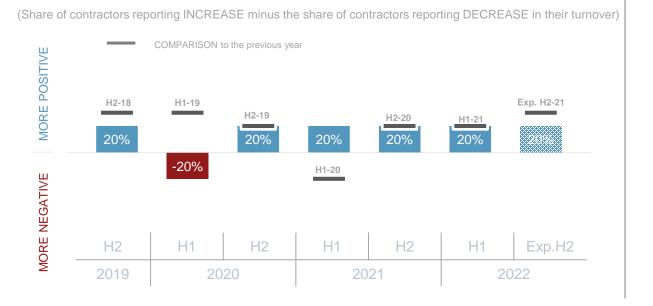


Net share of contractors' experience regarding turnover

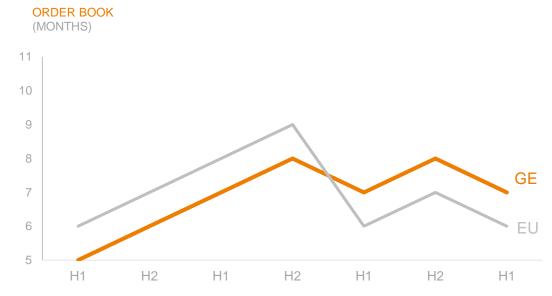
Germany | United Kingdom | France | Italy | Spain | Netherlands | Belgium | Poland

If you compare your turnover of H1-22 to H1-21, how did your turnover develop? What are your expectations for the development in H2-22 compared to H2-21?

Germany experiences XXX half year compared to the previous half year



How big is your **current order book** portfolio? For how many months will you be able to keep your current staff working?



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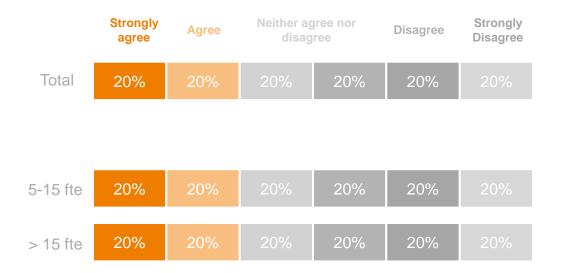
Germany | United Kingdom | France | Italy | Spain | Netherlands | Belgium | Poland

Contractors in Germany are XXX about the effects of the war

Oil and gas prices

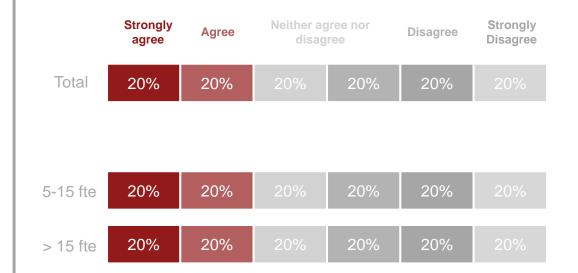
To what degree do you agree with the statement;

the high oil and gas prices will have a **positive effect** on the sustainability of the building stock?

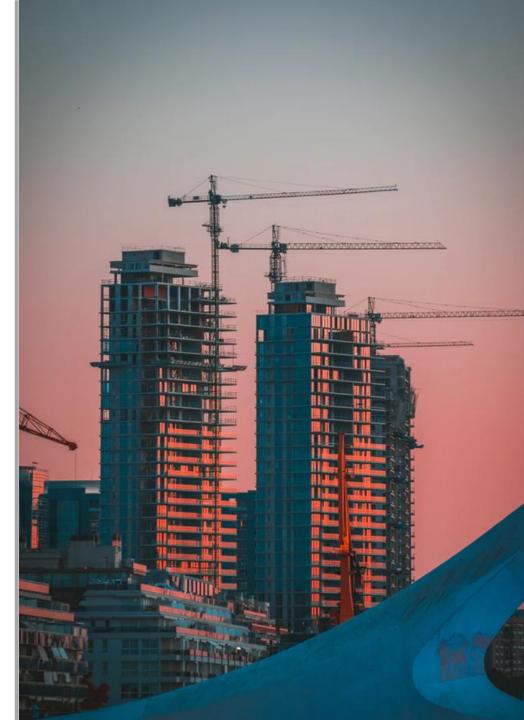


Ukrain war

To what degree do you agree with the statement; due to the war in Ukraine we expect that delivery issues of building products will increase?



