



CONSTRUCTION MARKET INSIGHTS – EUROPE

Skilled labour shortage impacting construction growth opportunities

MARCH 2024

Belgium • Denmark • Finland • France • Germany • Ireland • Israel • Italy • Netherlands⁺ • Sweden • ⁺UK

Executive summary



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After a turbulent few years, economic growth in Europe is once again picking up, albeit cautiously, as inflation eases and interest rates level.

The construction industry which was hit hard by the steep hikes in interest rates over 2023, is expected to rebound in the second half of 2024, benefitting from strong investment in key sectors such as data centres, life sciences and high-tech manufacturing. As part of the net-zero agenda, governments across the region are seeking to decarbonise energy networks, transport infrastructure and buildings, while building up domestic green industries, such as EV gigafactories to support e-mobility.

Increased demand in high tech sectors is exacerbating an existing shortage of specialist skilled construction workers, which will continue to affect project costs and timelines. A number of mitigation schemes are being implemented by governments to assist in worker mobility, including upskilling initiatives to address some of these acute shortages. However, it may take some time to reap the benefits, and see improvements as a result of these initiatives.

Demand will also be driven by a flight to quality in the commercial market, as it rebalances in response to the rise of hybrid working. There is likely to be significant investment in renovation and retrofitting projects, to meet tenant expectations and tightening of energy efficiency targets. We are also witnessing an increase in conversions of redundant space into laboratories and manufacturing facilities for the life sciences sector.

The data centre sector remains strong, however challenges remain, as governments support development by upgrading power networks, but impose stricter limits on energy consumption. Investment is picking up in life sciences too, with several countries experiencing double-digit growth in R&D spending.

Major region-wide investment up to 2030 is intended to significantly expand domestic semiconductor production to localise supply. Countries are also seeking to entice developers of EV gigafactories with favourable subsidies and operating conditions. In this, they will face stiff competition from the US and Asia, all on a similar mission to lead in the evolution of the 21st century green industries.

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GDP Growth

2024 will see a moderate uplift for the European economy with an increase in disposable income, and resilient consumer spending amid slowing inflation.

In 2023, the European economy sustained growth, albeit at a somewhat subdued pace. Forecasts indicate a mild rebound in the coming year, supported by factors such as easing inflation, tangible growth in wages within the labour market, and continuing low unemployment rates.

Domestic demand is expected to benefit from substantial EU-funded investments. The outlook for 2024 is for a gradual recovery, although geopolitical uncertainties resulting from the ongoing Russia-Ukraine and Israel-Hamas conflict are likely to result in ongoing economic volatility.

Belgium, France, Germany and Italy

Europe's largest economy Germany is expected to grow by only 0.5% in 2024 following a contraction in 2023 due to high energy prices, a skilled worker shortage and weak domestic demand. Belgium and France anticipate stable economic growth driven by increased domestic consumption, while Italy will see marginal growth, fuelled by RRF-funded investment.

Denmark, Finland and Sweden

In the Nordics, Denmark's economy is experiencing weak domestic demand and is undergoing a cooling phase. A recent update by the European Commission estimates only 0.5% growth for Denmark's GDP in 2023. Sweden and Finland experienced economic contraction, due to weak private consumption and declining construction activity in 2023 but are anticipated to experience a moderate pickup in growth in 2024.

Ireland

Following a strong performance in recent years, economic growth is expected to normalise. The IMF's October 2023 update projected a 2% GDP growth for 2023, but recent European Commission estimates anticipate a contraction, partly due to a decline in the pharmaceutical sector, post the pandemic boom. However, recovery is expected in the coming years, with continued growth in private consumption supported by a tight labour market, slowing inflation, and rising real incomes.

UK

The UK economic GDP growth remains close to zero since 2022 and is forecast to gradually improve in the second half of 2024, with policies such as increased public investments, potential interest rate cuts and tax reductions.

Israel

Israel is likely to experience a temporary slowdown due to the Israel-Hamas conflict, but growth is expected in 2025.

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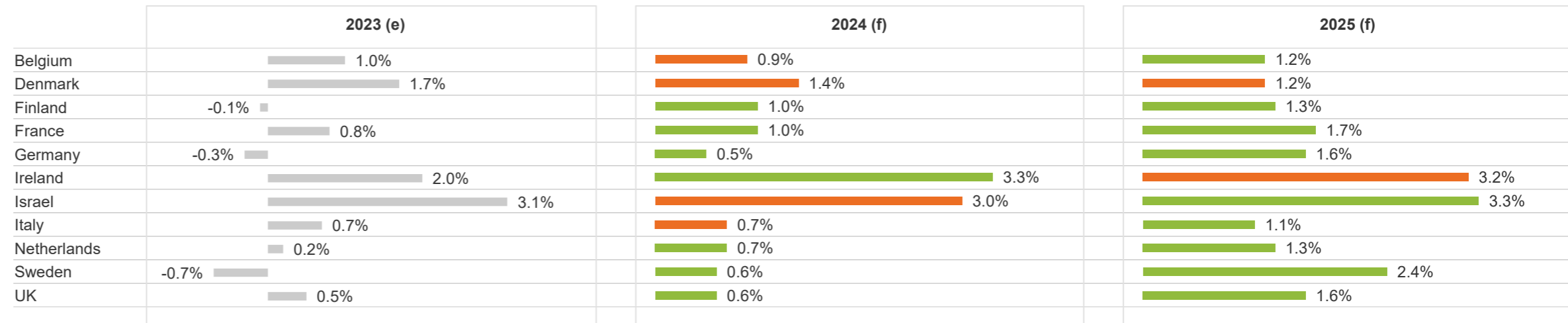
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Real GDP annual growth (%)



Source: IMF (Oct 2023 & Jan 2024 Update)

(e) estimated

(f) forecasted

More than previous year Less than previous year

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Inflation

Easing energy prices will result in moderate 2-4% inflation in Europe in 2024, but geopolitical uncertainties and rising wages may add upward pressure.

Consumer price inflation, which accelerated in 2021 and 2022, began to cool off in the second half of 2023. Easing energy costs was a major contributor to this decrease, with prices poised to steer consumer price inflation into a 2% to 4% range across major European economies in 2024. Core inflation, which had been persistently high in recent months, has experienced a more significant cooling than anticipated. Some inflation pressures may remain due to demand-driven forces in a tight labour market and with increasing wages, costs are expected to maintain an elevated position. Additionally, an escalation of ongoing geopolitical conflicts could introduce further volatility to commodity and energy pricing. Overall, inflation deceleration is expected to continue, though at a slower pace. The speed of this decline varies among countries based on underlying factors.

Belgium

Headline inflation, which peaked at 10.3% in 2022, is projected to have fallen to 2.5% in 2023 due to rapidly declining wholesale gas and electricity prices, along with government measures curbing price hikes. It is expected to rebound to 4.3% in 2024 as the effects of these measures diminish.

Denmark

The IMF in its October 2023 update, estimated inflation for 2023 at around 4.2%; however, a recent update from the European Commission indicates that Denmark's inflation fell to 3.4% in 2023. Further easing is anticipated in the coming years.

Finland

Inflation is projected to drop below 2% in 2024 and maintain stability in 2025. Lower energy costs have been a contributor to the decline in the inflation.

France

Gradual deceleration of inflation as wage increases feed into core inflation, with a projected decline from 5.6% in 2023 to 2.5% in 2024.

Germany

Expected reduction in inflation from 6.3% in 2023 to 3.5% in 2024, with wage increases feeding into core inflation.

Ireland

Experienced elevated inflation in Q1-Q3 2023 due to delayed gas and electricity price adjustments. Inflation is expected to have eased in Q4 2023 with energy price cuts, base effects, and reduced commodity prices. Ireland's inflation is expected to drop to 3% in 2024.

Israel

Inflation in 2024 is expected to be 2.4%, influenced by global developments, and domestic monetary policy. Supply side interruptions due to Israel-Hamas conflict may offset forces moderating inflation.

Italy

Headline inflation in Italy is expected to have decreased from 6% in 2023 to 2.6% in 2024 and 2.2% in 2025, while core inflation is likely to decrease at a slower pace.

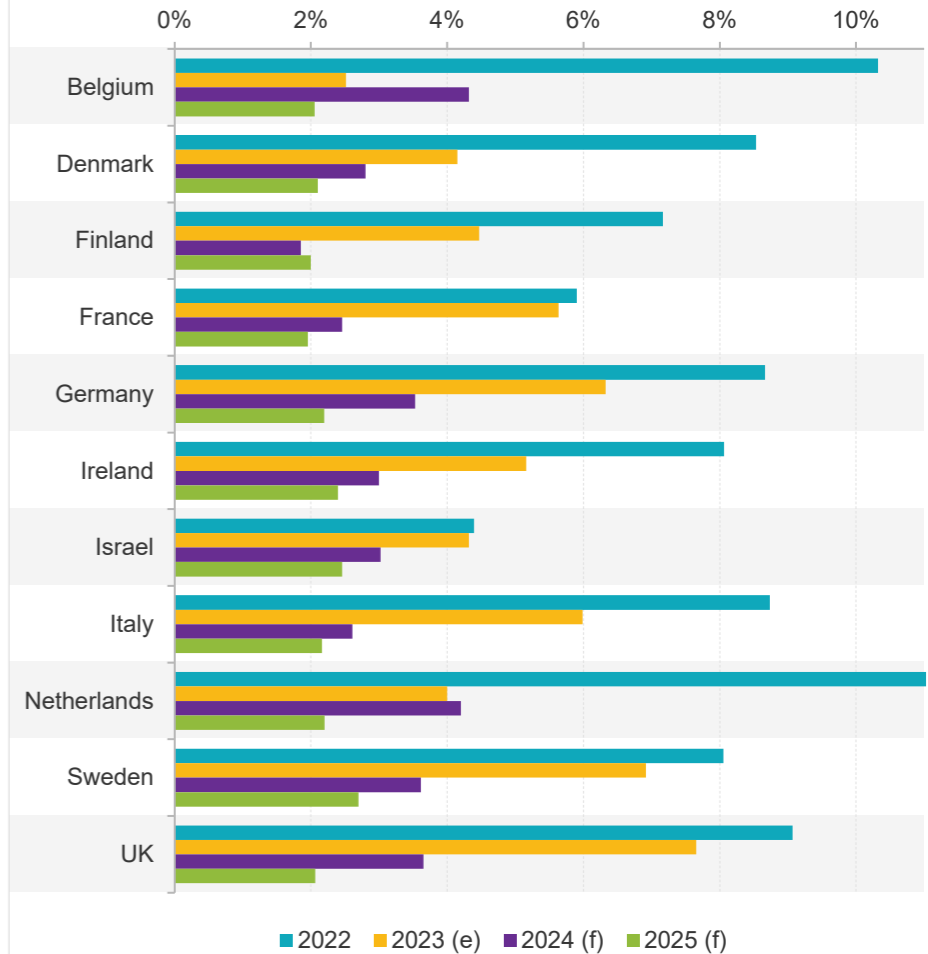
Sweden

Lower energy costs, reduced demand, and base effects are expected to bring inflation to 2.7% by 2025.

UK

Inflation, has eased to 3.9% in November from 10% in January 2023, driven by lower energy prices. Further decline to 2% is expected by 2025. Core inflation, though softening, remains elevated due to a tight labour market and firms passing on higher costs.

CPI inflation



Source: IMF (Oct 2023 Update) (e) estimated (f) forecasted

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Interest rates

“ As inflation has dropped, the Bank of England and European Central Bank are indicating that we have come to the end of the rate hike cycle. This is positive news, and we should see an increase in project planning in H2 of 2024. ”

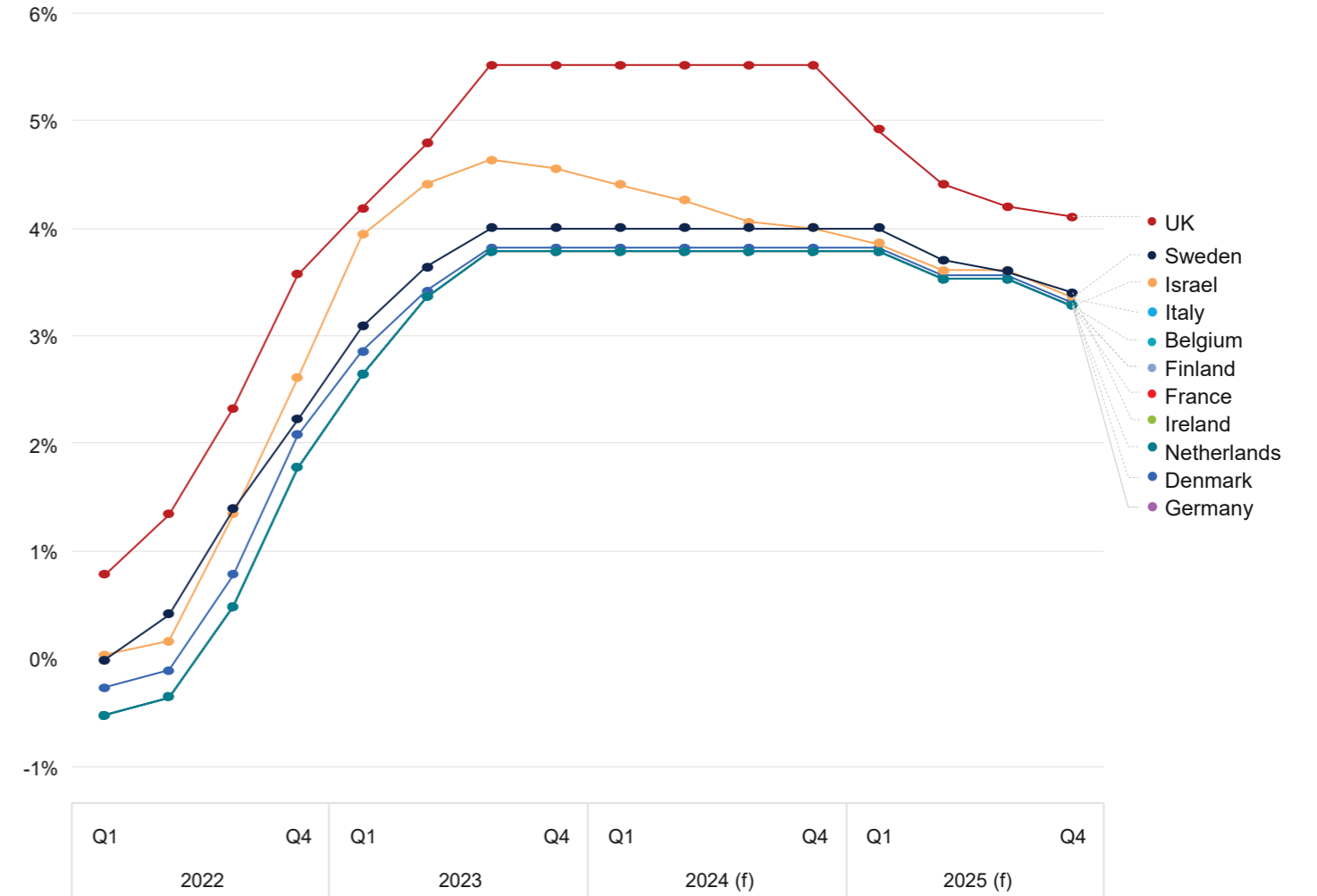


Niall Greene
Senior Director, Europe

- With inflation showing signs of moderation, the policy tightening cycle is approaching its peak. The European Central Bank (ECB) recently halted interest rate hikes after ten consecutive cycles since July 2022. In its latest statement, the ECB outlined a medium-term outlook aiming for inflation to stabilise around 2.1%.
- In December 2023, the Monetary Policy Committee (MPC) of the Bank of England decided to keep interest rates steady at 5.25%, marking the third consecutive meeting without a change.
- According to OECD forecasts, long-term interest rates are expected to decline starting in the last quarter of 2024 and the Q1 2025.
- Looking ahead the industry is poised for a revival starting in the latter half of 2024, benefiting from the anticipated decline in interest rates and an overall improvement in macroeconomic conditions.

