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# About European Architectural Barometer

#### THE GOAL

The objective of the European Architectural Barometer of USP Marketing Consultancy is to offer profound insight into the current economic situation and trends among architectural firms in the Netherlands, Germany, the UK, France, Spain, Italy, Belgium and Poland. The European Architectural Barometer provides knowledge about the future building volumes and the way in which these building volumes will be realised (trends).

#### THE RESEARCH TOPICS

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

#### Quarterly theme topics in 2024:

Q1: Trends in Material Usage

**Q2: Future in Construction** 

Q3: Decision Making Process

Q4: Smart Materials and Buildings

#### COUNTRY SCOPE

(number of interviews conducted)

Background characteristics of the interviewed respondents can be found in the country-specific profiling, the architect chapter, and in the appendix as a European overview.





#### **PROJECT TEAM**

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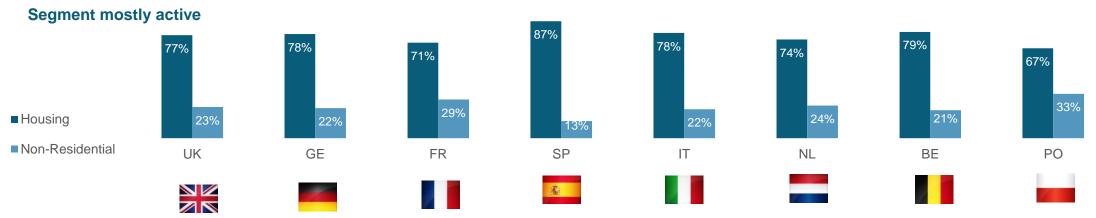
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### Background of the architects

The table below shows the average number of employees of the architectural firms within the current quarter of this research, divided by country. The architectural firms with one employee were excluded from this research. The second table shows the segments in which architects within this research are mostly active.





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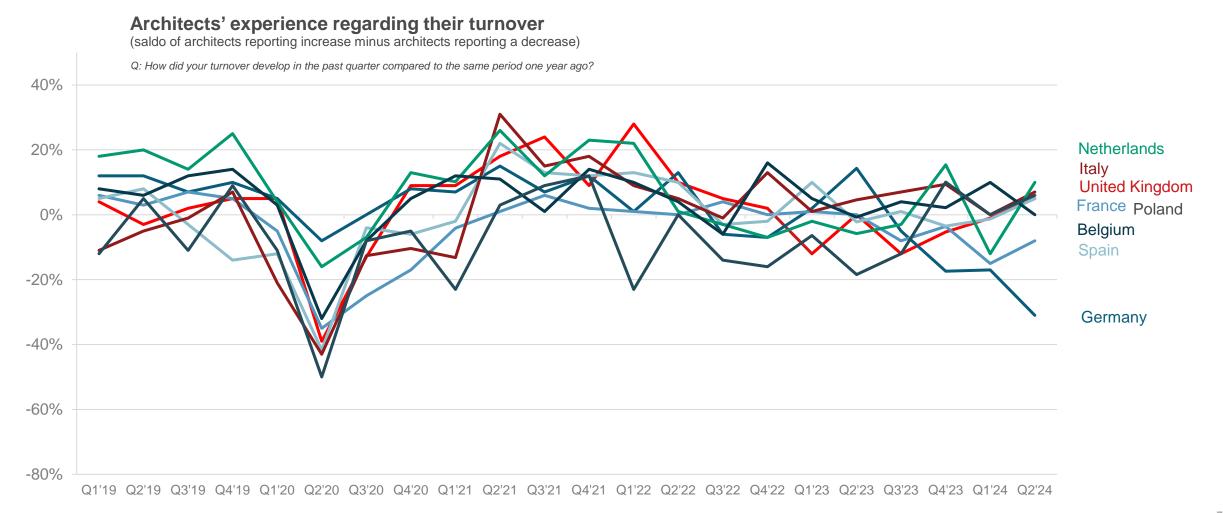


An increasing number of Italian and French architects are expecting empty order books in the next twelve months.





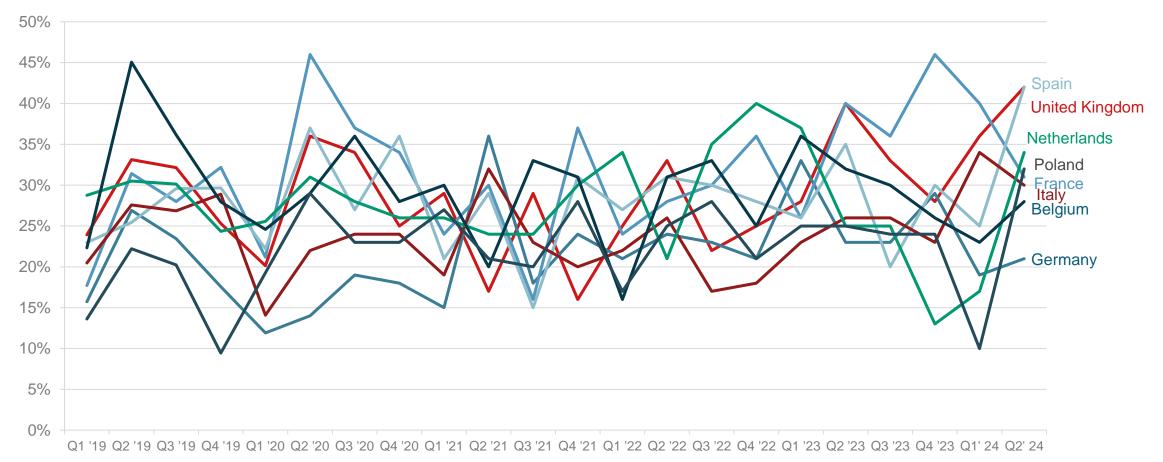
# In all countries but Spain and Germany more architects report an increasing turnover than architects that report a decreasing turnover.