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Prefab

Prefab is XXX in Europe

Prefab usage in Europe is XXX since 2018. It is seen XXX which is quite critical to face increasing demands. XXX has the highest share of usage of prefab and this trend seems to be continued in the future. Most other countries also showed XXX and are expecting to XXX of prefab solutions in the future.

With the increasing XXX, prefab is perceived as XXX. However, it also requires XXX which makes it a difficult switch. Therefore, it is unlikely to see XXX in the usage in the coming years.

Adaptation is difficult because of the requirements

Contractors generally see the benefits only in XXX and are hesitant to adapt to prefab because of requirements such as XXX. Furthermore, they are usually not the main decision makers when it comes to using prefab. In most countries, XXX have more influence on the decision for prefab usage. In some cases, the decision-making process is also influenced by other stakeholders, such as XXX.

Using XXX in projects is more common

Although a high level of prefab usage is XXX, using some kind of prefab element in the projects is getting XXX compared to 2018. Instead of fully adapting the prefab solutions, most construction projects make use of XXX. European contractors also expect to see more XXX in the future projects.

Currently, prefab is mostly used in XXX, similar to the levels in 2018. In the non-residential sector, usage in XXX has the biggest share of usage and this share has been increasing since 2018. In most projects, XXX are still the most common building parts to use prefabricated elements for.



Definitions



Prefab was introduced to the contractors as 'off-site construction or modern methods of construction'.

| Dutch/ Flemish | "off-site bouwen of moderne bouwmethoden" |
|----------------|--|
| German | "Bau abseits der Baustelle oder moderne Bauweisen" |
| French | "la construction hors site ou les méthodes de construction modernes" |
| Spanish | "a elementos que vienen ya se fabrican y montan fuera de la obra y a métodos de construcción modernos" |
| Italian | "sistemi di costruzione non in loco o metodi di costruzione moderni" |
| Polish | "metody konstrukcji poza terenem budowy lub nowoczesne metody konstrukcji" |

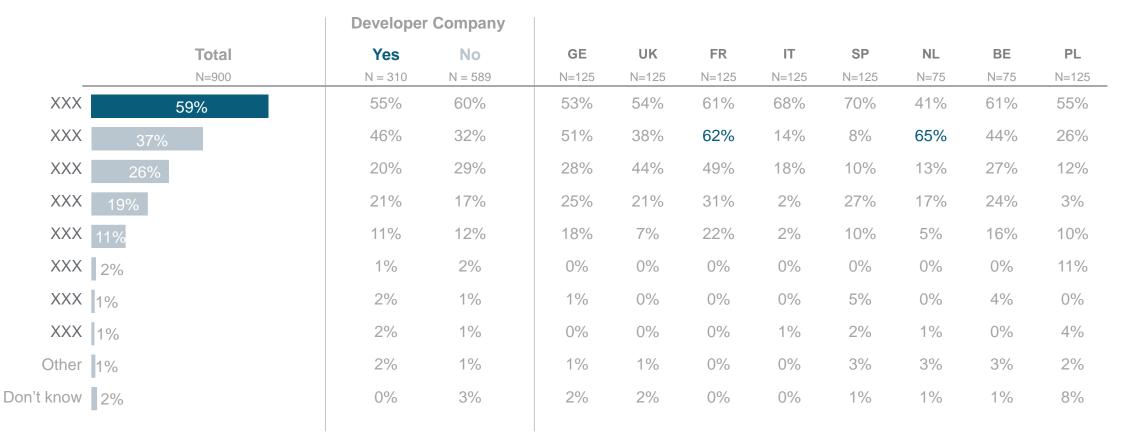
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Decision Makers

In most countries, XXX are the main decision makers, but in the Netherlands, XXX have more influence.

Stakeholders of decisions in prefabricated construction

Who decides to use prefab elements?



Main advantages

The most prominent advantage of using prefab is XXX. In Germany XXX is also very important.