Source: OECD

Short-term interest rates (% change per annum)



Source: OECD short term interest rates and trading economics, Central Banks

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Key challenges

The construction industry has shown remarkable resilience over the past three years. It has faced significant challenges including a global pandemic, the impacts from the ongoing Russia-Ukraine conflict and the resulting supply chain disruptions.

Looking forward to 2024, challenges remain including weak economic growth, geopolitical uncertainties, high interest rates, a persistent shortage of skilled labour coupled with increasing labour costs.

“ Wage pressures, driven by lack of skilled labour remains a major challenge impacting the bottom line of projects. ”



Paul Butler
Senior Director, Europe

Source: European Commission, World Construction Today, Eurostat

Labour shortage

- The European construction industry is facing a significant shortage of skilled labour, exacerbated by the aftermath of the COVID-19 pandemic and increased demand from decarbonisation efforts. Factors such as rising inactivity rates due to an aging population and the growth of high-tech industries also contribute to this challenge.
- The Employment and Social Developments in Europe Report reveals that current labour shortages in construction are nearly three times higher than a decade ago. As demand-supply gaps are addressed, challenges are likely to be alleviated. A recent Eurostat survey indicates that the challenge is not as pronounced as in first three quarters of 2023, primarily due to weak construction output. However, given the growth of high-tech sectors, a shortage of skilled labour is expected to persist in the short to medium term.

Traditional sectors struggle as high-tech sectors soar

- A recent survey carried out by the European Commission showed that insufficient demand in the residential and commercial sector is limiting new building activity in Europe. Challenges such as high interest rates, rising construction costs and weakening economies is leading to a reluctance to invest in new residential and commercial buildings, potentially resulting in a decline in construction output in 2024. However, in sharp contrast, there is strong demand and signs of positivity emerging from developments in the data centre, high-tech industrial, manufacturing, retrofitting and infrastructure sectors.

Financial constraints

- Elevated interest rates and more stringent financing conditions are posing challenges for businesses, especially small enterprises. Persistent wage pressures further contribute to the overall situation, although a reduction in material prices offers some relief.
- According to a recent survey conducted by Eurostat, financial constraints have remained an ongoing challenge since 2022. It is anticipated that as economic conditions improve, interest rates are likely to decrease.

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Construction industry output

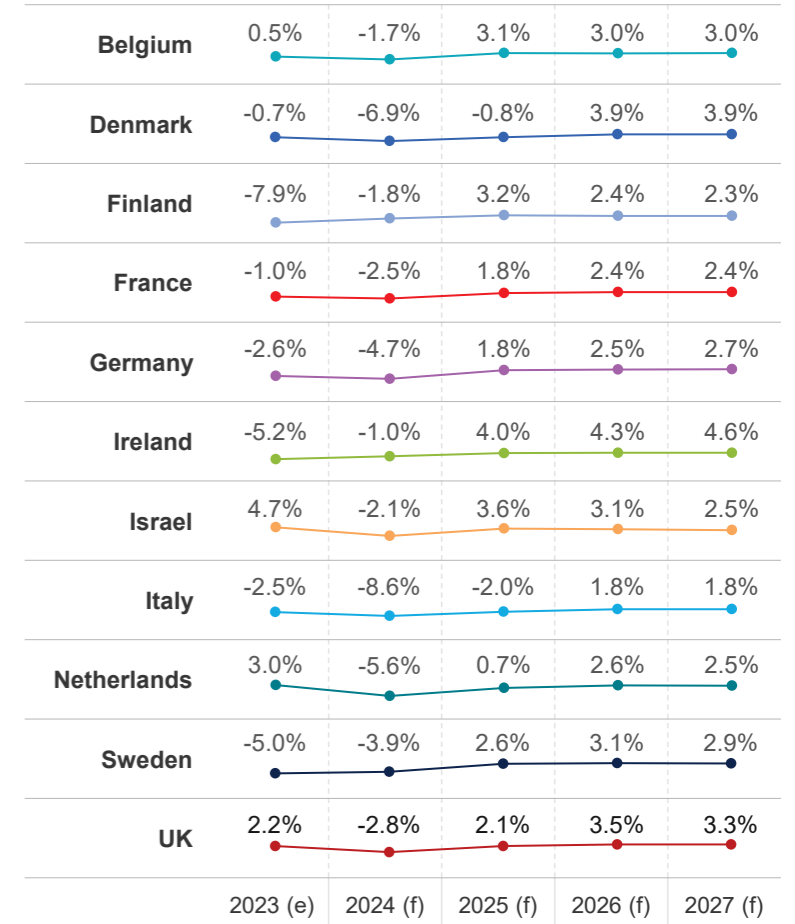
2023

- In 2023 all countries, except for Israel, are anticipated to report a decline in the residential sector, with Sweden and Finland having witnessed dips of more than 15%.
- Conversely robust growth is expected to be recorded in the infrastructure, energy and utilities sector, especially in the UK, Netherlands, Ireland, and Belgium, where double-digit growth is fuelled by government investments. France is the only exception, with a minor 1% contraction, while other countries show growth of between 5 to 10%.
- The UK's infrastructure sector, expanded by 7.2%, and offsets weaknesses in other sectors, leading to better-than-expected performance in the overall construction industry.

What lies ahead: 2024 and beyond

- There is however some optimism for moderate growth in some sectors including industrial, infrastructure, energy, and utilities. This positive trajectory is fuelled by substantial public investments in energy and infrastructure projects and growing investments in data centres, pharmaceuticals, green hydrogen, semiconductors, and battery manufacturing.
- Looking ahead to 2024, construction output is likely to contract across nearly all European countries due to a challenging global economic outlook, heightened interest rates and a subdued residential sector. Decline in overall output is attributed to the weakness in the residential sector, constituting 40 to 50% of total construction output, which has been significantly impacted by high inflation and elevated interest rates.

YoY % change in construction output



Source: Global Data

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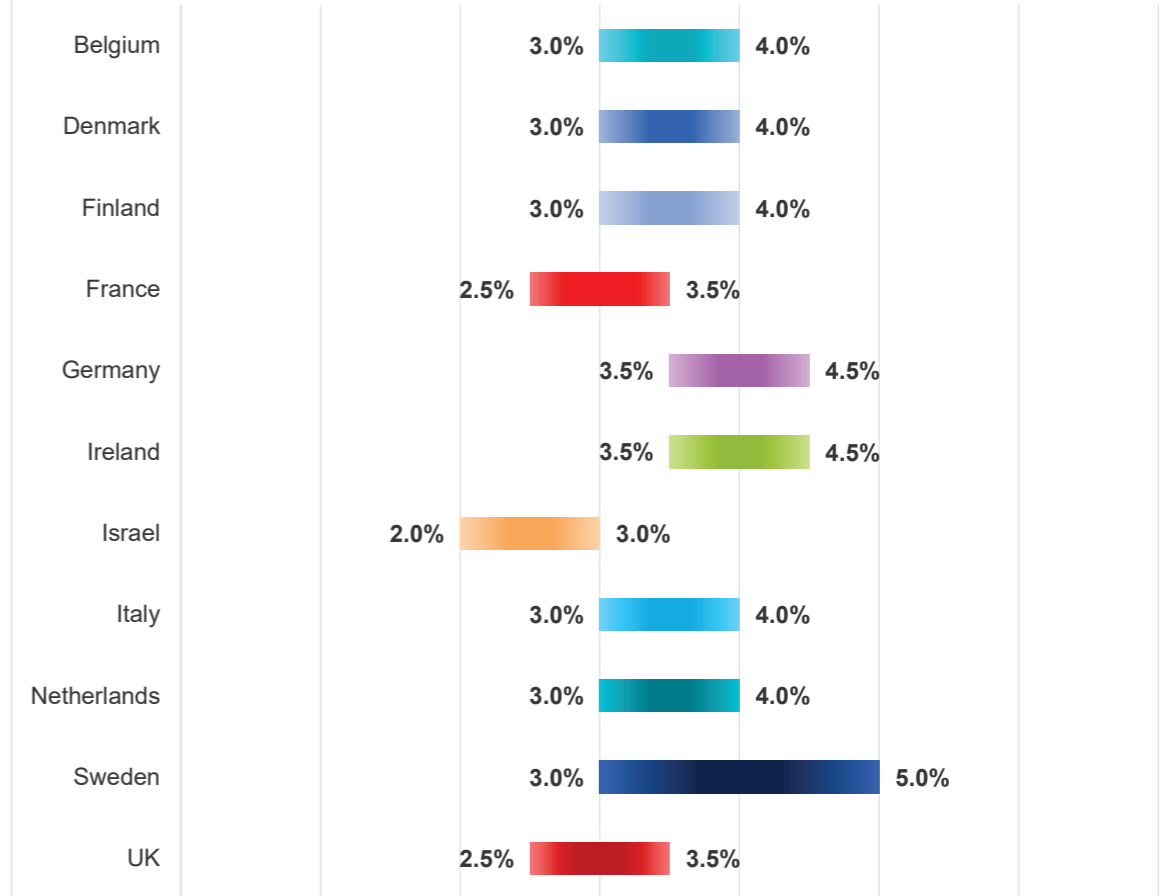
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Construction inflation

Construction inflation in European countries is projected to decelerate in 2024, supported by dropping energy and commodity prices as well as easing inflationary pressures. However, cost of labour will continue to remain a challenge.

- With market activity decreasing in some areas and deflationary pressures increasing, contractor pricing is projected to become more competitive in 2024.
- Skills shortages persist in numerous specialised professions, especially for regions witnessing increased project activity in high tech and mission critical sectors.
- Geopolitical events, including supply chain disruptions in the Red Sea, may impact the cost and delivery timelines of materials and equipment in the future.
- All factors indicate to a further drop in tender price inflation in 2024, continuing the emerging pattern from last year. Cost pressures on key inputs have reduced as supply and demand have been rebalanced.
- From the highs of 2022, we are witnessing decreasing commodity prices across those that remained stubbornly high up to this point.
- Steel is seeing the most notable drop, with Copper following close behind.
- Energy intensive commodities are expected to fall marginally in coming quarters given weakened overall output.

Construction inflation forecast 2024



Source: Linesight

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Supply chain outlook for long-lead equipment

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Review of 2023

- Over the course of 2023, there was a general decline in raw material prices, accompanied by the restoration of stock levels to establish a dependable supply source.
- In 2023, the currency exchange markets remained relatively stable, supporting international trading to enhance the supply chain and mitigate the cost impact on the international materials market. Energy prices peaked and began to drop back resulting in reduced input costs for some energy intensive materials and equipment. However, some materials and equipment suppliers have hesitated to transfer the cost savings to clients, maintaining a cautious stance toward the materials markets.
- Throughout 2023, the global industry faced obstacles in freight and logistics. Issues such as supply chain disruptions, capacity limitations, and weather-related challenges led to increased transportation costs throughout the year. Continuing political tensions, hostilities, and trade embargoes between nations remained a significant source of geopolitical risk. The outlook for 2024 does not indicate significant improvement.

Outlook to 2024

- Supply chain relationships will continue to be a focus for 2024. As the industry grapples with over 12-month lead times for some equipment, strategic partnerships with vendors will be important to de-risk procurement and delivery dates.
- Increased demand for power and cooling products will create further capacity and lead time challenges for the supply chain. The heightened computing power and increased chip density are placing substantial demands on the HVAC supply chain, further compounded by rising temperatures due to global warming.
- In general, the supply chain is still being significantly impacted by regional conflicts, persisting effects of the pandemic, and climate change. Further obstacles are likely to arise from the car industry, a major purchaser of microchips, due to the rising need for lithium-ion battery technologies that compete for the same rare earth elements. The identification of an alternate source of commodities, other than China will also be a hot subject in 2024.
- Predictions from the supply chain suggest a 3% to 5% annual increase over 2024. This is guided by increasing labour and production costs. The gains in material pricing is likely to be offset by increasing labour costs.

Equipment supply timelines (in weeks)

	Europe		
	Jan 2024	Q2-Q3 2024	
Transformers	60-65	↗	
Generators	50-55	↔	
UPS	30-35	↔	
Batteries	28-32	↔	
LV switchgears	50-60	↔	
PDU/RPP	30-35	↔	
STS	30-35	↔	
Chillers-PRR	40-45	↔	
CRAC	30-35	↔	
Cooling tower	30-35	↔	
BMS	40-45	↔	↗ Increasing
Bio-reactors	50-76	↔	↔ Stable
Clean room partitions	35-40	↔	↘ Decreasing

Disclaimer

The timelines provided are based on specific specifications and brands, as reported in January 2024, and reflect market conditions at that time. However, it's important to note that market conditions are subject to geopolitical and other influences which may cause supply chain disruptions that could impact the delivery schedules of equipment. Therefore, the timelines mentioned above are indicative and subject to change.

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European industry availability

Overview

A pronounced shortage of skilled labour is notably affecting the construction industry throughout Europe.

The migration of workers during the COVID-19 pandemic has played a role in this shortage, but other factors, such as rising inactivity rates due to an ageing population, decarbonization efforts, and the growth of high-tech industries, have also contributed to this challenge.

Some employment trends indicate that migrant workers are returning to the workforce, which suggests a positive shift in the labour market dynamics.

- Widespread labour shortages have emerged for both skilled and unskilled workers within the construction and engineering industries in Europe.
- The construction industry shortages of skilled staff is more prevalent than other industries.
- The most prevalent gaps can be seen with trades such as bricklayers, carpenters and joiners. Plumbers, pipefitters, and building electricians also rank within the top 10 labour scarcities.