In six out of eight countries there is a spike in number of architects reporting cancelled projects in Q2 2024.

#### % of architects experiencing cancelled projects

Q: How many projects have been cancelled in the past quarter?





# Construction volumes 2024 European overview

• 2024 is expected to be

• This is mostly due to





# Construction volumes 2025 European overview

• 2025 is expected to be

• The long-term indicators





### Economic developments

United Kingdom

Future of Construction

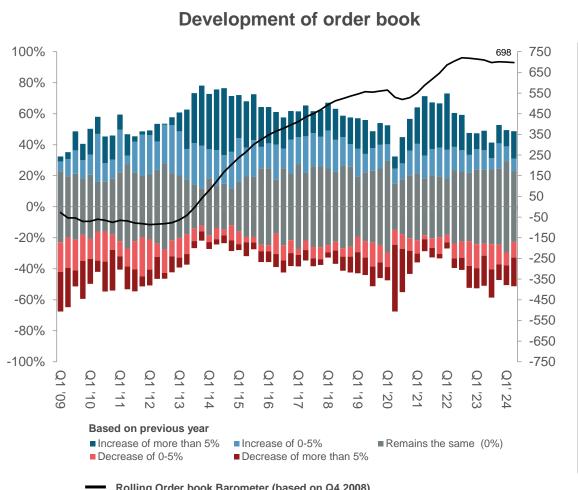
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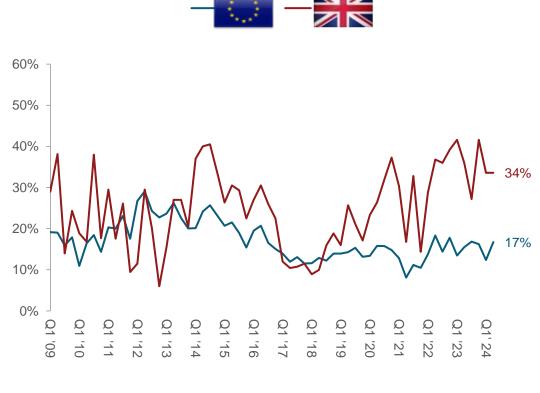




An increasing share of British architects reported a decreasing order book in the last quarter.



# **Expecting empty order book in 12 months**



Since COVID-19, British institutions stopped publishing many indicators. A large share of architects experience postponed and cancelled projects, which hints towards difficult times in the construction industry.

Economic and construction related indicators	Value Q2 2023	Value Q1 2024	Value Q2 2024	Q-2-Q development
GDP (quarterly growth rate) (%)*	0.2	0.6	0.7	Neutral
Consumer confidence indicator**	n/a	n/a	n/a	
Industrial confidence indicator**	n/a	n/a	n/a	
Construction confidence indicator**	n/a	n/a	n/a	
Production value buildings (index 2015=100)**	n/a	n/a	n/a	
Architects with postponed projects (%)***	54	47	62	Negative
Architects with cancelled projects (%)***	40	36	41	Negative
Building permits residential (index 2015=100)**	n/a	n/a	n/a	
Building permits non-residential (index 2015=100)**	n/a	n/a	n/a	

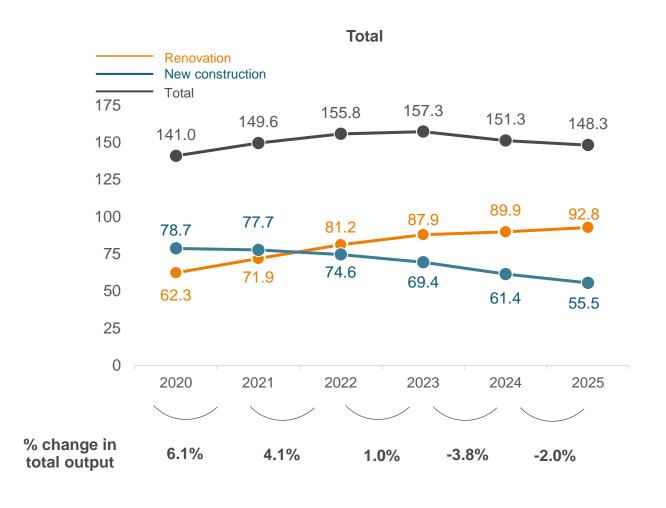
Source: \* Country statistical office; \*\* Eurostat, \*\*\* Arch-Vision

<sup>\*</sup>Since the end of 2020 UK data has not been published anymore. The data previously provided to Eurostat was an amalgamation of several administrative data sources used as a proxy. The series was discontinued in 2020 when most of the data sources used to produce the estimate were discontinued due to the COVID-19 pandemic and resources were diverted elsewhere.



# Forecast of building volumes in billion euros

(% change year over year)





Data of the economic developments are available per country

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# Summary - The Future of Construction

In this chapter we will deepdive into...

We have focused on four key topics...

# Conclusion...

Q: Which trends do you believe will change the construction industry in the coming 10 years the most?