Main advantages of prefab

In your opinion, what are the main advantages of prefab elements?

| | Total | GE | UK | FR | IT | SP | NL | BE | PL |
|------------|-------|-------|-------|-------|-------|-------|------|------|-------|
| - | N=900 | N=125 | N=125 | N=125 | N=125 | N=125 | N=75 | N=75 | N=125 |
| XXX | 75% | 52% | 67% | 86% | 94% | 64% | 85% | 83% | 72% |
| XXX | 18% | 34% | 18% | 26% | 10% | 12% | 12% | 16% | 11% |
| XXX | 15% | 47% | 13% | 8% | 2% | 6% | 17% | 16% | 9% |
| XXX | 6 | 6% | 18% | 6% | 3% | 5% | 3% | 4% | 0% |
| XXX | 69 | 13% | 4% | 7% | 8% | 3% | 4% | 4% | 1% |
| XXX | 5' | 14% | 2% | 6% | 3% | 1% | 1% | 9% | 2% |
| XXX | 2% | 0% | 2% | 0% | 1% | 10% | 1% | 0% | 5% |
| XXX | 2% | 1% | 1% | 0% | 1% | 10% | 4% | 0% | 3% |
| XXX | 2% | 4% | 5% | 2% | 1% | 0% | 0% | 0% | 0% |
| Other | 9% | 13% | 3% | 3% | 6% | 12% | 20% | 4% | 9% |
| Don't know | 6% | 2% | 12% | 0% | 0% | 7% | 4% | 4% | 18% |
| | | | | | | | | | 20 |

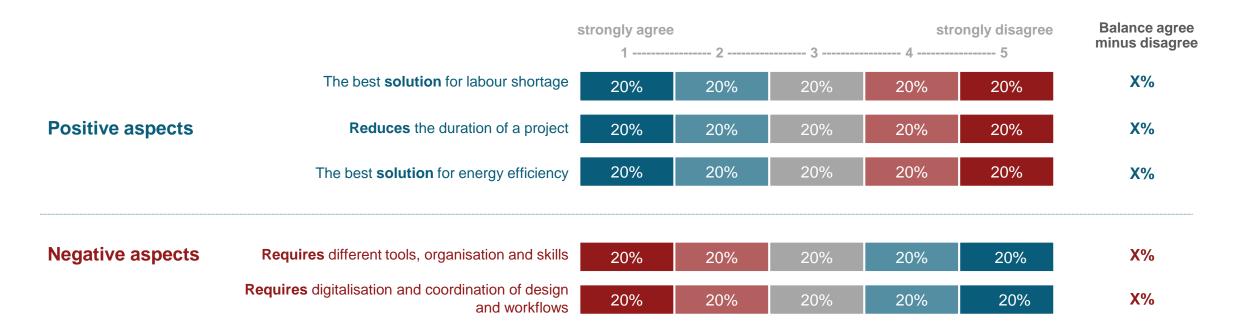


Attitudes towards Prefab

The most important benefit of the prefab solutions is XXX. However, the difficult requirements to use prefab create XXX

Attitudes for Prefab

To what degree do you disagree or agree with the following statements about prefab?

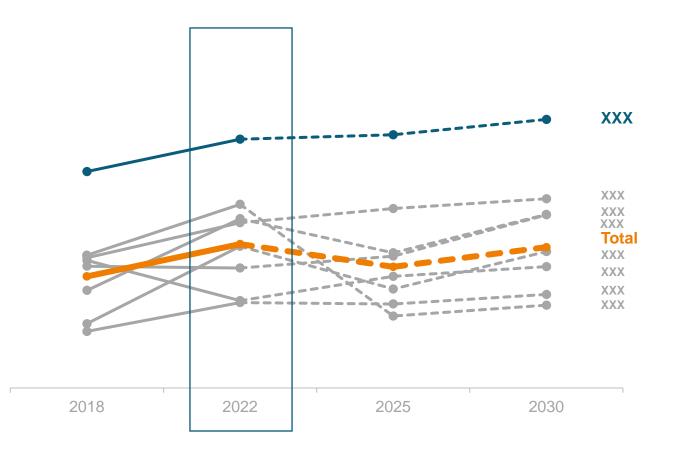


Prefab usage past, present, and future

In Europe, prefab usage increased X% in the last four years.

Trend in share of prefab elements

Percentage of projects contained some form of prefab building elements or off-site construction, Expectations for 2025 and 2030



XXX still has the highest share of usage

However, not all countries are XXX about the usage expectations for prefab, especially for the near future.