Worker mobility

- The cross-border movements of workers give rise to significant labour market imbalances, when the skills of the workers are required in the region from which they migrate.
- Mobility trends however vary across countries, influenced by their immigration policies, and demand-supply dynamics.
- Regarding Europe as a whole, employment trend data indicates that the employment levels of foreign citizens have either risen or returned to pre-pandemic levels.
- In Germany, there has been a notable increase in the percentage of migrant workers in the total workforce. This suggests a demand-supply gap in the labour market within the country.
- In contrast, the UK has witnessed a decline in its overall migrant workforce following Brexit and the COVID-19 pandemic. Nevertheless, efforts are being made to address this situation.

Future trends

- Governments and industry stakeholders are actively working to address these shortages through measures such as relaxing migration policies and upskilling existing workers.
- It's expected that a short to medium term labour shortage will persist until demand-supply gaps are addressed, impacting both project costs and timelines.

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European labour shortages

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The following are key factors influencing demand and supply of labour in the construction industry:

Labour demand

- Increased demand for specialised labour at the sectoral and regional level leading to increased strain on certain typologies of labour.
- Increased demand due to government led initiatives around net-zero goals and the overall transition to a climate neutral economy.

Labour supply

- Demographics – decreasing supply due to an ageing population.
- Labour mobility – decreasing supply due to some constraints on international and internal regional movement.
- Low labour productivity in the construction industry is impacting schedules.
- Skills mis-match due to lack of training and certifications needed to undertake these open roles.

- In 2022, EU countries reported widespread and severe shortages in construction industry occupations. A widespread shortage is a shortage that has been identified by at least 11 out of 29 countries in the EU (as per EURES Labour Shortage Report 2022).
- Among the 38 identified occupations experiencing widespread shortages, 13 are directly related to the construction industry. 7 of these construction-related occupations rank among the top 10 occupations facing these widespread shortages. It is interesting to note that building construction labourers is reported as an occupation with surplus labour by 7 countries.
- The UK’s Construction Industry Training Board predicts a need for an additional 225,000 workers by 2027 (45,000 workers per year), which potentially will require government intervention.
- The German construction industry association, Bauindustrie, estimates the construction industry will be short 100,000 workers by 2030.
- The recent security challenges in Israel have underscored significant issues in the construction industry’s reliance on foreign labour. Israel is planning to recruit around 70,000 foreign workers to address this concern.

Occupation labour shortages within EU

Occupation	Countries reporting a surplus in these occupations	No. of countries reporting the occupation as a shortage	% of countries who ranked shortage as ‘high magnitude’ (i.e. ‘severe shortage’)
Bricklayers and related worker	DK, HU, RO	19	57%
Carpenters and joiners	HU	18	38%
Plumbers and pipe fitters	HU	18	38%
Building and related electricians	HU	18	40%
Welders and flame cutters		17	54%
Concrete placers, concrete finishers and related workers	HU	17	62%
Sheet metal workers	HU	16	44%
Floor layers and tile setters	HU	16	44%
Building construction labourers	DK, EL, DE, LT, NO, SE, SK	15	38%
Painters and related workers	ES, HU	13	63%
Earth moving and related plant operator	DK,HU	14	44%
Civil engineers	-	11	57%
Roofers	HU	11	78%

DK-Denmark, DE-Germany, EL-Greece, ES-Spain, HU-Hungary, LT-Lithuania, NO-Norway, SE-Sweden, SK-Slovakia, RO-Romania

Source: EURES Labour Shortage Report 2022

Ranking of occupations as per widespread shortage list

<=10 11-20 >20

Labour

European labour shortages - key findings

Construction is identified as one of the key industries experiencing widespread labour shortages across Europe, particularly in the craft trades.

- 0.48 to 1.5 million additional workers needed in the building construction and energy renovation sector (2023-2030)¹.
- 1.26 million Additional jobs needed to replace the ageing workforce¹.
- Belgium and Finland are facing labour shortages in the majority of construction related trades.
- Germany is facing a shortage of skilled workers in the MEP trades.
- The Netherlands, in addition to the shortage for construction labourers, is also facing a shortage of architects.

Trade wise shortage and surplus in EU

No.	Occupation	BE	DK	FI	FR	DE	IE	IT	NL	SE
1	Building and related electricians	↓	↓	↓	↓	↓				
2	Building architects		↓						↓	
3	Building construction labourers	↓	↓	↓		↑		↓	↓	↑
4	Carpenters and joiners	↓	↓	↓	↓			↓	↓	↓
5	Construction supervisors	↓	↓	↓	↓	↓		↓	↓	
6	Civil engineers	↓	↓	↓		↓		↓	↓	
7	Civil engineering labourers	↓	↓	↓						
8	Civil engineering technicians		↓		↓	↓				
9	Air conditioning and refrigeration mechanics	↓		↓		↓				
11	Electrical engineering technicians	↓	↓		↓	↓	↓			
12	Electrical mechanics and fitters	↓	↑	↓	↓	↓		↓		↑
13	Floor layers and tile setters	↓		↓						↓
14	Housebuilders			↓				↓		
15	Locomotive engine drivers					↓				
16	Painters and related worker	↓	↓	↓	↓					↓
17	Plasterers	↓	↑	↓					↓	
18	Plumbers and pipe fitters	↓	↓	↓	↓	↓			↓	↓
19	Sheet metal workers	↓	↓	↓	↓	↓		↓		↓
20	Structural metal preparers and erectors	↓			↓			↓		
21	Welders and flame cutters	↓		↓	↓			↓	↓	

BE-Belgium, DK-Denmark, FI-Finland, FR-France, DE-Germany, IE-Ireland, IT-Italy, NL-Netherlands, SE-Sweden

↓ shortage ↑ surplus

Source:

¹ JTC Study Report May 2023

² BCG Report Migration Matters: A Human Cause with a \$20 Trillion Business Case

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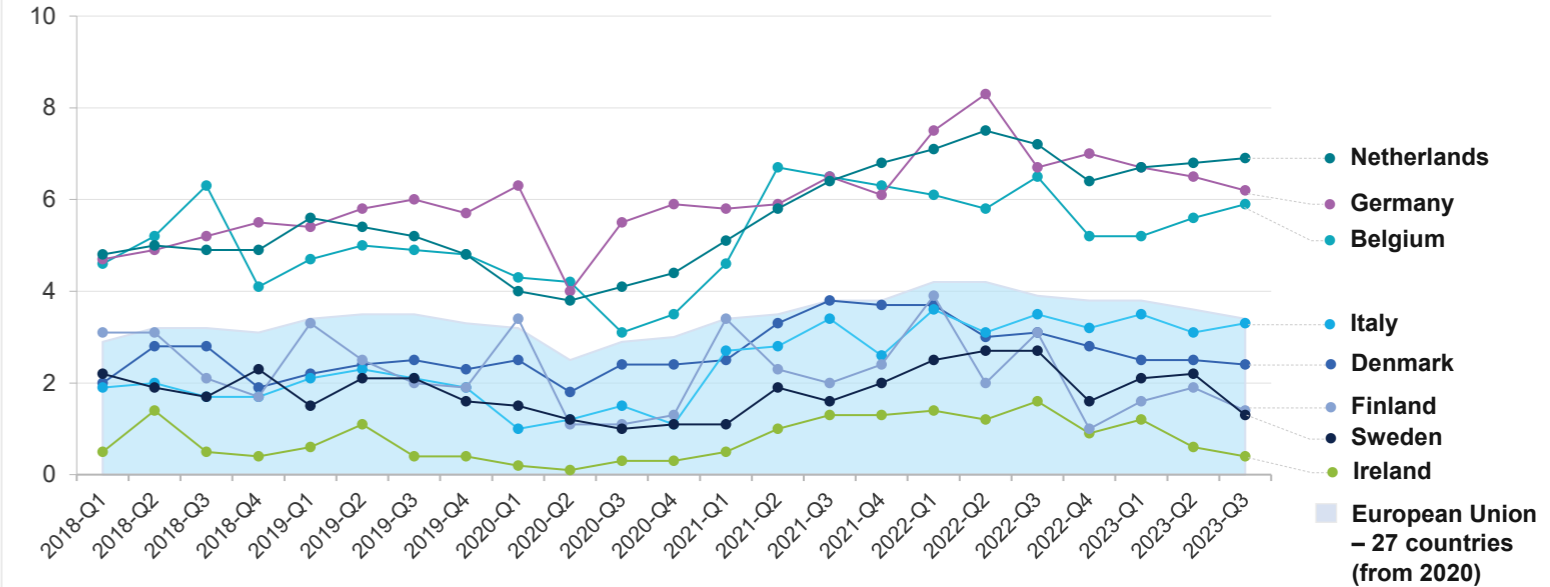
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State of employment

We have seen a slight improvement in the vacancy rate, but the labour market is likely to tighten further over the long-term.

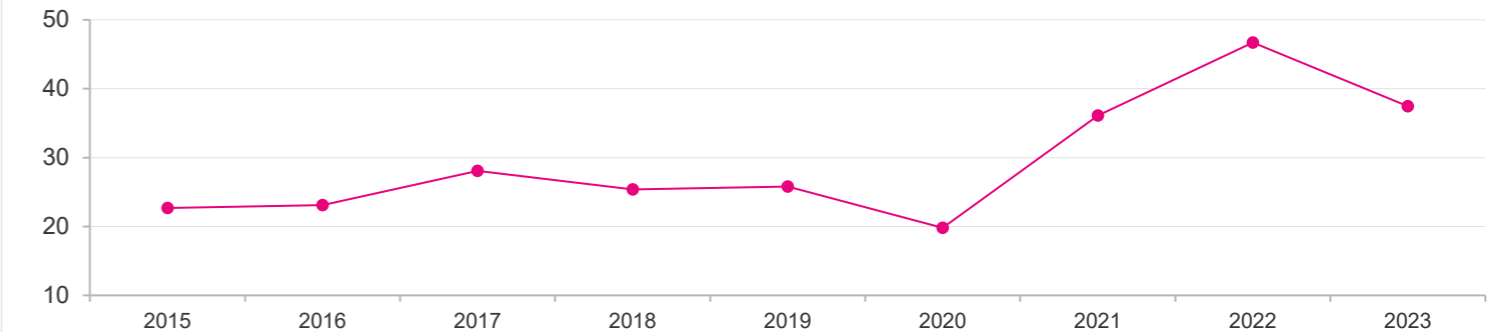
- In the EU, the job vacancy rate for the construction industry was 3.4% in Q3 2023 which is now comparable with the rates in pre-covid levels. However, few countries are reporting high vacancy rates. Overall, vacancy rates have been declining because of the economic slowdown, however the rates are likely to grow in-line with anticipated economic recovery.
- In Q3 2023 Germany, Netherlands and Belgium reported the highest vacancy rates of 6.2%, 6.9% and 5.9% respectively. These rates were the highest within the EU region.
- Construction job vacancies in the UK reached pre-pandemic levels at least six months earlier than other industries and remained elevated throughout 2021 and 2022.
- The number of vacancies in the UK have reduced in 2023 however these are still elevated as compared to levels before 2022, indicating that construction industry continues to face the challenge of recruiting in a highly competitive labour market.

European Union job vacancy rate in construction industry (in %)



Source: Eurostat, Unadjusted data (i.e., neither seasonally adjusted nor calendar adjusted data)

UK average no of vacancies (in 000's) in construction industry (seasonally adjusted)



Source: ONS UK

Note: The job vacancy rate, JVR = number of job vacancies / (number of occupied posts + number of job vacancies) * 100

A job vacancy is defined as a paid post that is newly created, unoccupied, or about to become vacant, for which the employer is taking active steps and is prepared to take further steps to find a suitable candidate from outside the enterprise concerned; and for which the employer intends to fill either immediately or within a specific period of time. The vacancy rate is a measure of unmet demand and provides insights into the degree of labour market tightness.

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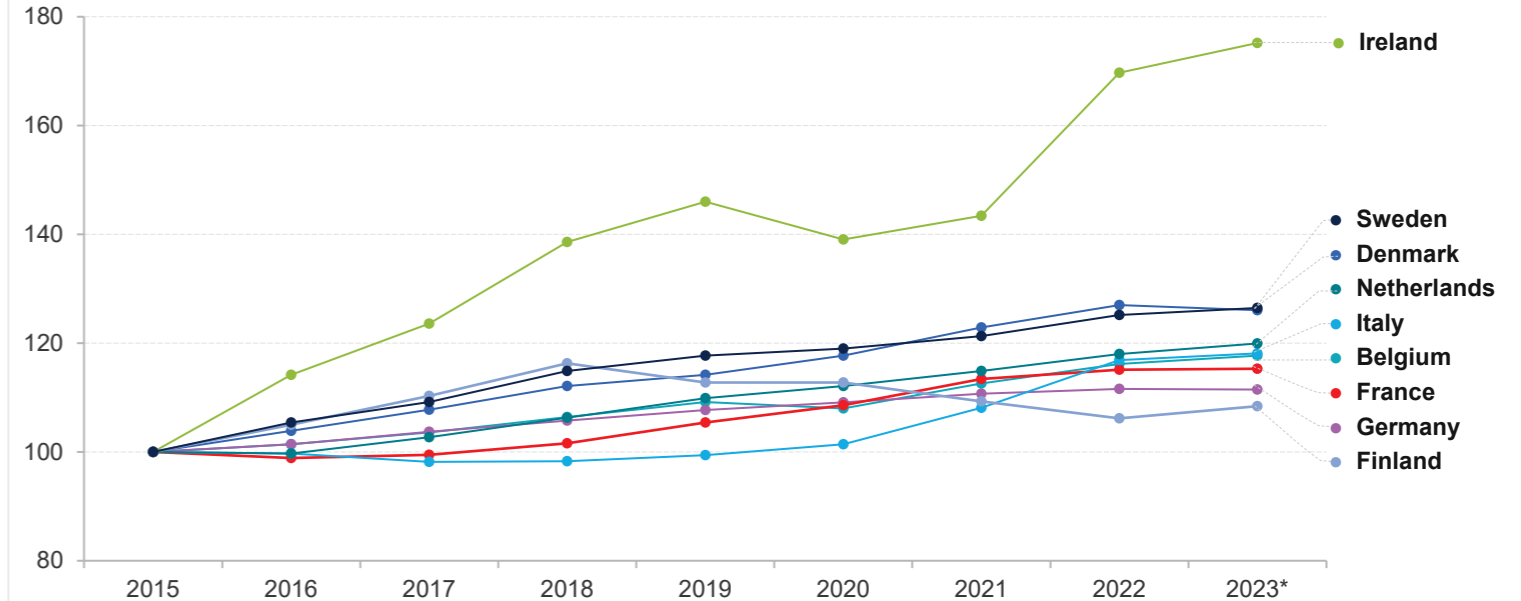
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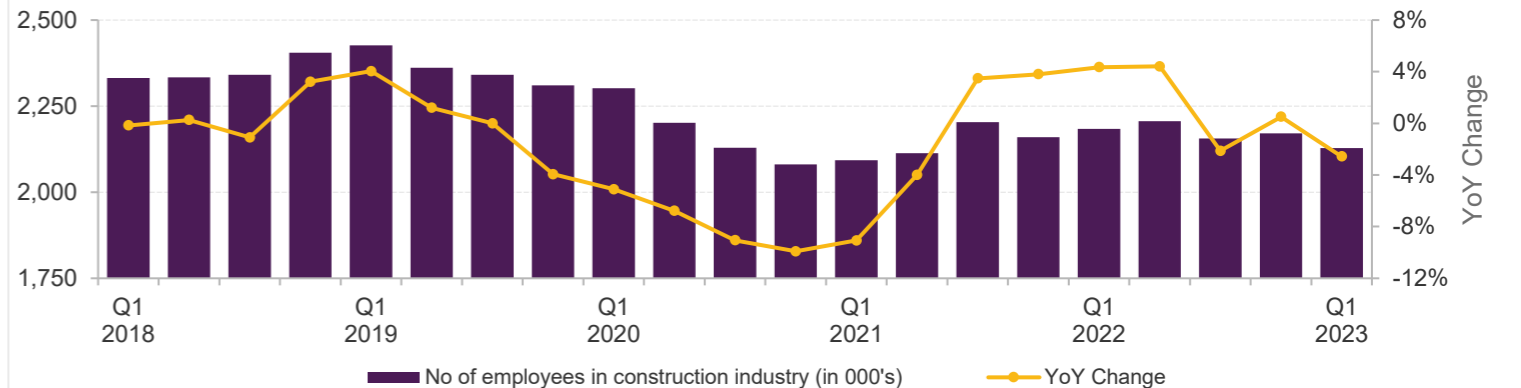
Construction industry employment