	Total	UK	DE	FR	SP	IT	NL	BE	PL
Sustainable material usage	20%	x	X	X	X	X	X	X	X
Resource-efficient materials	20%	X	X	Χ	Χ	Χ	Χ	Χ	Χ
Green buildings	20%	X	X	Χ	X	Χ	Χ	Χ	Χ
Off-site construction	20%	X	Χ	Χ	Х	Χ	Χ	Χ	Χ
Stricter regulations for construction	20%	X	Χ	Χ	Х	Χ	Χ	Χ	Χ
Artificial intelligence	20%	X	X	Χ	Х	Х	Χ	Χ	Χ
Energy efficiency	20%	X	Χ	Χ	Х	Χ	Χ	Χ	Χ
New circular approaches to re-use, remanufacture, upcycle and recycle building components	20%	Χ	Χ	Χ	Χ	X	X	Х	Χ
Other*	20%	X	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Don't know	20%	X	Х	X	Χ	Χ	Χ	Х	Х

# Conclusion...

Q: To what extent are the following trends already considered in your current projects?

	Very strongly	Strongly	Neutral S	Slightly Not at	all Don't know	UK	DE	FR	SP	IT	NL	BE	PL
Stricter regulations	20%	20%	20%	20%	20%	Х	X	X	X	X	X	X	X
Green buildings	20%	20%	20%	20%	20%	X	Χ	Χ	X	Χ	Χ	Χ	Χ
Lowering on-site garbage production	20%	20%	20%	20%	20%	Х	Χ	Х	Х	Χ	Χ	Χ	Χ
Off-site construction	20%	20%	20%	20%	20%	Х	Χ	Х	Χ	Χ	Х	Χ	Χ
Bio-based materials	20%	20%	20%	20%	20%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Internet of Things	20%	20%	20%	20%	20%	Х	Χ	Х	Χ	Χ	Χ	Χ	Χ
Augmented reality	20%	20%	20%	20%	20%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Drone technology	20%	20%	20%	20%	20%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Artificial intelligence	20%	20%	20%	20%	20%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Nano-technology materials	20%	20%	20%	20%	20%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Robotization	20%	20%	20%	20%	20%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Blockchain	20%	20%	20%	20%	20%	Х	Χ	Х	Х	Х	Х	Х	X 19

# Conclusion...

Q: How long will it take for the following trends to be implemented in projects in the construction industry?

						,	% = alrea	ady happer	ning + happ	ening the r	ext three y	ears		
	Already happening	In the next three years	In the next ten years	More than ten years	Will never happen	Don't know	UK	DE	FR	SP	IT	NL	BE	PL
Green buildings	20%	20%	20%	20%	20	0%	X	X	X	X	X	X	X	X
Off-site construction	20%	20%	20%	20%	20	0%	Χ	Χ	Χ	Χ	Χ	Χ	X	Χ
Lowering on-site garbage production	20%	20%	20%	20%	20	0%	Х	Χ	Χ	Χ	Х	Х	X	Χ
Bio-based materials	20%	20%	20%	20%	20	0%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
XDrone technology	20%	20%	20%	20%	20	0%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Augmented reality	20%	20%	20%	20%	20	0%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Internet of Things	20%	20%	20%	20%	20	0%	Х	Χ	Χ	Χ	Χ	Χ	X	Χ
Artificial intelligence	20%	20%	20%	20%	20	0%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Robotization	20%	20%	20%	20%	20	0%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Nano-technology	20%	20%	20%	20%	20	0%	Х	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Blockchain	20%	20%	20%	20%	20	0%	Х	Χ	Χ	Χ	Χ	Χ	Χ	X



# Artificial intelligence, Blockchain, Augmented reality and Internet of things

About Artificial intelligence, Blockchain, Augmented reality and Internet of things technology

These technologies have the potential....

### Conclusion...

Q: How do you see artificial intelligence, blockchain, augmented reality and internet of things can contribute in construction projects?

	Total	UK	DE	FR	SP	IT	NL	BE	PL
Access documents throughout the project	20%	X	X	X	X	X	X	X	X
Improve efficiency in design and production process	20%	X	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Project planning and budgeting	20%	X	Χ	Χ	Х	Χ	Χ	Χ	Χ
Showcase building designs	20%	Χ	Χ	Χ	X	Χ	X	Χ	X
Rendering and project visualization	20%	Χ	X	Χ	X	Χ	X	Χ	X
Analyse building performance	20%	Χ	Х	Х	Х	Х	Χ	Х	Χ
Efficient stakeholder management	20%	Χ	X	Х	Х	Х	Χ	Х	Χ
Quality control	20%	Χ	X	Х	Х	Х	Χ	Х	Χ
Other*	20%	Χ	X	Χ	Х	Χ	Χ	Χ	Χ
Don't know	20%	X	Χ	Χ	Χ	Χ	Χ	Χ	Χ

<sup>\*</sup>Many different answers have been provided on this question, a full overview can be requested

### Conclusion...

Q: How applicable for your own projects do you find the following specific examples of AI, blockchain, augmented reality and internet of things?