Prefab trends per size of project

Prefab was mostly used in XXX buildings in the past and present, and this trend seems to be continued in the future.

Prefab projects

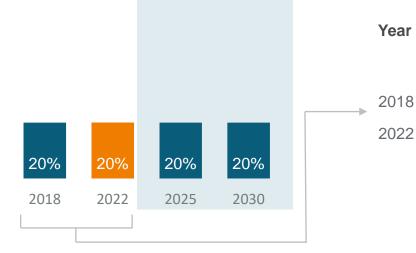
If you look at the projects you have worked on in the past 2 years, what percentage of your projects contained some form of prefab building elements or off-site construction?

2018

What is your expectations for 2025 and 2030?

And what was the most dominant size of the projects that contained prefab building elements?

In which size segment do you expect the biggest growth of prefab?



| | Domina | nt size of | Prefab pro | ojects* | Future ex | pectation | S | |
|---|----------|------------|------------|------------------|-----------|-----------|-----------|------------------|
| | Low rise | Mid rise | High rise | Not one specific | Low rise | Mid rise | High rise | Not one specific |
| 3 | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| 2 | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |

*Low rise – up to 4 floors Mid rise – 5 up to 10 floors High rise – more than 10 floors



Dominant size of projects across countries

In some countries, usage of prefab in XXX is increasing.

Dominant size* of current prefab projects

What was the most dominant size of the projects that contained prefab building elements?

| | Low-rise | | Mid | Mid-rise | | -rise | No specific | |
|-------------------|----------|------|------|----------|------|-------|-------------|------|
| Country | 2018 | 2022 | 2018 | 2022 | 2018 | 2022 | 2018 | 2022 |
| Total | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Germany | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| United Kingdom | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| France | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Italy | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Spain | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Netherlands | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Belgium | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Poland | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |

Dominant size of future prefab projects

In which size segment do you expect the biggest growth of prefab?

| | Low | -rise | Mid | -rise | High | -rise | No sp | ecific |
|-------------------|------|-------|------|-------|------|-------|-------|--------|
| Country | 2018 | 2022 | 2018 | 2022 | 2018 | 2022 | 2018 | 2022 |
| Total | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Germany | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| United Kingdom | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| France | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Italy | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Spain | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Netherlands | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Belgium | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Poland | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |

Expectations for future projects

*Low rise – up to 4 floors Mid rise – 5 up to 10 floors High rise – more than 10 floors

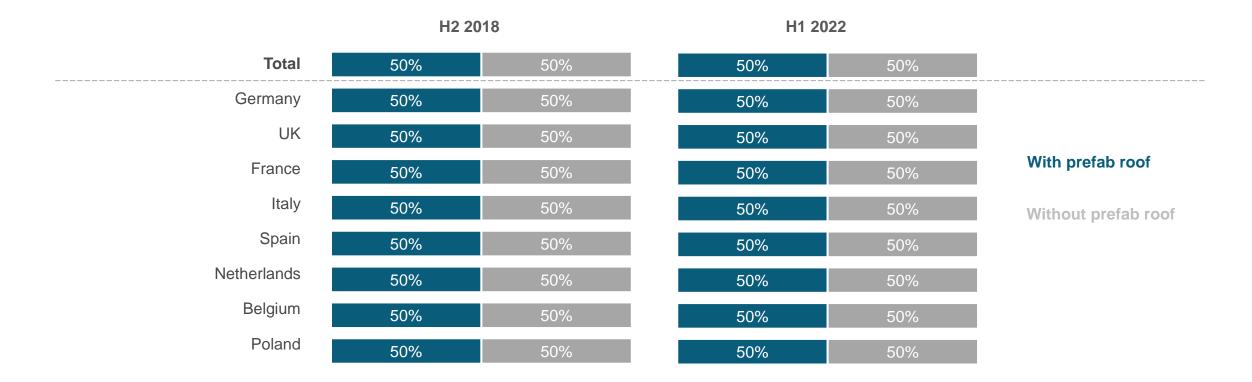


Prefab roof usage

Prefab roofs are XXX in most countries.

Prefab roof usage

What percentage of your residential projects had a prefab roof?