- Although a slowdown in overall employment was observed in the construction industry in 2020, primarily due to the impact of the pandemic, it rebounded in 2021 across most of the countries.
- For 2023, we anticipate a contraction will be recorded in the construction industry output, mostly due to a decline in residential construction. There was steady growth in construction employment, driven by increased public sector investments and an expansion in the high-tech sector.
- In the UK there has been a decline in overall construction employment since Brexit and following the COVID-19 pandemic. After Brexit, there was a shortage of 46,000 EU origin workers and 6,600 non-EU origin workers in the construction industry, constituting approximately a 2.5% reduction in the total construction industry workforce.

EU countries, construction industry employment index (Base 2015=100)



No. of employees in UK construction industry (in 000's)



Source: Migration and Construction June 2023, The impact of Brexit on the UK labour market - an early assessment

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Demand factors

Investments in energy upgrades under recovery and resilience plans, has already had important employment effects on the construction industry and supply chains.

The renovation wave

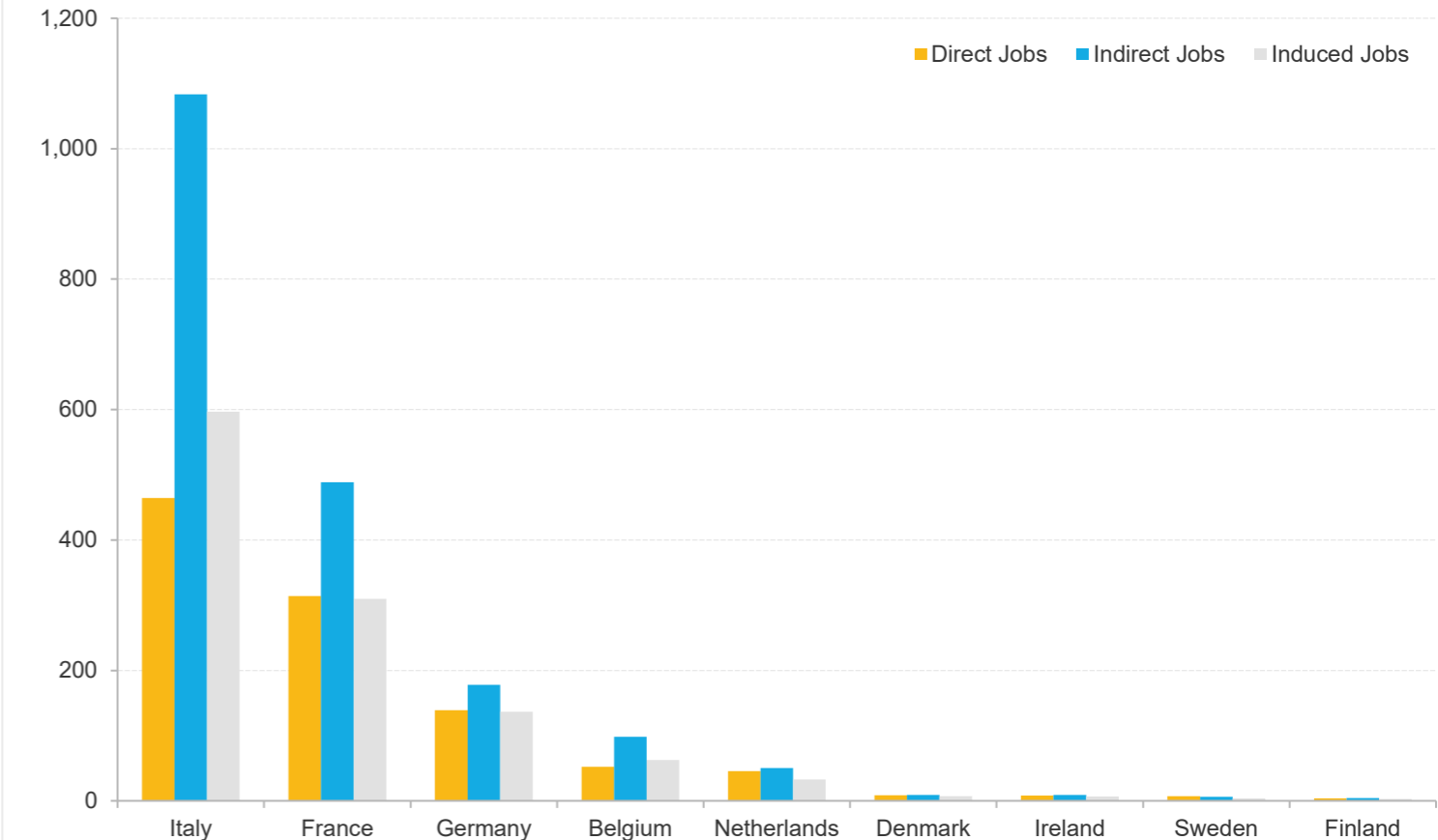
- The drive for sustainability has impacted the availability of specialist labour within the construction industry.
- Buildings account for the largest share of total EU final energy consumption (40%) and produce about 35% of all greenhouse emissions.³
- As per the EU green deal 2020, there is a target to double the current energy renovation rate by 2030, renovating 35 million buildings.
- This renovation wave aims to reduce buildings' GHG emissions by 60% and improve energy efficiency.
- In the UK, there will be a demand for 10,000 to 60,000 new workers annually as retrofit initiatives gain momentum, as per a report by PWC. The most sought-after trades include heating engineers, glaziers, and insulation specialists.
- Approximately 0.1 million OSH managers are required for the renovation wave.

Source:

³ JTC and EFBWW on Skills and in the framework of quality jobs in the European green deal in construction and the post COVID-19 recovery Europe, JTC and EFBWW on Skills and in the framework of quality jobs in the European green deal in construction and the post COVID-recovery, PWC UK Press release: Making homes more energy efficient could sustain 500,000 jobs

	Direct	Indirect	Induced
Job creation in energy and resource-efficient renovations sector 2021– 2026 in EU273	2.3 million	7.5 million	4.6 million

Direct, indirect and induced jobs in energy efficient renovations sustained by national recovery and resilience plans (NRRPS), 2021–2026 (in thousands)



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Supply factor: demographics

While the overall population of the EU grew by nearly 6 million between 2010 and 2021, the percentage of people aged between 15 to 24 has been in decline across all countries.

Ageing population

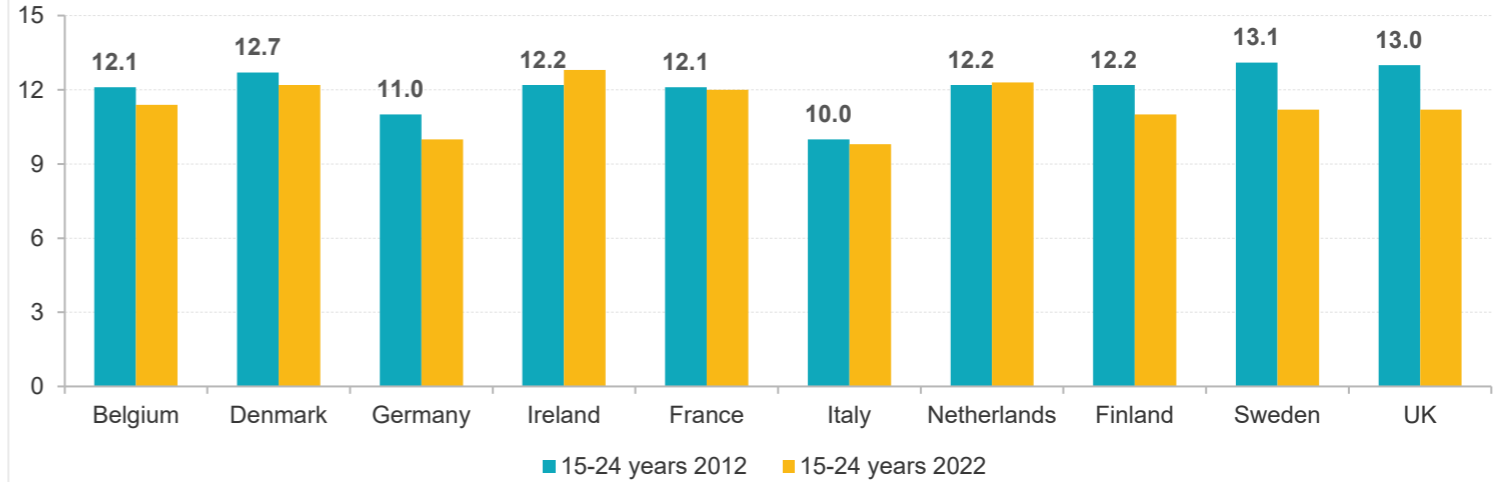
- Ageing populations in many European countries will have an impact on population size and overall labor pool.
- This 15-24 age grouping represents the workforce for tomorrow. Meanwhile the population for 65+ has been increasing.
- In UK, the median age of a construction worker was 41.2 years in 2022, and many workers were nearing retirement age. 45% of construction workers were 45 years and older. As these workers retire, there are not enough young workers entering the industry to replace them.

“As mission critical and high-tech sectors look to pull from the same talent pool we will continue to see skilled staff shortages. Creative approaches are needed to develop out resources and safeguard skills supply for the future.”

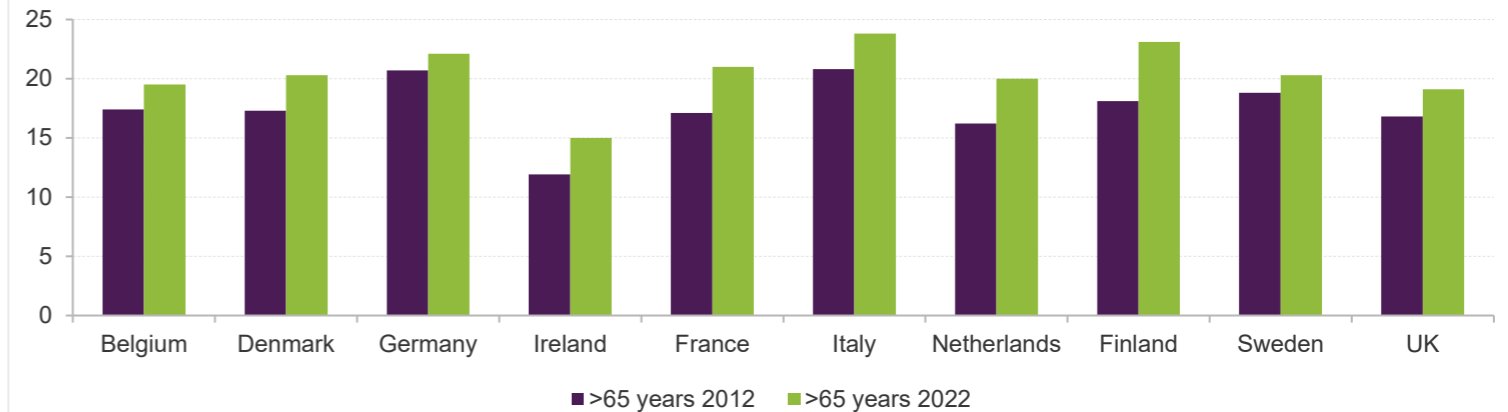
Damien Gallogly
Senior Director, Europe

Source: Eurostat

Proportion (in %) of population of age groups (15 – 24 years)



Proportion (in %) of population of age groups (65+ years)



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“ The increasing demand for cloud services, growth of data-intensive applications such as AI and the need for reliable and secure data storage are driving factors in the expansion of the data centre market in the UK and across Europe. ”



Michael Riordan
Managing Director,
United Kingdom

Upgrading existing DC infrastructure is also going to be a challenge. Modular and pre-fabricated solutions are likely to be adopted which would allow for faster deployment.

Despite a subdued macroeconomic outlook, the demand for data centres is expected to remain high. AI is contributing to a demand surge for data centres, which is having implications on data centre design, construction, and costing.