						% = very	applicable	+ applicabl	е				
	Very applicable	Applicable N	leutral Not applic		all Don't know	UK	DE	FR	SP	IT	NL	BE	PL
Showcase building design to clients and investors by using augmented reality		20%	20%	20%	20%	X	X	X	X	X	X	X	X
Augmented solutions that help overlay the asbuilt situation with the BIM model	20%	20%	20%	20%	20%	X	Х	Х	Χ	Х	Χ	Χ	X
Al powered generative design to identify and mitigate clashes between different BIM models in a design	20%	20%	20%	20%	20%	Х	Χ	Χ	Χ	Χ	Χ	Χ	X
Using blockchain solutions to have documents available for everyone, eliminating document duplication in projects		20%	20%	20%	20%	Х	Χ	Х	Χ	Χ	Χ	Х	Χ
Al algorithms to calculate sustainability data	20%	20%	20%	20%	20%	Х	Χ	Χ	Χ	Х	Χ	Χ	X
Al models to predict the course of project plannings and budgets in projects	20%	20%	20%	20%	20%	Х	Χ	Χ	Χ	Χ	Χ	Χ	X
Al algorithms to monitor developing problems and determine when preventive maintenance is needed in the operation of buildings	20%	20%	20%	20%	20%	Х	Χ	Χ	X	Χ	Х	Х	Х

# Nanotechnology

### **About Nanotechnology**

Nanotechnology is the manipulation and use of materials at an extremely small scale, typically involving particles....

# Conclusion...

Q: How do you see nanotechnology can contribute in construction projects?

	Total	UK	DE	FR	SP	IT	NL	BE	PL
Use high-performance materials	20%	X	X	X	X	X	X	X	X
Lightweight and space-saving solutions	20%	X	Х	Χ	X	X	X	Х	Χ
Improved material durability through coatings	20%	Χ	Х	Χ	Χ	Χ	Χ	Χ	Χ
Better performance of solar cells and photovoltaics	20%	X	Χ	Χ	Χ	Χ	Χ	Χ	X
Use self-cleaning materials	20%	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ
Increase usage of 3D printing	20%	Χ	Χ	X	Х	X	Χ	Х	Х
Use self-healing materials	20%	Χ	Х	Χ	Х	Χ	Χ	Х	Χ
Improved carbon footprint of buildings and projects	20%	X	Χ	Χ	Χ	Χ	Χ	Χ	Х
Other	20%	Χ	Х	Χ	Χ	Χ	Χ	Χ	Χ
Don't know	20%	Х	Χ	X	Χ	X	X	Χ	Χ

### Conclusion...

Q: How applicable for your own projects do you find these specific examples of nanotechnolgy?

	Very applicable	Applicable	Neutral	Not very applicable	Not at all	Don't know	UK	DE	FR	SP	IT	NL	BE	PL
Using high-performance materials such as insulation or thermal glass	20%	20%	20%	20%	20	)%	X	X	X	X	X	X	X	X
Using self-cleaning materials	20%	20%	20%	20%	20	)%	X	Χ	Χ	Χ	Χ	Χ	Χ	X
Using energy-responsive smart windows*	20%	20%	20%	20%	20	)%	Χ	Χ	Χ	Χ	Χ	Х	Χ	Χ
Using self-healing materials	20%	20%	20%	20%	20	)%	X	Х	Χ	X	Χ	X	Χ	Χ

% = very applicable + applicable

 $<sup>\</sup>hbox{``windows changing optical properties in response to outside stimuli~e.g.~light, heat etc..}$ 

# Robotics and 3D printing

**About Robotics and 3D printing technology** 

Robotics and 3D printing are two innovative technologies...

### Conclusion...

Q: How do you see robotics and 3D printing can contribute in construction projects?

	Total	UK	DE	FR	SP	IT	NL	BE	PL
Faster speed of construction	20%	X	X	X	X	X	X	X	X
Increased accuracy	20%	Χ	Х	Χ	Х	Х	Х	Х	Χ
Design flexibility	20%	Χ	Х	Χ	X	Х	Χ	Х	Χ
Industrialise construction process	20%	Χ	Х	Χ	X	Х	Χ	Х	Χ
Increase productivity in construction process	20%	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Х
Cost decrease of materials and projects	20%	Χ	Х	Χ	Χ	Х	Χ	Х	Χ
Better presentation/explanation to clients	20%	Χ	Χ	Χ	Χ	X	Χ	Χ	Χ
Industrialise production process	20%	X	X	X	Χ	X	X	X	Х
Other*	20%	X	X	X	Х	Χ	X	Χ	Χ
Don't know	20%	X	Χ	X	Χ	Χ	Χ	Χ	Χ

<sup>\*</sup>Many different answers have been provided on this question, a full overview can be requested

# Conclusion...

Q: How applicable for your own projects do you find these specific examples of robotics and 3D printing?

							% = very	y applicable	+ applicabl	е				
	Very applicable	Applicable	Neutral	Not very applicable	Not at all	Don't know	UK	DE	FR	SP	IT	NL	BE	PL
Using 3D printing techniques for complex and customised shapes	20%	20%	20%	20%	20	)%	X	X	X	X	X	X	X	X
Deployment of robotics for increasing accuracy and precision in construction processes	20%	20%	20%	20%	20	)%	Χ	Χ	Χ	Χ	Χ	Χ	Χ	X
Exoskeletons used for health gains of construction workers at the construction site	20%	20%	20%	20%	20	)%	Χ	Χ	Χ	Χ	Χ	Χ	Χ	X
Deployment of robotics for efficiency gains during the construction process	20%	20%	20%	20%	20	)%	Χ	Χ	Χ	Χ	Χ	Χ	Χ	X
Using robotics for increasing the reliability of construction works	20%	20%	20%	20%	20	0%	Χ	X	X	X	Х	X	X	Χ