Prefab is mostly used in XXX

Prefab in current building types What kind of projects/ buildings contained prefab building elements?

Total 2022 Total 2018 GE UK FR SP NL BE IT. PL N=61 N=614 N=394 N=89 N=63 N=105 N=93 N=67 N=57 N=79 **Residential** XXX 40% 57% 39% 59% 36% 29% 46% 35% 27% 41% 37% XXX 58% 31% 29% 19% 35% 42% 61% 27% 37% XXX 10% 34% 13% 5% 12% 12% 37% 12% 6% XXX 15% 24% 33% 3% 7% 3% 43% 11% 4% XXX 4% 1% 2% 5% 1% 0% 4% 0% 0% XXX 16% 8% 11% 29% 33% 32% 13% 19% 13% Nonresidential XXX 13% 19% 11% 33% 9% 25% 21% 15% 8% XXX 99 11% 6% 21% 11% 7% 3% 10% 12% 8% XXX 89 7% 11% 11% 5% 8% 2% 9% 12% 5% XXX 4% 7% 7% 8% 2% 2% 3% 7% 5% 3% XXX 3% 2% 3% 2% 3% 4% 0% 0% 10% -XXX 3% 6% 6% 5% 0% 4% 1% 3% 4% 3% XXX 2% 1% 0% 1% 1% 0% 0% 13% 0% -6% 4% 8% 5% 16% 9% Other 8% 4% 14% 6%

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2022



Future expectations are also similar

| Prefab in future building types In which building types do you expect | 2022 Future Expectations | | | | | | | | | | |
|--|--------------------------|----------------|-------------|------|------|------|------|------|------|------|------|
| In which building types do you expect | ine biggest gro | win or pretab? | | | | | | | | | |
| | | Europe 2022 | Europe 2018 | GE | UK | FR | IT | SP | NL | BE | PL |
| | | N=299 | N=524 | N=41 | N=41 | N=42 | N=43 | N=41 | N=25 | N=25 | N=41 |
| Residential | XXX | 41% | 35% | 56% | 46% | 40% | 30% | 34% | 44% | 36% | 39% |
| | ХХХ | 33% | 35% | 27% | 44% | 31% | 42% | 32% | 48% | 28% | 20% |
| | XXX | 16% | 17% | 27% | 17% | 2% | 12% | 7% | 52% | 8% | 15% |
| | XXX | 14% | 15% | 22% | 39% | 2% | 5% | 7% | 32% | 8% | 2% |
| | XXX | 1% | 4% | 0% | 2% | 0% | 0% | 0% | 0% | 4% | 0% |
| Non- | XXX | 17% | 12% | 17% | 7% | 43% | 12% | 7% | 8% | 36% | 10% |
| residential | XXX | 13% | 14% | 10% | 2% | 12% | 35% | 17% | 0% | 20% | 7% |
| | XXX | 8 | 6% | 10% | 5% | 12% | 16% | 5% | 0% | 12% | 0% |
| | XXX | 7% | 9% | 10% | 15% | 10% | 7% | 2% | 4% | 12% | 0% |
| | XXX | 79 | 5% | 10% | 2% | 10% | 14% | 5% | 4% | 8% | 2% |
| | XXX | 5% | 5% | 12% | 7% | 0% | 2% | 5% | 4% | 8% | 5% |
| | XXX | 2% | - | 2% | 0% | 0% | 0% | 5% | 0% | 12% | 2% |
| | Other | 4% | 9% | 0% | 2% | 0% | 0% | 15% | 4% | 8% | 2% |

More than half of prefab usage is used for XXX

Prefab in future construction parts

For which parts of the building do you expect the usage of prefab solutions to grow most?