Schneider Electric estimates that AI power consumption could grow by more than threefold by 2028. With AI demand, rack density is expected to increase, which will have impact on the HVAC and air cooling.⁴

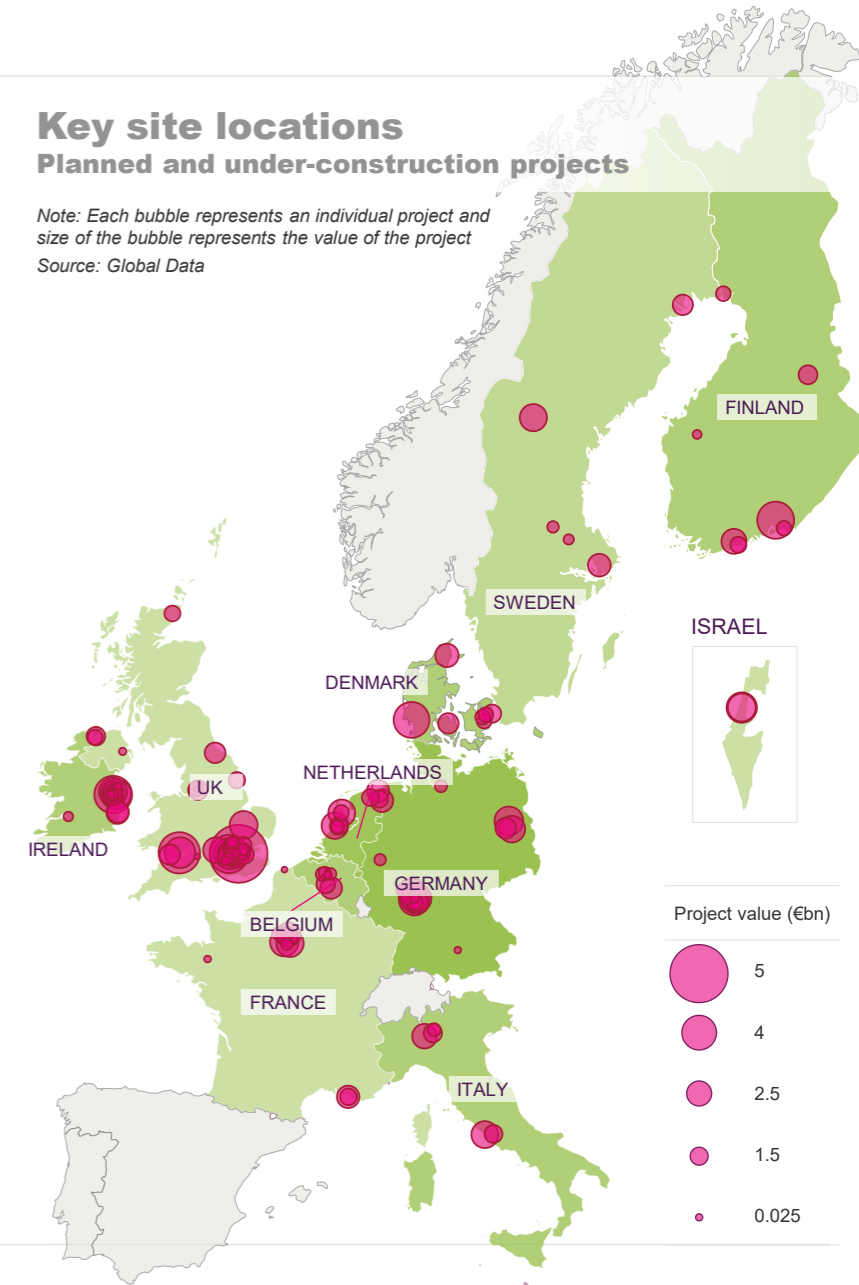
FLAP-D markets continue to be the preferred location, witnessing increases in capacity despite challenges related to power availability and increasing regulations around sustainability. There is also a growing focus in new locations within these countries.

With ample availability of renewable power, Nordic countries are emerging as preferred data centre investment areas.

Source:
⁴ Schneider Electric: *The AI Disruption, White Paper 110*

Key site locations Planned and under-construction projects

Note: Each bubble represents an individual project and size of the bubble represents the value of the project
Source: Global Data



Sectors in focus

Data Centres

Overview

Government focus

- While there are planning and energy consumption related restrictions for data centre development in certain regions in Europe, governments are actively working towards supporting the growth of sector by deploying funds and upgrading infrastructure.
- The European Commission is earmarking €1.2 billion in state funding for cloud computing and Edge development.⁵
- The EU is also drafting plans to invest €584 billion to upgrade the power grids.⁶
- Additionally, the Dutch government is contributing €70 million to support projects like modular data centres under the IPCEI-CIS (Next Generation Cloud Infrastructure and Services) umbrella to strengthen cloud infrastructure.⁷

Looking towards the Edge

- Building edge data centres presents several challenges due to their unique requirements and distributed nature
- Edge data centres face an uphill adoption due to a variety of challenges including power, connectivity, and the commercial viability of smaller older sites.
- These older, smaller sites may be well placed to serve the local community for future Edge requirements, but they are not currently equipped to support power hungry compute and AI equipment and the corresponding cooling requirements. These sites will therefore require significant infrastructure investment in and as they are generally smaller, that in turn increases the costs of Edge deployments.

Sustainability will be a key focus

- Power challenges in data centres delivery are prompting a shift to renewable energy options. There are also imminent EU directives which will mandate energy usage related metrics for data centres >500kW.
- EU regulations are likely to come into force by 2025, which will enforce sustainability standards. Germany being the first adopter of regulation passed 'The new German Energy Efficiency Act' which mandates a PUE of 1.2 for new data centres by 2026.⁸ Other countries where there is a burden on the grid are likely to follow similar guidelines in coming quarters.
- New power sources are currently being reviewed, some that are not grid dependant, are being tested in regions across Europe. An example here would be SK Ecoplant and Lumcloon Energy who are reportedly planning a new data centre in Ireland that will rely on gas-powered fuel cells rather than a grid connection.
- AI could offer some potential solutions in achieving energy savings, by collecting and analysing large datasets and visualising future workloads, AI can help to measure and enhance the use of energy, resources, and operations.

Source:

⁵ European Commission Press release, 5 December 2023

⁶ European Commission Press release, 28 November 2023

⁷ Eurofiber: Report on Digital Infrastructure, December 2023

⁸ Euractiv: Energy Efficiency, Data centre brace for new EU energy reporting Obligations, October 2023

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Project activity

Belgium

In Belgium, Brussels remains a prime location for data centres and is expected to receive €1.35 billion worth of projects (under construction and planned).

Denmark, Sweden and Finland

In terms of value, approximately 15% of the total supply of DCs, in the 11 countries mentioned (under construction and planned) is concentrated in Denmark, Sweden, and Finland.

France

In France, Paris and surrounding regions remain a preferred development region of hyperscalers.

Strong demand for cloud services aligns with the French government's strategy to foster its cloud industry. However, new proposed regulations, of "cloud credits", offering preferential rates to new clients, might weigh on investments.

Germany

Frankfurt remains the top choice in Germany for both existing and upcoming locations driven by the presence of DE-CIX.

The master plan related developments in the Frankfurt region, coupled with the recent passage of the Energy Efficiency Act, are likely to influence the construction and operation of data centres nationwide and could impact construction costs.

Berlin is emerging as a notable cloud region which has set Germany on course to be the first European country to have two Tier 1 cities, as power becomes more constrained in Frankfurt. Also, we are seeing a gradual shift to neighbouring municipalities.

Ireland

In Dublin, despite the regulatory and power supply issues, the growth pipeline persists. Operators are now considering locations outside of Dublin that are still near the T50 fibre ring but have less severe power challenge. Interest is also growing in the west Ireland, with the IRIS sea cable development.

Israel

While the overall construction activity in Israel has been impacted due to the ongoing Israel-Hamas conflict, there have been recent announcements from cloud players to expand their investments.

Italy

Milan is a key data centre location in south of Europe, however there are projects coming up in Rome as well.

Netherlands

In the Netherlands, the majority of developments centre around Amsterdam, with a total of €4.4bn in anticipated projects. Notably, there is a growing interest in edge data centres in the Netherlands. Recently, a consortium of seven Dutch companies and research institutes secured funding for an efficient Edge data centre project.

UK

The UK leads in terms of projects under execution followed by Germany, France and Ireland. While London Docklands and Slough in West London are prominent data centre locations in Europe, power constraints in West London is prompting project activity in East London, Cardiff, and Newport.

Key considerations

01

Skilled labour shortages

The demand for data centre development in Europe is surpassing the pipeline. Labor shortages are prevalent in every major market, leading to increased costs for contractors. MEP trades, such as electrical and HVAC, are particularly affected.

02

Delay in approvals in busy markets

In busy markets, delays in permitting and municipal approvals is impacting project schedules and timelines.

Permitting for newer entrants, for markets such as Germany, can be challenging.

03

Supply chain

The recent Red sea hostilities has impacted the supply chains to Europe, which had been normalising over the past year. The continued disruption could further impact long lead equipment in terms of cost and delivery. This is coupled with a high level of demand from competing industries.

04

Securing power supply

Established data centre locations continue to be preferred for site selections, however securing power is an issue, due to challenges arising from overburdened grids. The EU commission has recently launched drafts plans for €584bn grid investment.

Sectors in focus Life Sciences

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“ Europe’s Life Sciences sector is expected to experience significant growth in 2024, with the support of private and public funding. These projects will focus on creating more environmentally friendly buildings with a reduced carbon footprint.



Brian McClinton
Senior Director, Europe

While existing clusters in locations like Ireland, Germany, Netherlands and Belgium are expanding, there is also attention on new locations, with the Nordics emerging as a rapidly growing region for Life Sciences.

Despite a challenging global economic environment, there is an increased focus on R&D expenditure, with a few countries experiencing double digit growth in the overall spending. Investor interest is notably concentrated in areas such as obesity drugs, neurology, immunology, and select oncology, including antibody-drug conjugates (ADCs) and radio pharma.

AI is poised to revolutionise the life science industry, accelerating drug discovery and requiring faster development of manufacturing facilities. In pharmaceutical manufacturing, the adoption of flexible and modular designs, along with prefab components, is on the rise to minimise retrofitting costs and align with advancing technology. Effective programme and supply chain management prove crucial for the smooth delivery of such large-scale projects in the industry.

After a turbulent funding year in 2023 the investment activity is picking up in the life sciences sector. Despite a weak global economic outlook life sciences companies in the UK managed to secure £1.25 billion in venture financing, accounting for 11% of the total venture capital investment in UK companies this year.⁹

The Golden Triangle remains a central focus location, with the UK government ambitiously aiming to establish the UK as a global life sciences hub by 2030. A recent step in this direction was the unveiling of £520m for life sciences as part of Autumn Statement 2023.¹⁰

The German biotechnology industry also managed to raise around €1.08bn in capital in 2023, a slight improvement over the previous year (€920mn) according to a survey published by the biotech association BIO Deutschland.¹¹

Sources:

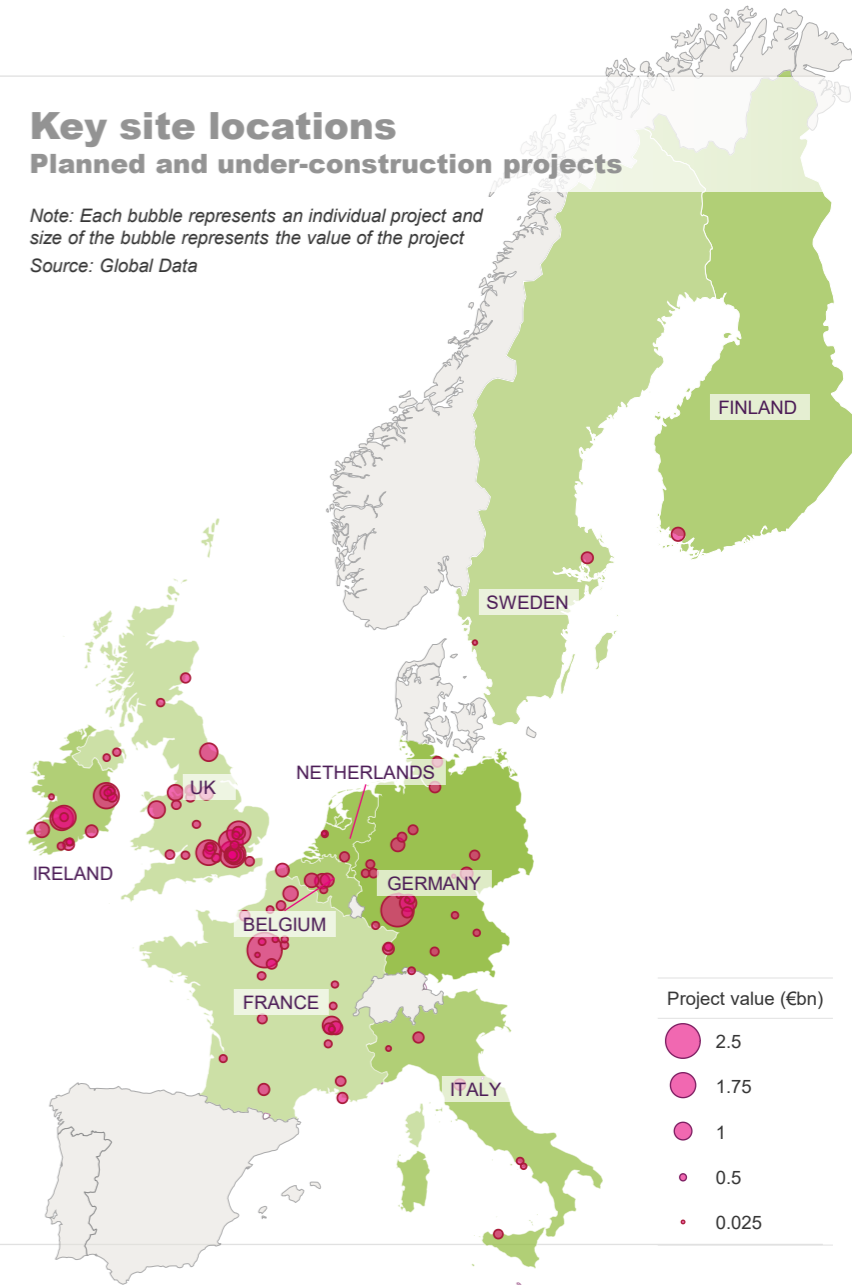
⁹ BIA-Finance 26th January 2024

¹⁰ Department for Business & Trade, Government of UK, Policy paper: Advance manufacturing plan, 6th December 2023

¹¹ BIO Deutschland annual trend survey 2023/2024

Key site locations Planned and under-construction projects

Note: Each bubble represents an individual project and size of the bubble represents the value of the project
Source: Global Data



Sectors in focus

Life Sciences

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Project activity

- The UK is witnessing remarkable growth in the establishment of research facilities in the field of life sciences, with Germany following close behind.
- Germany, France and Ireland are at the forefront of advancements in the manufacturing area within the life sciences sector.
- Construction activity in the Nordics is still limited, but with a focus on R&D investments, these are likely to pick up soon. Pharma companies headquartered in Denmark are the biggest R&D spenders in the Nordics region. They witnessed a growth of 26.2% in R&D spend from 2021 to 2022, which was one of the highest in Europe.¹²

Investor interest is notably concentrated in areas such as obesity drugs, neurology, immunology, and select oncology, including ADCs and radio pharma.

Key considerations

01

Supply chain challenges

- LLE lead times remain challenging, particularly for sterile equipment remaining on the critical path. Limited tier 1 supply chain partners and ongoing global investment in new facilities continue to extend lead times.
- Clean utilities equipment also showing on critical path, so selection of procurement models and scoping of packages continue to be critical to attract interest from the market.
- Poorly designed packages are being seen as being rejected by the supply chain, with either refusal to tender or inflated returns being submitted. Use of preferred vendors under framework / MSA arrangements continue to be utilised to maximum leverage within the market.