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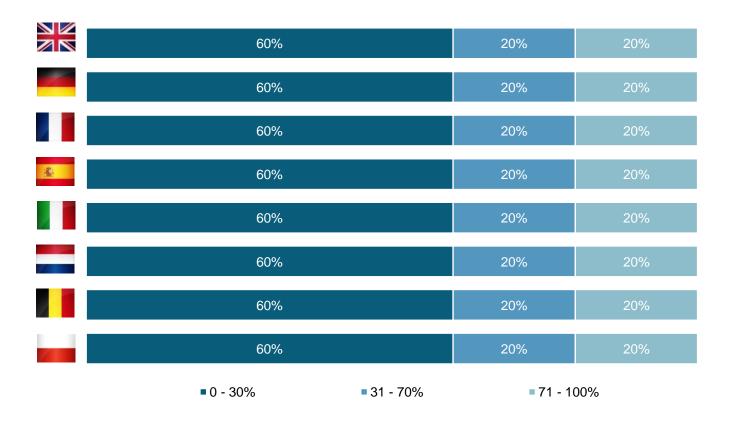




# Background of the architects

Conclusion...

#### New development or renovation



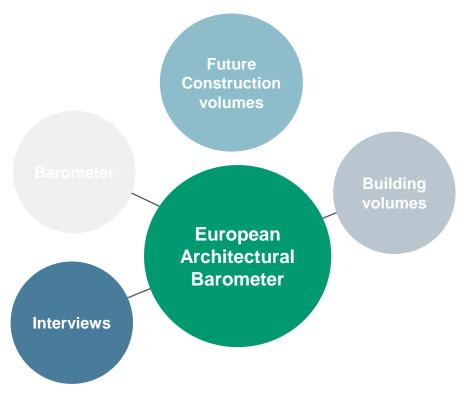
# About European Architectural Barometer

#### **European Architectural Barometer**

Architects have already been monitored by several institutes in quite diverging ways in the different countries. USP launched this European Architectural Barometer for a more cohesive view. The European Architectural Barometer is extremely useful for organisations with a focus on Europe that also want to compare the activities of architects in different countries.

#### **Interviews**

All interviews are conducted by native speakers. From the third measurement onwards, two hundred interviews per country have been completed per measurement. The first two measurements were based on one hundred interviews per country. Later, for the Netherlands and Belgium, the measurements returned to one hundred interviews.



#### **Future construction volumes**

For decision makers charged with considerations of company resources, staffing and marketing strategy, a clear insight into future construction volumes is essential. However, economic indicators seldom provide an adequate picture of these volumes.

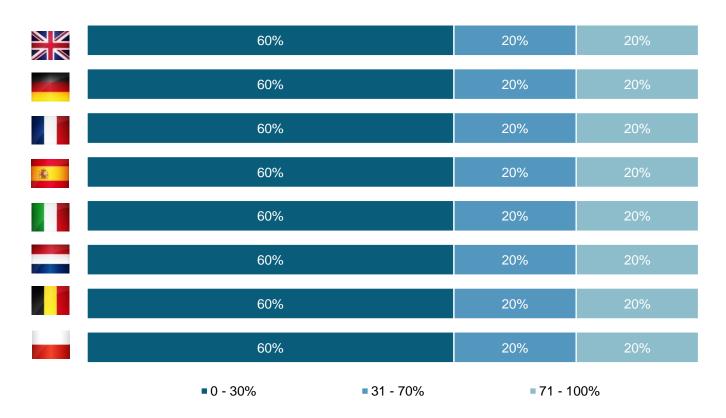
#### **Building volumes**

The construction industry operates in a delayed cyclical market, which means that buildings designed today will not be ready until at least two years from now. The economic activities of architectural firms provide a strong indication of the direction in which the construction sector will develop in terms of both building volumes and the way in which building volumes will be realised.

# Results per segment

For three key questions from the current measurement of the European Architectural Barometer, the results are divided by architects that realise most of their sales in the residential segment (0% – 30% non-residential), by architects that realise sales in both segments (31% - 70% non-residential), and by architects that realise most of their sales in the non-residential segment (71% - 100% non-residential).