| | Total 2022 | Total 2018 | GE | UK | FR | т | SP | NL | BE | PL |
|------------|------------|------------|------|------|------|------|------|------|------|------|
| _ | N=304 | N=1061 | N=42 | N=43 | N=43 | N=42 | N=41 | N=25 | N=26 | N=42 |
| XXX | 51% | 53% | 60% | 30% | 84% | 57% | 41% | 48% | 54% | 31% |
| XXX | 22% | 27% | 43% | 16% | 9% | 45% | 10% | 24% | 12% | 14% |
| XXX | 18% | 15% | 69% | 0% | 16% | 12% | 10% | 0% | 8% | 21% |
| XXX | 14% | 9% | 17% | 23% | 19% | 12% | 15% | 12% | 8% | 7% |
| XXX | 13% | 13% | 7% | 7% | 16% | 21% | 5% | 12% | 31% | 14% |
| XXX | 12% | 16% | 2% | 5% | 16% | 19% | 7% | 16% | 27% | 12% |
| XXX | 109 | 7% | 7% | 26% | 14% | 5% | 12% | 4% | 4% | 5% |
| XXX | 6% | 4% | 0% | 21% | 12% | 2% | 10% | 0% | 0% | 0% |
| XXX | 3% | - | 0% | 2% | 0% | 0% | 7% | 0% | 0% | 14% |
| Other | 79 | 10% | 7% | 7% | 0% | 2% | 17% | 4% | 0% | 12% |
| Don't know | 14% | 11% | 2% | 23% | 2% | 5% | 12% | 20% | 19% | 31% |

Definitions

Prefab was introduced to the contractors as 'off-site construction or modern methods of construction'. Once we got past the general topics about prefab, we went into detail about the different types of prefab. To show how advanced a country is in using prefab construction elements, we defined the following levels of prefab:



 prefabricated plain unfinished elements; elements <u>without</u> insulation, windows or installation (e.g. precast floors, facade or roof element without windows)

| 4 | | |
|---|--------|---|
| | - 19 C | |
| | - T* | |
| _ | himsen | 1 |

• prefabricated panelised systems or elements; examples are wall, floor, ceiling, roof and facade panels including insulation, windows or installation



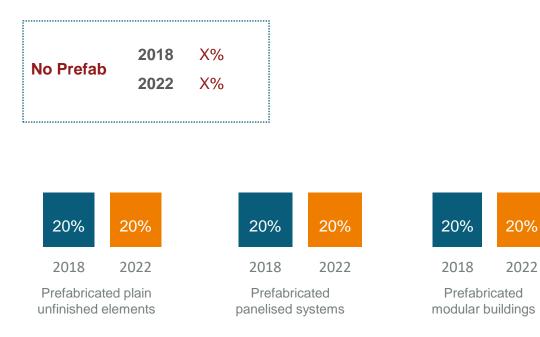
• prefabricated modular buildings or volumetric elements; examples are dormers, bathroom pods or kitchen pods which are preassembled units before arriving on the construction site (3D prefab)

Usage of prefab elements

XXX are the most commonly used prefab elements. However, contractors expect to use more XXX

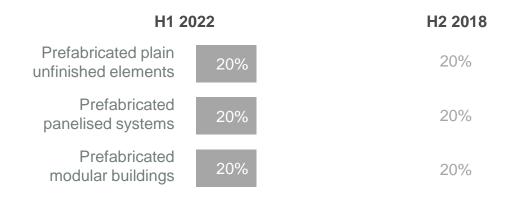
Projects containing the following prefab elements

When you look at your projects which included any prefab from the past 2 years, what % of your projects contained the following types of prefabrication?



Future expectations for prefab types

Which type of prefabrication do you expect to grow the most in the coming years?





Usage of prefab elements

Usage of XXX already increased in most countries since 2018 and they are expected to be used more in the future.

Percentage of projects containing prefabricated elements When you look at your projects which included any prefab from the past 2 years, what percentage of your projects contained the following types of prefabrication?

| | Prefab. unfinished elements | | Prefab. panelised systems | | mod | fab. Iular Iings | No Prefab | | |
|-------------------|-----------------------------------|------|---------------------------------|------|------|------------------------|-----------|------|--|
| Country | 2018 | 2022 | 2018 | 2022 | 2018 | 2022 | 2018 | 2022 | |
| Total | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | |
| Germany | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | |
| United Kingdom | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | |
| France | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | |
| Italy | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | |
| Spain | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | |
| Netherlands | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | |
| Belgium | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | |
| Poland | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | |

Future expectations for type of prefab

Which type of prefabrication do you expect to grow the most in the coming years?

| | unfin | fab. ished ients | pane | fab. Ilised ems | mod | fab. Iular Iings | No | one |
|-------------------|-------|------------------------|------|-----------------------|------|------------------------|------|------|
| Country | 2018 | 2022 | 2018 | 2022 | 2018 | 2022 | 2018 | 2022 |
| Total | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Germany | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| United Kingdom | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| France | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Italy | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Spain | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Netherlands | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Belgium | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Poland | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| | | | | | | | | 1 |



Prefab elements in different building types

FINISHED PREFAB SYSTEMS WITH INSULATION OR INSTALLATION

20%

20%

20%

20%

20%

20%

20%

20%

20%

20%

20%

XXX

When looking at...