02

Shortage of skilled labour

- Similar to other sectors, the life sciences sector is experiencing significant challenges due to skilled labour shortages. Contractors are resorting to sourcing labour from alternative locations, leading to increased competition and upward pressure on labour rates.
- Additionally, the availability and prices of hotels and accommodations for housing this labour are beginning to impact overall labor costs.

03

Key concerns around new regulations

- The pharmaceutical and biotech regulatory landscape in Europe is changing. The immediate and long-term effects of the proposed changes remain uncertain, but they have the potential to influence the regulatory framework for life sciences in 2024 and beyond.
- While the intention is to enhance the affordability, accessibility, and innovation of medicines, their reception has been varied. This could impact pharmaceutical developers seeking marketing authorisation in Europe.
- ESG will become a key focus area, fully embedded in business operations and it will become more central in context to third-party engagement.

Source:

¹² European commission Industrial R&D investment

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“ We are witnessing a revolution of high-tech manufacturing; smart factories that leverage AI, robotics, and automation to develop a robust supply chain of these technologies, to reduce costs, and enhance project controls. ”



Niall Greene
Senior Director, Europe

There are currently 200- 250 new battery plants planned across Europe to be delivered over the next decade. However not all of the projects will materialise, due to changes in technology adoption, a lack of uptake agreement from automotive manufacturers, as well as an absence of funding and government incentivisation.¹⁵

The e-mobility and semiconductor industries in Europe are experiencing a significant upswing, driven by EU regulations, a renewed emphasis on self-reliance strategies, and a rising demand for sustainable solutions.

The development of high-tech industrial projects, marked by substantial capital expenditures demands meticulous planning throughout the construction and delivery phases. These projects often integrate cutting-edge technologies, efficient supply chain management, including sourcing specialised equipment and components, imperative for ensuring timely project delivery.

For semiconductors, Europe’s robust ecosystem includes equipment manufacturers, chemical suppliers, and Integrated Design and Manufacturing Service (IDMS) providers. However, it currently holds a modest share, accounting for around 8% of global wafer production capacity. However, the recent budgetary allocations and regulatory initiatives are expected to increase the share.¹³

The European Chips Act has allocated €43 billion to strengthen the semiconductor industry across 27 member states, aiming to double global market share from 10% to 20% by 2030.¹⁴

As of June 2023, the European Union has attracted €90 billion in semiconductor industry investments. The UK has also introduced a £1 billion semiconductor strategy that covers the next decade.¹⁵

Source:

¹³ BCG SIA strengthening the global semiconductor supply chain April 2021

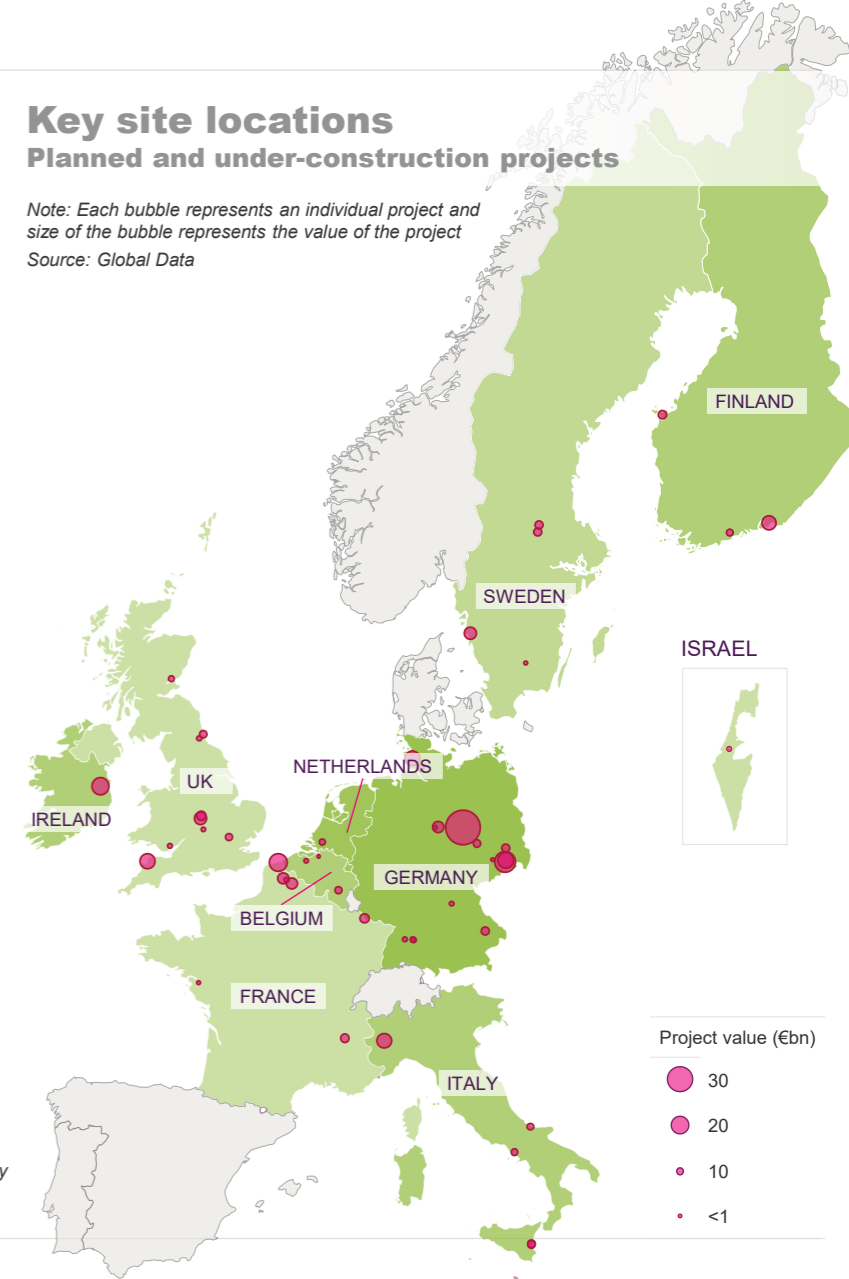
¹⁴ Department for Science, Innovation and Technology, Press Release, 19th May 2023

¹⁵ Consultancy.eu, Europe to see 250 new Li-ion battery plants in next 10 years

Key site locations

Planned and under-construction projects

Note: Each bubble represents an individual project and size of the bubble represents the value of the project
Source: Global Data



Sectors in focus

High-tech Industrial (semiconductor and batteries)

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Project activity

- The development and production of semiconductor components in Europe is concentrated mainly in Germany, France, Italy, the Netherlands, Belgium and Ireland. Advanced manufacturing clusters on 300mm wafers are located in Germany, Ireland and France.
- In terms of fabs construction activity, Germany leads in both planned and under-construction supply, with Saxony, Saarland, and Saxony-Anhalt as key hubs.
- Ireland, Finland, and Durham in the UK are also expected to witness the development of foundries in the coming quarters, with most projects currently in the planning stages.
- In battery manufacturing facilities, approximately 25% of the total global projects by value are expected to come up in Europe, with the UK experiencing the highest activity. Additionally, investments are underway in Germany, France, Italy, Finland, and Belgium.
- Hungary has attracted major investment from a number of battery producers and is positioning itself to become Europe's first tier 1 battery producer. This is closely followed by Germany.¹⁷

High-tech manufacturing often has complex supply chains and usually operate in clusters with an already developed overall supply chain. Availability of workforce, government subsidies, operational costs, legal compliances and existing infrastructure are a few of the key factors that influence decisions on facility location.

Sources:

¹⁵ Property Week

¹⁷ Benchmark Source, Hungary set to be Europe's leading tier 1 battery producer this decade

Key considerations

- | | | |
|-----------|---------------------------------------|--|
| 01 | Supply chain complexity | <ul style="list-style-type: none"> • The gigafactory market is relatively immature and the supply chains are less developed.¹⁶ On the other hand, semiconductor manufacturing has highly complex, established supply chains. • Government incentives have been introduced to establish more localised supply chains to limit exposure to market disrupting geopolitical events as well as address carbon emissions. |
| 02 | Competition from other regions | <ul style="list-style-type: none"> • The UK and EU will face stiff global competition, as the US and Asia have introduced policies to boost domestic battery and semiconductor production, and to entice companies to confirm these developments within their respective countries. |
| 03 | Availability of suitable sites | <ul style="list-style-type: none"> • There are few suitable sites that can accommodate developments of this size, which can range from 100ha to 400ha depending on project scale. A site must have a high-capacity, reliable, renewable energy source, connections to utilities and transport infrastructure to be considered well connected. |
| 04 | Talent shortages and skill gap | <ul style="list-style-type: none"> • The construction industry in Europe is grappling with a significant skilled labour shortage. The complexity of HVAC and electrical systems in these facilities demands highly skilled MEP labour. The intricate nature of clean rooms and dry rooms, vital for maintaining required cleanliness and humidity levels, require very high precision in terms of execution. • Furthermore, these large-scale projects necessitate a substantial number of on-site trade workers concurrently. Hence, meticulous labour capacity planning is imperative for the successful execution of such projects. |
| 05 | Speed of technology | <ul style="list-style-type: none"> • The technology associated with semiconductors is continuously developing, and the challenge that faces their construction teams is having suitable manufacturing space ready and available when the technology is fully designed. • Having developed the technology, they cannot afford a time lag until the manufacturing space is available. Hence construction processes need to be flexible to accommodate ongoing change in the manufacturing facility right until the technology is signed off. |

Sectors in focus Commercial

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“ Across the UK and Ireland, there is a growing recognition among commercial developers that the most attractive opportunities may be in the form of deep retrofits of their existing assets in prime, sought after locations.



Stephen Ashe
Senior Director, Europe

Flexibility and employee well-being will remain a key consideration in office space design and retrofit over the course of 2024. Tenants are seeking agile office environments that can easily adapt to changing needs and accommodate various work styles.

With improving macroeconomic conditions and anticipated decreases in interest rates in the coming quarters, positive sentiments are emerging in the European commercial sector.

However, expected timelines for recovery vary across countries. The overall recovery in construction output in real terms for the sector is projected to be largely witnessed between 2025 and 2027.

Sustainability and ESG considerations are paramount, with companies seeking spaces aligned with their overall ESG strategy.

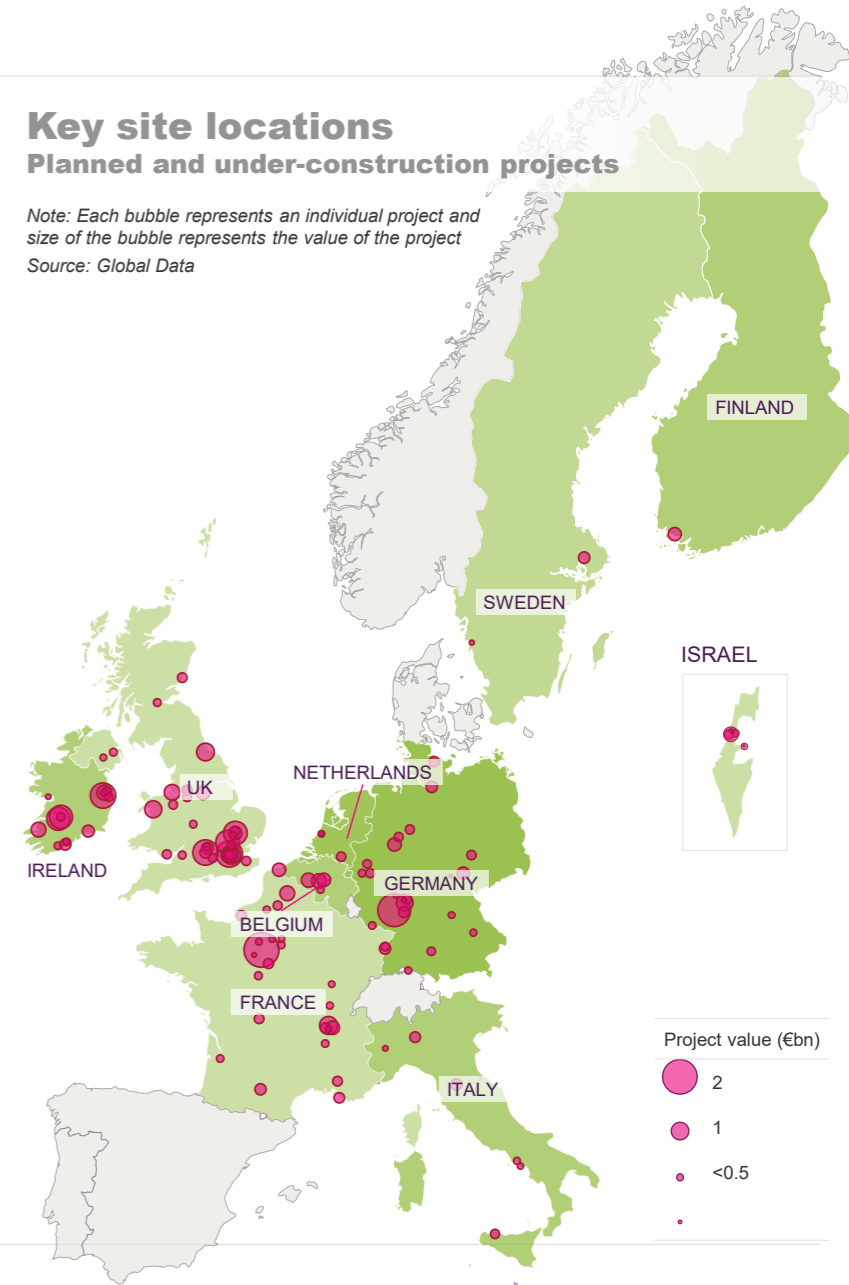
Given governmental sustainability goals and net zero targets, refurbishing old buildings is essential for efficiency improvement. The UKGBC's Whole Life Carbon Roadmap indicates the need for a 59% reduction in office sector energy consumption by 2050.