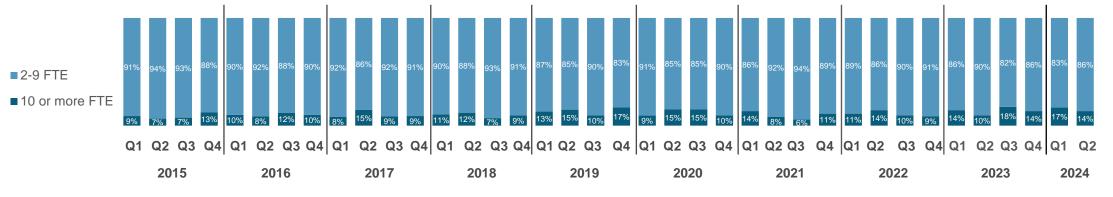
#### Segment most active

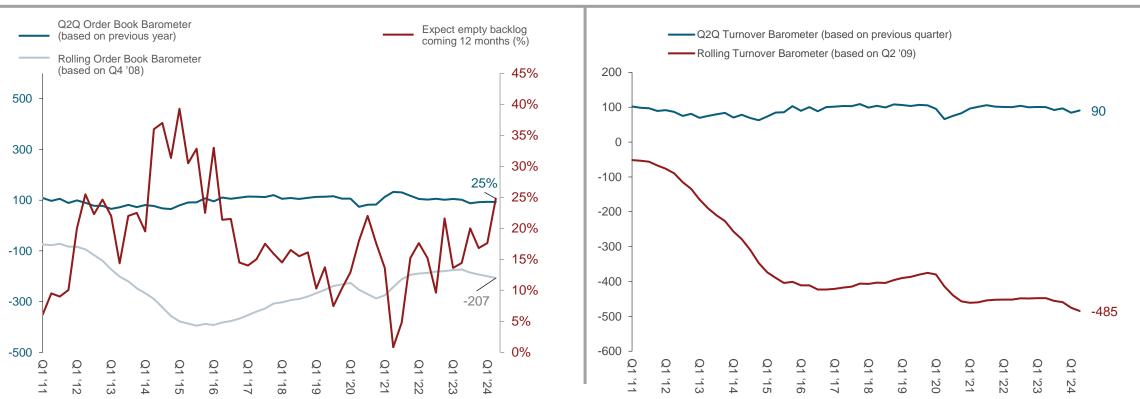


The tables on the following pages show the abovementioned split with regard to the following questions:

- How did the turnover develop in this quarter compared to the previous quarter?
- How did your order book develop in this quarter compared to the same quarter last year?
- Do you expect that your order book might be empty these coming 12 months?

# Short-term outlook among French architects







Data of the short-term outlook is available per country

# Development turnover and order book

Development turnover (based on previous quarter)	)				1																			
% sales in non-residential	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100
Strongly increased (>5%)	Х	Х	Х	Х	Х	Х	Х	X	Х	Х	X	X	Х	Х	Х	Х	Х	Х	Х	Х	X	X	X	X
Slightly increased (0-5%)	х	Х	X	Х	Х	х	X	X	Х	Х	Х	X	х	х	Х	х	Х	X	Х	Х	X	x	X	X
Stayed the same (0%)	Х	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	Χ	X	X	Χ	X	X	X	X
Slightly decreased (0-5%)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Strongly decreased (>5%)	Х	X	x	Х	X	x	X	x	х	X	х	X	Х	x	X	х	x	X	Х	X	x	Х	x	X
Barometer turnover	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х

#### **Development order book**

(based on previous year)					1						<b>18</b>													İ
% sales in non-residential	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100
Strongly increased (>5%)	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	X
Slightly increased (0-5%)	X	X	X	Х	X	X	X	X	X	X	X	X	x	X	X	х	X	X	х	X	X	Х	X	X
Stayed the same (0%)	X	X	Χ	Х	X	Χ	Х	Χ	X	X	X	X	X	X	Χ	Х	X	Χ	Х	X	Χ	Х	Χ	X
Slightly decreased (0-5%)	X	X	X	X	X	X	X	Х	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Strongly decreased (>5%)	х	х	х	х	x	х	х	х	x	х	х	х	х	Х	х	х	x	х	х	x	х	x	х	Х
Barometer order book	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х



## Expectation empty order book in the next 12 months

#### Expectation empty order book in the next 12 months

					1/6			1						1										
% sales in non-residential	0 - 30	31 – 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100	0 - 30	31 - 70	71 - 100
Yes	X	X	Χ	X	Χ	X	X	Χ	Х	X	X	X	Х	Χ	X	X	X	X	X	Χ	X	X	Χ	X
No	X	X	X	X	X	X	X	Χ	X	X	X	X	X	Χ	X	X	Χ	X	X	Χ	X	X	X	Χ
Do not know	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х

## Sample and methodology of the research

Most architectural firms have less than two FTE. Nevertheless, the focus of the European Architectural Barometer is on the larger firms. Therefore, the research is only conducted among architectural firms with two FTE and more. As the study is focused on architects active in construction, architects that are solely active in interior or landscaping are excluded from the research.

The table below shows the number of successful interviews in each country. The difference between the gross sample of respondents that were reached (all reached numbers) and the net sample of respondents that were reached, was caused by those architects who could not be contacted or had an incorrect phone number, and those who did not meet the selection criteria (mostly due to the fact that the architectural firms had less than two FTE). The difference between the net sample of respondents reached and the response are the number of architects who refused to participate.

Response		of her						
Gross sample (all attempts to approach respondents)	1595	1246	2057	3151	1577	1176	1892	3240
Net sample (all approached respondents)	415	333	509	687	318	580	578	844
Completed interviews	125	125	125	125	125	100	101	100
Response percentage (interviews/ net sample)	30%	38%	25%	18%	39%	17%	17%	12%

## Methodology calculation of the Q2Q Saldo and Barometer

## The European Architectural Barometer for the order book development and turnover development is calculated in the following way:

- 1. Respondents with a strong increase (>5%) are multiplied by 100
- 2. Respondents with a slight increase are multiplied by 50
- 3. Respondents that remained the same are multiplied by 0
- 4. Respondents with a slight decrease are multiplied by -50
- 5. Respondents with a strong decrease (>5%) are multiplied by -100
- 6. The sum of these values divided by 100, results in the Q2Q saldo.
- 7. Adding 100 to this saldo results in the Barometer figures, where 0 is the strongest possible decrease, 100 is stabilisation and 200 is the strongest possible increase.

The Barometer values calculated this way are presented in the report as Quarter to Quarter Turnover and Order book Barometer.