PLAIN PREFAB ELEMENTS WTHOUT ANY INSULATION OR INSTALLATION

... in what type of buildings are those solutions used the most

PRE-ASSEMBLED MODULAR BUILDING PARTS / ELEMENTS

| Total 2022 | | Total 2018 | |
|------------|-----|------------|-----|
| | | | |
| 20% 20% | 20% | 20% | 20% |
| 20% 20% | 20% | 20% | 20% |
| 20% 20% | 20% | 20% | 20% |
| 20% 20% | 20% | 20% | 20% |
| 20% 20% | 20% | 20% | 20% |
| 20% 20% | 20% | 20% | 20% |
| 20% 20% | 20% | 20% | 20% |
| 20% 20% | 20% | 20% | 20% |
| 20% 20% | 20% | 20% | 20% |
| 20% 20% | 20% | 20% | 20% |
| 20% 20% | 20% | 20% | 20% |

Residential

Non-residential

XXX

XXX

XXX

XXX

XXX

XXX

XXX

XXX

XXX

Other

20%

20%

20%

20%

20%

20%

20%

20%

20%

20%

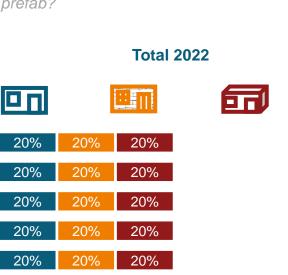


Prefab elements in different construction parts

When looking at...



...what parts of the building are done in prefab?



20%

20%

20%

20%

20%

FINISHED PREFAB SYSTEMS WITH

INSULATION OR INSTALLATION

| | Total 2018 | |
|-----|------------|-----|
| | | |
| 20% | 20% | 20% |
| 20% | 20% | 20% |
| 20% | 20% | 20% |
| 20% | 20% | 20% |
| 20% | 20% | 20% |
| 20% | 20% | 20% |
| 20% | 20% | 20% |
| 20% | 20% | 20% |
| 20% | 20% | 20% |
| 20% | 20% | 20% |

ᄓ미

PRE-ASSEMBLED MODULAR BUILDING

PARTS / ELEMENTS



Most used materials in prefab



What is the dominant type of construction material when prefabricated plain unfinished elements are used in the following building parts?

Concrete Wood/timber Gypsum Steel Bricks AAC/ACC Facades/ external walls 20% 20% 20% 20% 20% 20% Pitched roofs 20% 20% 20% 20% 20% 20% 20% Flat roofs 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% Ceilings 20% 20% 20% 20% 20% 20% Floors Internal partition walls 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20% Bathrooms* Kitchens* -

H2 2018

H1 2022

| Concrete | Wood/tim | ber Gyps | um Steel | Bricks | AAC/ACC |
|----------|----------|----------|------------|--------|---------|
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |

USP

Most used materials in prefab



What is the dominant type of construction material when **prefabricated panelised systems or elements** are used in the following building parts?

Concrete Wood/timber Gypsum Steel Bricks AAC/ACC Facades/ external walls 20% 20% 20% 20% 20% 20% Pitched roofs 20% 20% 20% 20% 20% 20% Flat roofs 20% 20% 20% 20% 20% 20% Ceilings 20% 20% 20% 20% 20% 20% Floors 20% 20% 20% 20% 20% 20% Internal partition walls 20% 20% 20% 20% 20% 20% Bathrooms* 20% 20% 20% 20% 20% 20%

H2 2018

H1 2022

Concrete Wood/timber Gypsum Steel Bricks AAC/ACC 20%

Most used materials in prefab



What is the dominant type of construction material when prefabricated modular buildings or volumetric elements are used in the following building parts?