Notably, 77% of UK office stock presently holds an energy performance certificate (EPC) rating below B, which suggests the need and scale of retrofitting requirement in the commercial buildings.¹⁸

Source:
¹⁸ Facilitate Magazine

Key site locations Planned and under-construction projects

Note: Each bubble represents an individual project and size of the bubble represents the value of the project
Source: Global Data



Sectors in focus Commercial

Project activity

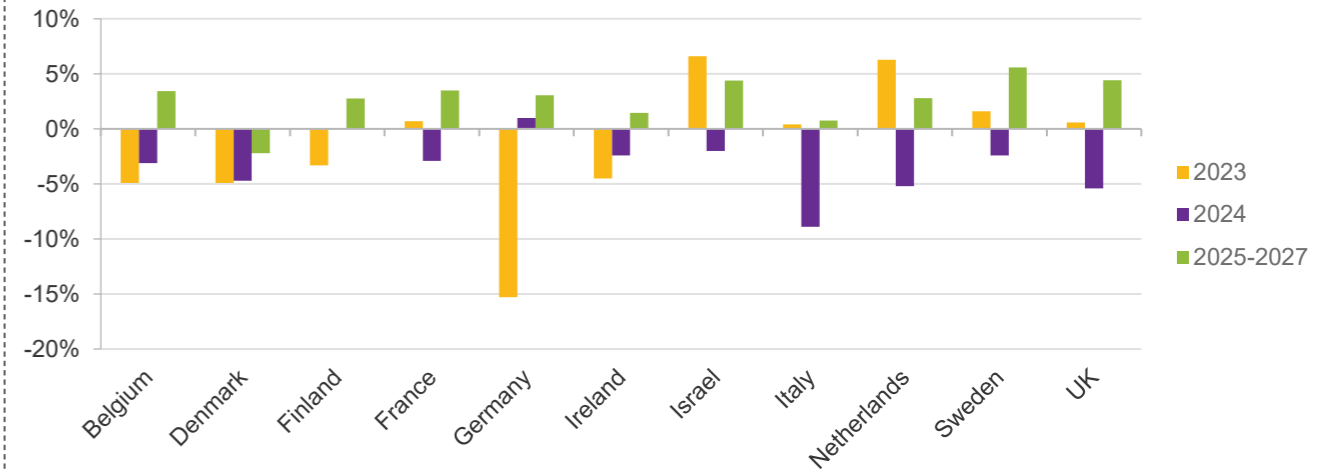
- While there has been limited new project announcements in the last two years, a substantial number of projects are anticipated to be completed in the next 3-4 years.
- With an increased focus on ESG and a preference for quality space, there is likely to be an upswing in the fit-out market in the coming years.
- In terms of project volume by value for the upcoming projects, the UK leads the charge, followed by Germany.

Office space trends will continue to prioritise sustainability, with a strong emphasis on green building practices, energy efficiency, and the use of eco-friendly materials in construction and renovation projects.

Key considerations

01	Supply chain complexity	Supply chain issues due to the red sea crisis may impact the delivery timelines of long lead items like carpets, modular furniture etc, which may impact overall project delivery for fit-outs.
02	Lack of skilled labour to carry out refurbishment jobs	The shortage of professionals capable of implementing sustainable construction practices poses a challenge to achieving green building objectives.
03	Retrofitting opportunities	The trend for deep retrofits is only set to grow – with momentum driven both by the potential for increased asset values, and the corporate and regulatory push for a more sustainable built environment. These projects do present additional challenges that must be managed – but these are by no means insurmountable, with foresight, robust risk management, and the right expertise on board from an early stage.

YoY % Change in construction output in real terms for Commercial sector



Source: Global Data

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Commodities

Construction commodities play a crucial role in the global economy, and their prices are subject to fluctuations due to various factors such as supply and demand, economic outlook, and geopolitical events.

In recent times, we have witnessed market corrections in commodities, providing timely relief to the construction industry.

At Linesight, we closely monitor the trends and developments in the commodities market to provide our clients with the most up-to-date and accurate information.

Please note that commodity prices are based on representative materials available in the respective countries, and as these materials may not be standard across all markets, cross-country comparisons on prices can be ineffective. For example, asphalt types can vary between hot, cold or a bitumen price, and standard unit sizes for materials can vary across countries. Material prices relate to raw or unfinished materials, and not to finished, delivered and erected on-site prices.



Copper



Steel rebar



Steel flat



Stainless steel



Cement



Concrete



Lumber



Bricks/Blocks



Plasterboard



Diesel



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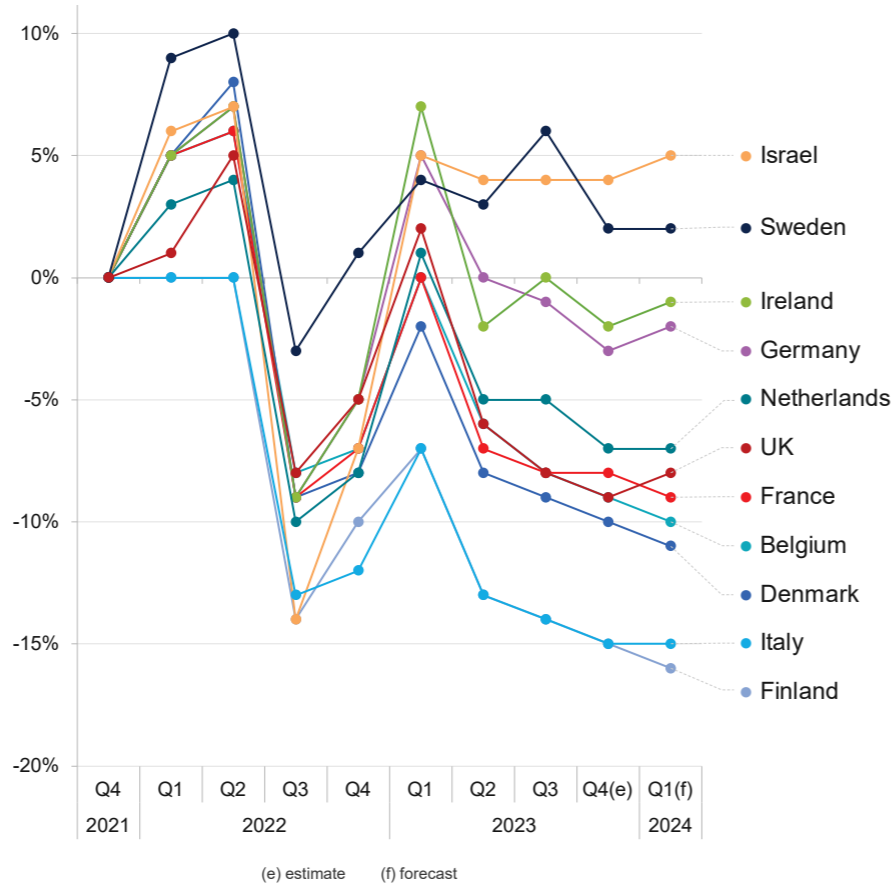
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Price change comparison against Q4 2021



YoY % price change	Level of impact on construction industry			Forecast
	Price change (e) vs (f)	Material availability	General state of supply chain	
0%	■	●	◆	↔
-1%	■	●	◆	↔
-7%	■	●	◆	➔
-7%	■	●	◆	➔
-8%	■	●	◆	↔
-10%	■	●	◆	➔
-9%	■	●	◆	➔
-9%	■	●	◆	➔
-10%	■	●	◆	➔
-9%	■	●	◆	➔
-10%	■	●	◆	➔

- >5%
- >1%-≤5%
- ≤1%
- Deficit
- Balanced
- Surplus
- ◆ Stressed
- ◆ Adequate
- ◆ Easily available
- ↑ ≥ 5%
- ➔ ≥ 1% - < 5%
- ↔ < -1% - < 1%
- ➔ ≥ -1% - < -5%
- ↓ ≥ -5%

Source: Global Data

Past trend

Copper prices peaked in H1 2022 across Europe. Since then, prices have witnessed a downward trend, but have become increasingly volatile in the last few quarters. This is likely due to China's anticipated economic recovery, supply disruptions in Latin America, and a weak global economic outlook. In Q4 2023, prices were closer to the levels observed in Q4 2022, except in Israel which experienced a 12% increase in prices, attributed to the weakness of the Israeli New Shekel.

Current situation

During Q4 2023, copper prices declined across all countries by approximately 0.5% to 4% on a quarterly average basis. This decrease was primarily driven by weak demand from China, coupled with substantial inventories that have been dampening prices.

Future outlook

Future demand is poised to increase due to renewable energy sector growth. The recent Red Sea hostilities are causing supply chain disruptions, which may exert further upward pressure on prices.

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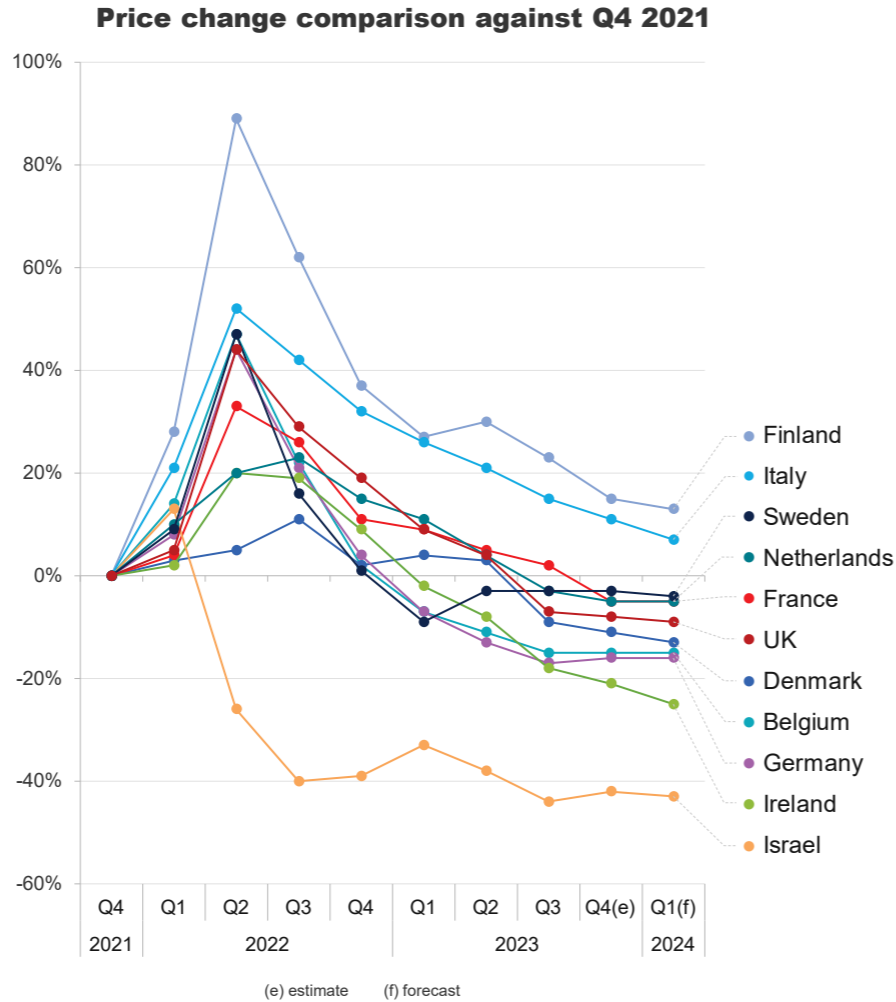
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Source: Global Data

YoY % price change	Level of impact on construction industry			Forecast
	Price change (e) vs (f)	Material availability	General state of supply chain	
Q1 '23 – Q1 '24 (f)				Q2 - Q3 '24 (f)

-11%	■	●	◆	↘
-15%	■	●	◆	↘
6%	■	●	◆	↔
-15%	■	●	◆	↔
-13%	■	●	◆	↔
-16%	■	●	◆	↘
-16%	■	●	◆	↘
-8%	■	●	◆	↔
-9%	■	●	◆	↔
-23%	■	●	◆	↘
-14%	■	●	◆	↔

■ >5%	● Deficit	◆ Stressed	↑ ≥ 5%
■ >1%-≤5%	● Balanced	◆ Adequate	↔ ≥ 1% – < 5%
■ ≤1%	● Surplus	◆ Easily available	↔ < -1% – < 1%
			↘ ≥ -1% – < -5%
			↓ ≥ -5%

Past trend

Due to supply chain disruptions, steel prices, which peaked in H1 2022, began to decline in Q2 2023. This decrease was influenced by reductions in energy prices, weak demand, and the normalisation of supply chains.

On a YoY basis in Q3 2023, steel prices saw a double-digit percentage dip across all countries except Israel, where prices had already fallen steeply in Q3 2022.

Current situation

In Q4 2023, steel prices continued to decline across most countries due to weak demand from the construction sector. However, Germany experienced a marginal increase of 0.4%, attributed to limited product supply, exhausted quotas for imports, and a shortage of steel scrap hampering production. Similarly, Israel saw a 3% increase due to high import costs amid the ongoing conflict.

Future outlook

In Q1 2024, prices are anticipated to decline, but upward pressure may emerge in subsequent quarters due to an expected recovery in construction demand and supply chain disruptions in the Red Sea. These disruptions have already caused delays of 2-3 weeks in critical material supplies.

Prices are forecasted to remain flat or decrease further based on demand-supply dynamics. Additionally, steel producers face pressure to reduce environmental impact, driving the development of more energy-efficient steelmaking technologies, albeit with short-term transitional costs.



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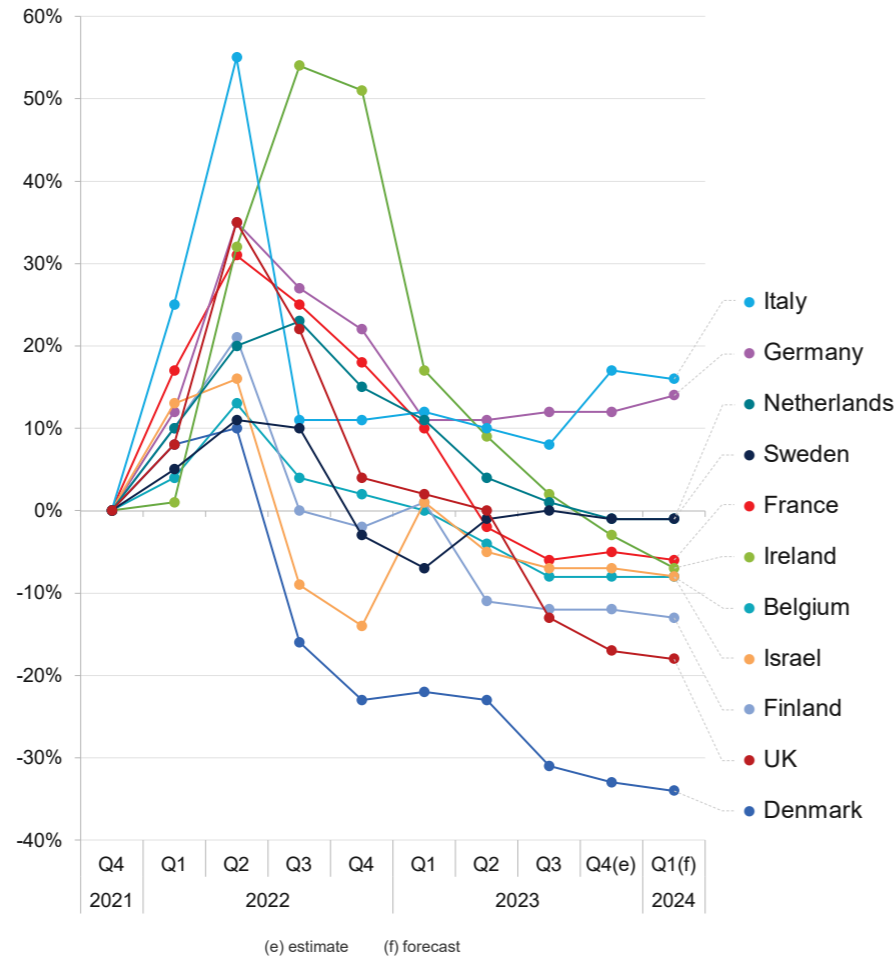
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Price change comparison against Q4 2021



YoY % price change	Level of impact on construction industry			Forecast
	Price change (e) vs (f)	Material availability	General state of supply chain	

3%	■	●	◆	↘
2%	■	●	◆	↔
-11%	■	●	◆	↔
6%	■	●	◆	↔
-14%	■	●	◆	↔
-20%	■	●	◆	↘
-8%	■	●	◆	↔
-9%	■	●	◆	↔
-14%	■	●	◆	↘
-19%	■	●	◆	↘
-16%	■	●	◆	↘

■ >5%	● Deficit	◆ Stressed	↑ ≥ 5%
■ >1%-≤5%	● Balanced	◆ Adequate	↗ ≥ 1% - < 5%
■ ≤1%	● Surplus	◆ Easily available	↔ < -1% - < 1%
			↘ ≥ -1% - < -5%
			↓ ≥ -5%

Source: Global Data

Past trend

In line with steel rebar prices, flat steel prices peaked in Q2 2022 across all the countries and began to ease in the second half of 2022.