## **Example of calculation Q2Q Barometer value:**

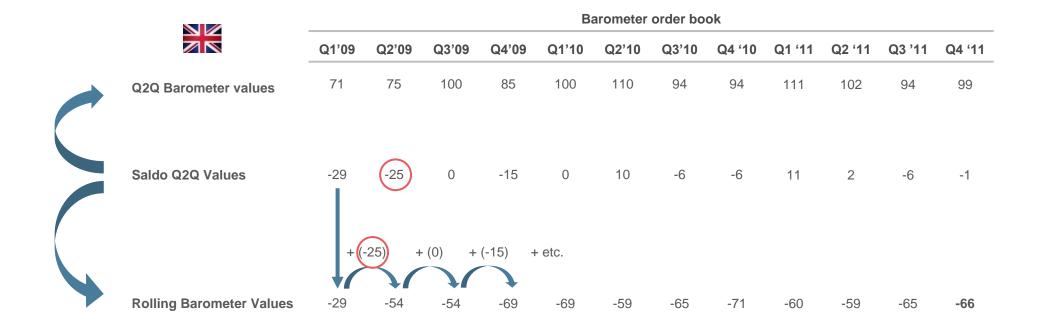
Development	00.445		Calculated		
Turnover Spain	Q2 '15		Values		
Increased by more than 5%	25%	x 100	2500		
Slightly increased (0-5%)	28%	x 50	1400		
Stayed the same (0%)	36%	x 0	0		
Slightly decreased (0-5%)	3%	x -50	-150		
Decreased by more than 5%	8%	x -100	-800		
	_		•		

Q2Q Saldo = 
$$(2500 + 1400 - 150 - 800) / 100 = 30$$

## Methodology calculation of the Q2Q Saldo and Barometer

To calculate the developments in the turnover and the order book with regard to the first measurement in 2009, USP has developed the so-called Rolling Barometer. The Rolling Barometer is calculated as the cumulative sum of the Q2Q saldos of every quarter. The Rolling Barometer can drop or rise by 100 points per quarter at maximum.

Example: The Rolling Order Book Barometer is -66 after twelve quarters. In the worst case (all architects reporting a decrease of over 5% every quarter) the Rolling Barometer would be -1200. In the best case it would be 1200. Therefore, a score of -66 in Q4 2011 means a slightly worse situation than in Q4 2008.



## Future building volumes: building a model for prediction

Building volumes

Architects are at the front of the construction sector. They are the first to perceive positive and negative changes. The current developments of architectural firms have a strong predictive impact on the total market. USP publishes its predictions for the building volumes based on the developments experienced by architects.

The model

USP uses a model based on eleven market indicators and USPs own results. The model combines information about the economy, like construction requests and confidence figures, with data about the developments within architects' experience, such as changes in the turnover and the number of active architects. Only information that proved to have a strong correlative value on the building volume is used. Subsequently, every kind of data is weighed based on the predictive value.

High predictive value

To ensure the correctness of the predictive value, the model has been – with retroactive effects – compared to the actual growth and shrinkage of the construction volume since 2003 for the Dutch\* market and since Q3 2009 for the remaining countries. The model turns out to possess a very high predictive value. Nevertheless, the forecast has to be interpreted with caution, as it remains a calculation. As with all predictions, the margin of error can be larger, comparable to the weather forecast: sometimes the USP model can be inaccurate.

Calculation predictive value

The predictive value is calculated based on the consistency of the market indicators with construction volumes, for the renovation, maintenance and the new build markets. The correlation is determined by a regression analysis, i.e. a statistical technique for analysing data in which there is a (possible) specific connection, known as regression.

<sup>\*</sup> Since 2003, the developments of architects in the Netherlands have been monitored by USP's sister organisation BouwKennis. Therefore, it is possible for the Netherlands to calculate the connection between the architects and the building volume based on 10 years of data.

## Future building volumes: Calculation

The Dutch market has been taken as a basis. The correlation between market volume regarding new build, maintenance and renovation on the one hand, and possible explanatory factors on the other hand, serves as a starting point.

The correlation with building volumes is tested for a total of eleven market indicators together with two outcomes of the European Architectural Barometer. The correlation of the following four indicators appeared to be strongest:

- Building permits m² of useful floor area in non-residential buildings
- Building permits, number of dwellings
- Development of Turnover Barometer (European Architectural Barometer figures)
- Number of FTE working at architectural companies (European Architectural Barometer figures)

The predicting value of these indicators is between 54% and 91%. Because a longer history of data was not available for most countries, the development of these four indicators in the last four quarters and the four quarters before served as a guidance for this measurement. The used range of five indicators is not static and can be adjusted for future calculations. With the database becoming more complete, more reliable correlations can adjust the mix of indicators. A longer range of regression measurements shall replace the comparison of the last four quarters with the four quarters before.

The forecast is based on the market knowledge of USP Marketing Consultancy together with the market figures available, such as building permits and the developments among architects who are mainly active in renovation or new build as well as mainly active in residential or non-residential. Due to the limited number of quarters, a forecast based on a statistical model is not possible for now. The model that was used has a lower prediction value for this period. However, USP Marketing Consultancy aims at clarifying the general direction of the construction market development by publishing these data and the predictions will be updated in the coming reports.