H2 2018

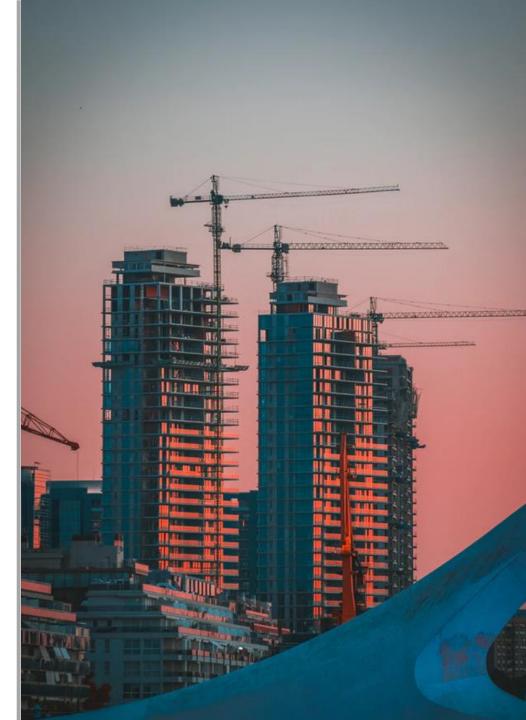


H1 2022

| Concrete | Wood/tim | ber Gyps | um Steel | Bricks | AAC/ACC |
|----------|----------|-----------|------------|--------|---------|
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |
| 20% | 20% | 20% | 20% | 20% | 20% |

*Results are indicative due to low number of observations (N<30).

JSP



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Management Summar

Profiling the Building Contractor

Prefat

Appendix

Usage of prefab elements – cross-country comparison



When looking at **prefabricated plain unfinished elements**, in what type of buildings are those solutions used the most?

| | Total | GE | UK | FR | IT | SP | NL | BE | PL |
|-----------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| | N = 289 | N = 50 | N = 23 | N = 27 | N = 44 | N = 40 | N = 23 | N = 23 | N = 59 |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Other | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Don't know/no opinion | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |

USP



Usage of prefab elements - cross country comparison



When looking at **prefabricated plain unfinished elements**, what parts of the building are done in prefab?

| | Total | GE | UK | FR | т | SP | NL | BE | PL |
|-----------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| | N = 289 | N = 50 | N = 23 | N = 27 | N = 44 | N = 40 | N = 23 | N = 23 | N = 59 |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Other | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Don't know/no opinion | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |

USP

Usage of prefab elements - cross country comparison



When looking at **prefabricated panelised systems or elements**, in what type of buildings are those solutions used the most?

| | Total | GE | UK | FR | п | SP | NL | BE | PL |
|-----------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| | N = 217 | N = 30 | N = 22 | N = 28 | N = 42 | N = 40 | N = 23 | N = 22 | N = 10 |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Other | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Don't know/no opinion | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |



Usage of prefab elements - cross country comparison



When looking at **prefabricated panelised systems or elements**, what parts of the building are done in prefab?

| | Total | GE | UK | FR | т | SP | NL | BE | PL |
|-----------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|
| | N = 217 | N = 30 | N = 22 | N = 28 | N = 42 | N = 40 | N = 23 | N = 22 | N = 10 |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Other | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Don't know/no opinion | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |

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Usage of prefab elements - cross country comparison



When looking at prefabricated modular buildings or volumetric elements, in what type of

buildings are those solutions used the most?

| | Total | GE | UK | FR | ІТ | SP | NL | BE | PL |
|-----------------------|---------|-------|--------|-------|--------|--------|--------|--------|-------|
| | N = 104 | N = 6 | N = 16 | N = 8 | N = 20 | N = 12 | N = 21 | N = 12 | N = 9 |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Other | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Don't know/no opinion | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |

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Usage of prefab elements - cross country comparison



When looking at **prefabricated modular buildings or volumetric elements**, what parts of the building are done in prefab?

| | Total | GE | UK | FR | π | SP | NL | BE | PL |
|-----------------------|---------|-------|--------|-------|--------|--------|--------|--------|-------|
| | N = 104 | N = 6 | N = 16 | N = 8 | N = 20 | N = 12 | N = 21 | N = 12 | N = 9 |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| XXX | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| Don't know/no opinion | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% | 20% |

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