## Questionnaire - Standard

## These questions are asked every measurement

- 1. How many employees (in FTE) does your company currently have, including yourself? [if less than 2 FTE, end of research]
- 2. As an architectural firm, are you mostly active in the segment housing, non-residential building, interior, or landscaping? [If interior or landscaping, end of research]
- 3. What is your position?
- 4. How many employees in FTE did your company have at the end of 2023?
- 5. How many employees in FTE did your company have at the end of 2022?
- 6. How many employees in FTE did your company have at the end of 2021?
- 7. If your turnover should relate to housing and non-housing, what percentage of your revenue do you get from housing-related jobs?
- 8. Are you mostly active in new build or renovation?
- 9. How did the turnover develop this quarter compared to the previous quarter? Decreased by more than 5%; slightly decreased (0-5%); stayed the same (0%); slightly increased (0-5%); strongly increased (more than 5%)
- 10. What are your expectations for the development of your turnover in the fourth quarter of 2022 in comparison to the turnover in the fourth quarter of 2021? Decreased by more than 5%; slightly decreased (0-5%); stayed the same (0%); slightly increased (0-5%); strongly increased (more than 5%)
- 11. How did your order book develop in this quarter compared to the same quarter previous year? Decreased by more than 5%; slightly decreased (0-5%); stayed the same (0%); slightly increased (0-5%); strongly increased (more than 5%)
- 12. How many new projects has your company scored/been commissioned in the past two months?
- 13. How many projects have been postponed in this quarter?
- 14. How many projects were not started and cancelled in this quarter?
- 15. Do you expect that your order book might be empty these coming 12 months?

## Questionnaire – Theme questions

#### Future of construction.

- 1. Which trends do you believe will change the construction industry in the coming 10 years the most?
- 2. Do you plan to perform sustainability calculations with BIM?
- 3. What kind of sustainability calculations will you perform in your BIM design?
- 4. How do you see artificial intelligence, blockchain, augmented reality, and the Internet of Things can contribute to construction projects?
- 5. How applicable for your own projects do you find the following specific examples of AI, blockchain, augmented reality, and internet of things?
- 6. How do you see nanotechnology can contribute in construction projects?
- 7. How applicable for your own projects do you find these specific examples of nanotechnology?
- 8. How do you see robotics and 3D printing can contribute in construction projects?
- 9. How applicable for your own projects do you find these specific examples of robotics and 3D printing?
- 10. How likely would you consider robotics and 3D printing already in the tendering process?

## What we do



### **Dedicated market research**

- Tailor made
- Driven by your information needs
- Advice & consultancy based on facts and over 25 years of experience in the industry
- Worldwide coverage
- B2B, B2C, qualitative and quantitive research or a combination of both
- Within our market specialism, all types of researches can be conducted
- Targeting the right audience, with the right questions at the right time.

## USP

# Our multi-client research monitors

	European <b>Architectural</b> Barometer	European Contractor Monitor	European Mechanical Installation Monitor	European Electrical Installation Monitor	European Painter Insight Monitor	European  Home Improvement  Monitor
Target group	Architects	Building contractors	HVAC installers	Electrical installers	Professional painters	Consumers
Methodology	Q	<b>Q</b>	Q	Q	Q	
Annual sample size	3,400 interviews	2,050 interviews	2,600 interviews	3,000 interviews	2,300 interviews	26,400 interviews
Country scope	<ul> <li>Germany</li> <li>United Kingdom</li> <li>France</li> <li>Netherlands</li> <li>Belgium</li> <li>Poland</li> <li>Spain</li> <li>Italy</li> </ul>	<ul> <li>Germany</li> <li>United Kingdom</li> <li>France</li> <li>Netherlands</li> <li>Belgium</li> <li>Poland</li> <li>Spain</li> <li>Italy</li> </ul>	<ul><li>Germany</li><li>United Kingdom</li><li>France</li><li>Netherlands</li><li>Belgium</li><li>Poland</li></ul>	<ul><li>Germany</li><li>United Kingdom</li><li>France</li><li>Netherlands</li><li>Belgium</li><li>Poland</li><li>Spain</li></ul>	<ul> <li>Germany</li> <li>United Kingdom</li> <li>France</li> <li>Netherlands</li> <li>Belgium</li> <li>Poland</li> <li>Spain</li> <li>Italy</li> <li>Denmark</li> <li>Sweden</li> </ul>	<ul> <li>Germany</li> <li>United Kingdom</li> <li>France</li> <li>Netherlands</li> <li>Belgium</li> <li>Poland</li> <li>Spain</li> <li>Italy</li> <li>Denmark</li> <li>Sweden</li> <li>Austria</li> </ul>
Way of reporting	Quarterly	Bi-annually	Quarterly	Quarterly	Annually	Quarterly
2022 Theme topics	<ul> <li>Q1: Sustainability</li> <li>Q2: Trends in material usage</li> <li>Q3: Decision making</li> <li>Q4: Brand health scan</li> </ul>	<ul> <li>H1: Prefabrication</li> <li>H2: Digitalisation and BIM</li> </ul>	<ul> <li>Q1: Digitalisation and BIM</li> <li>Q2: Prefabrication</li> <li>Q3: Smart buildings and products</li> <li>Q4: Media orientation</li> </ul>	<ul> <li>Q1: Sustainability</li> <li>Q2: Smart buildings and products</li> <li>Q3: Services in the installation market</li> <li>Q4: Brand health scan</li> </ul>	<ul><li>Trend tracking</li><li>Sustainability</li><li>Labour shortage</li><li>Online buying</li><li>Media orientation</li></ul>	<ul> <li>Q1: Orientation; rise of digital natives</li> <li>Q2: Purchase</li> <li>Channels; online leaders</li> <li>Q3: Brand health check</li> <li>Q4: DIY vs DIFM; outsourcing jobs</li> </ul>



# We are active globally



# Principals of USP

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## Construction











DIY







ASSA ABLOY













ABB

















































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# Marketing Consultancy

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