Current situation

In Q4 2023, flat steel prices trended downwards across all the countries except Germany, Israel and Italy. Higher flat steel prices in Germany is attributed to constrained product supply and restricted imports, while in Israel the increase was due to increase import cost. Italy witnessed an increase due to increase in price hike by regional steel producers.

Future outlook

Mirroring steel rebar trend, in Q1 2024 flat steel prices are expected to trend downwards in all the countries, barring Germany and Belgium, where prices are likely to remain sticky amid suppliers reducing the supply to adjust to the demand. Like steel rebar price trends, in the coming quarters prices are likely to remain stable or edge downwards.



Commodities Stainless steel

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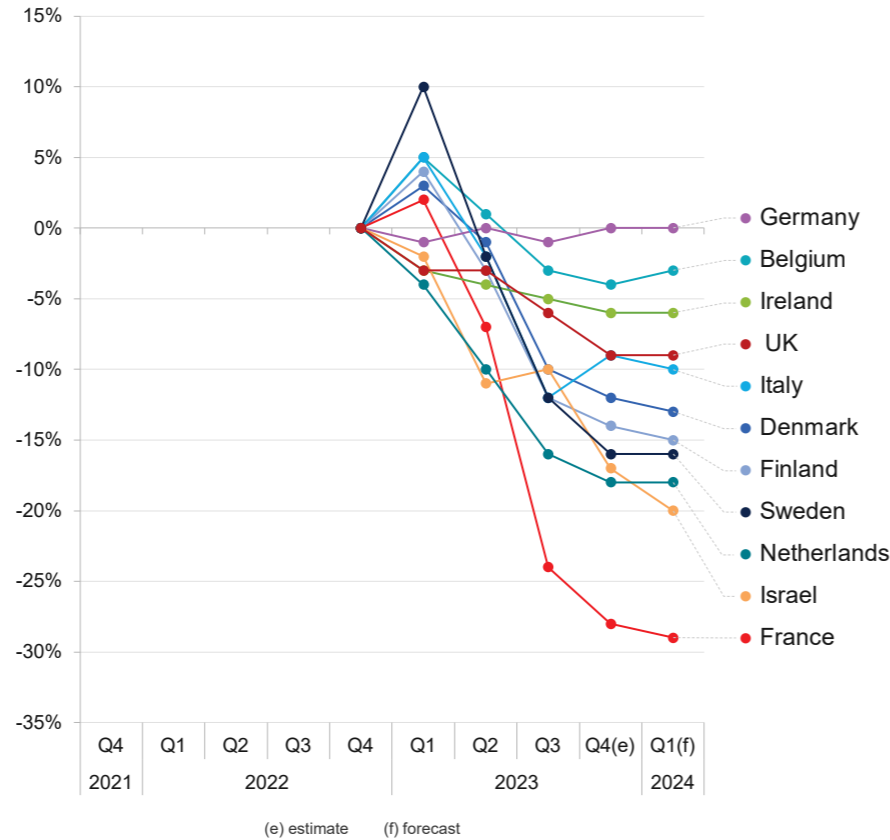
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Price change comparison against Q4 2022



YoY % price change	Level of impact on construction industry			Forecast
	Price change (e) vs (f)	Material availability	General state of supply chain	

2%	■	●	◆	↔
-8%	■	●	◆	↘
-3%	■	●	◆	↔
-7%	■	●	◆	↔
-14%	■	●	◆	↘
-15%	■	●	◆	↘
-18%	■	●	◆	↘
-24%	■	●	◆	↔
-15%	■	●	◆	↔
-18%	■	●	◆	↘
-30%	■	●	◆	↔

■ >5%	● Deficit	◆ Stressed	↑ ≥ 5%
■ >1%-≤5%	● Balanced	◆ Adequate	↗ ≥ 1% - < 5%
■ ≤1%	● Surplus	◆ Easily available	↔ < -1% - < 1%
			↘ ≥ -1% - < -5%
			↓ ≥ -5%

Source: Global Data

Past trend

In the last year Stainless steel prices in Europe have been declining since their peak in Q1 2023, primarily driven by weakened downstream demand and decreasing prices of key raw materials. However, there has been some volatility in the prices in Germany driven by anticipated demand from automotive and chemical sectors.

Current situation

On a quarterly average basis prices continued to decrease in Q4 2023, attributed to weak demand and declining production costs with the exception of Italy where prices picked up by 3% due to supply shortage.

Future outlook

In Q1 2023, prices are expected to decline further due to low nickel prices and weak demand, with Italy's Acciai Speciali Terni (AST) halting production for 3 days in November 2023 due to reduced European market orders. Prices may stabilise as demand improves across Europe, but Denmark, Finland, Italy, and Israel could see continued declines for several more quarters.



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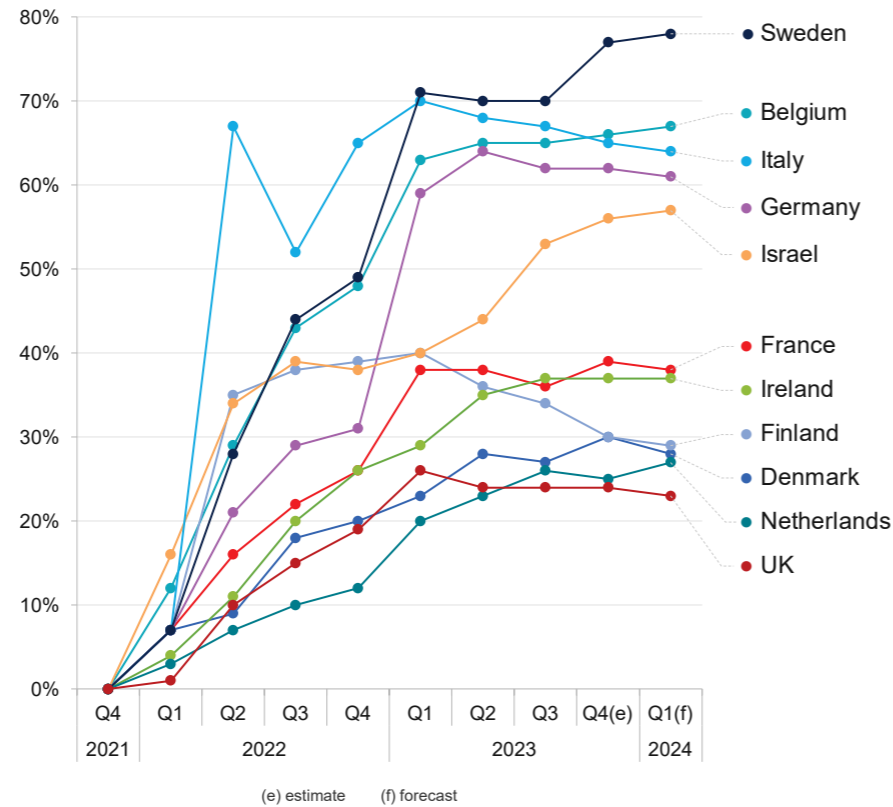
Labour

Sectors in focus

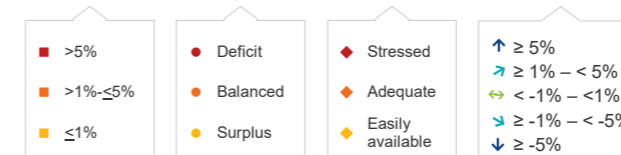
Commodities

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Price change comparison against Q4 2021



YoY % price change	Level of impact on construction industry			Forecast
	Price change (e) vs (f)	Material availability	General state of supply chain	
4%	■	●	◆	↔
2%	■	●	◆	↔
-4%	■	●	◆	↘
1%	■	●	◆	↘
12%	■	●	◆	↔
0%	■	●	◆	↔
6%	■	●	◆	↘
-7%	■	●	◆	↘
4%	■	●	◆	↘
5%	■	●	◆	↘
-2%	■	●	◆	↘



Source: Global Data

Past trend

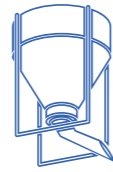
Despite the easing of energy prices, cement prices have continued to rise due to producers' inability to offset reduced input costs following previous losses. While some stabilisation has occurred in recent quarters, prices remain elevated compared to Q4 2021 levels across all countries.

Current situation

In Q4 2023, cement prices exhibited varied trends across countries. Denmark saw a 2.1% increase due to higher sand and gravel costs, while Israel experienced a 2% rise attributed to a weak currency. Sweden posted a 4% increase driven by infrastructure and institutional sector activity. However, Finland reported a 3% dip due to a slowdown in the construction industry. Prices remained stable in the rest of the countries.

Future outlook

In Q1 2024, price changes are expected to range from -1% to 1% across countries. Long-term projections anticipate price declines in most countries due to weak demand in the construction industry, especially the residential sector. However, a few countries may experience upward pressure from the demand side through investments within the infrastructure sector. In Israel, a weakness in currency will keep the prices elevated.



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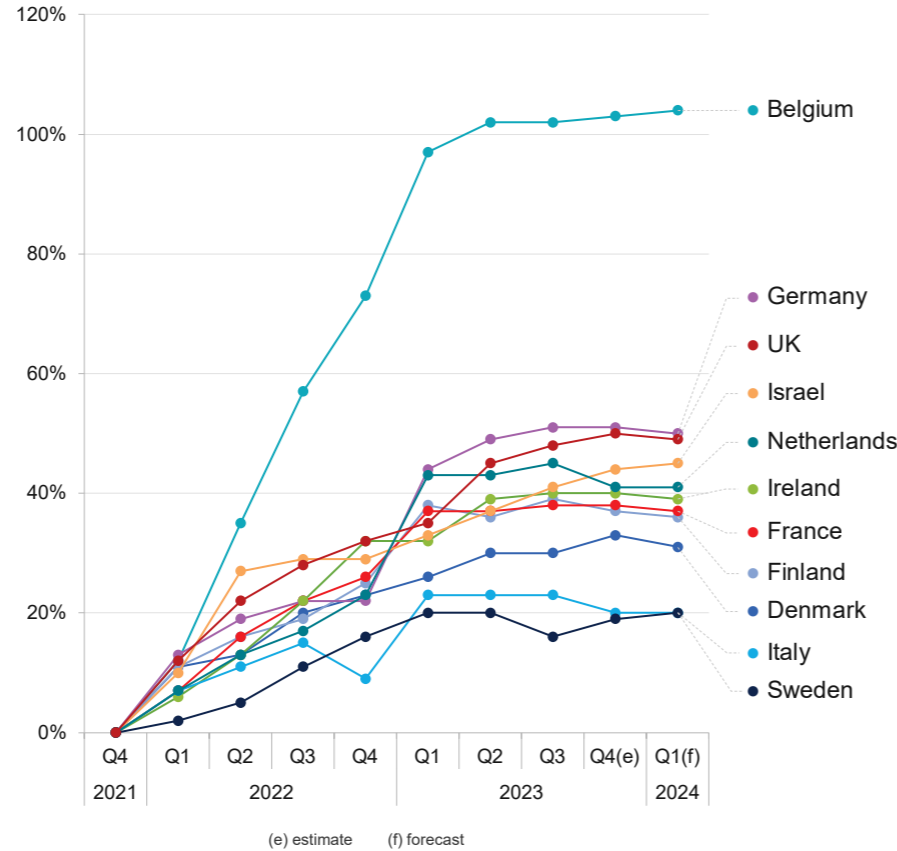
Labour

Sectors in focus

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Methodology

Price change comparison against Q4 2021



YoY % price change	Level of impact on construction industry			Forecast
	Price change (e) vs (f)	Material availability	General state of supply chain	

3%	■	●	◆	↔
4%	■	●	◆	↘
10%	■	●	◆	↘
9%	■	●	◆	↔
-1%	■	●	◆	↘
5%	■	●	◆	↘
0%	■	●	◆	↔
-1%	■	●	◆	↘
4%	■	●	◆	↘
-2%	■	●	◆	↘
-1%	■	●	◆	↔

■ >5%	● Deficit	◆ Stressed	↑ ≥ 5%
■ >1%-≤5%	● Surplus	◆ Adequate	↗ ≥ 1% - < 5%
■ ≤1%		◆ Easily available	↔ < -1% - < 1%
			↘ ≥ -1% - < -5%
			↓ ≥ -5%

Source: Global Data

Past trend

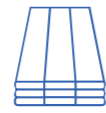
Concrete prices have mirrored the trends observed in cement, remaining elevated. However, some stabilisation has been noted in recent quarters.

Current situation

Amid weak demand, production levels are being adjusted, and prices are being recalibrated to match supply and demand conditions. Marginal adjustment in prices were observed on a QoQ basis. In Q4 2023, concrete prices remained largely stable in Belgium, France, Germany, and Ireland. Denmark, Israel, and Sweden experienced increases of over 2%, while Finland, Italy, and the Netherlands saw declines of more than 1.5%.

Future outlook

In Q1 2024 prices are likely to marginally trend downward among all the countries. In the long-term upward pressure to the prices might be observed due to decarbonisation efforts and support in demand from infrastructure sectors.



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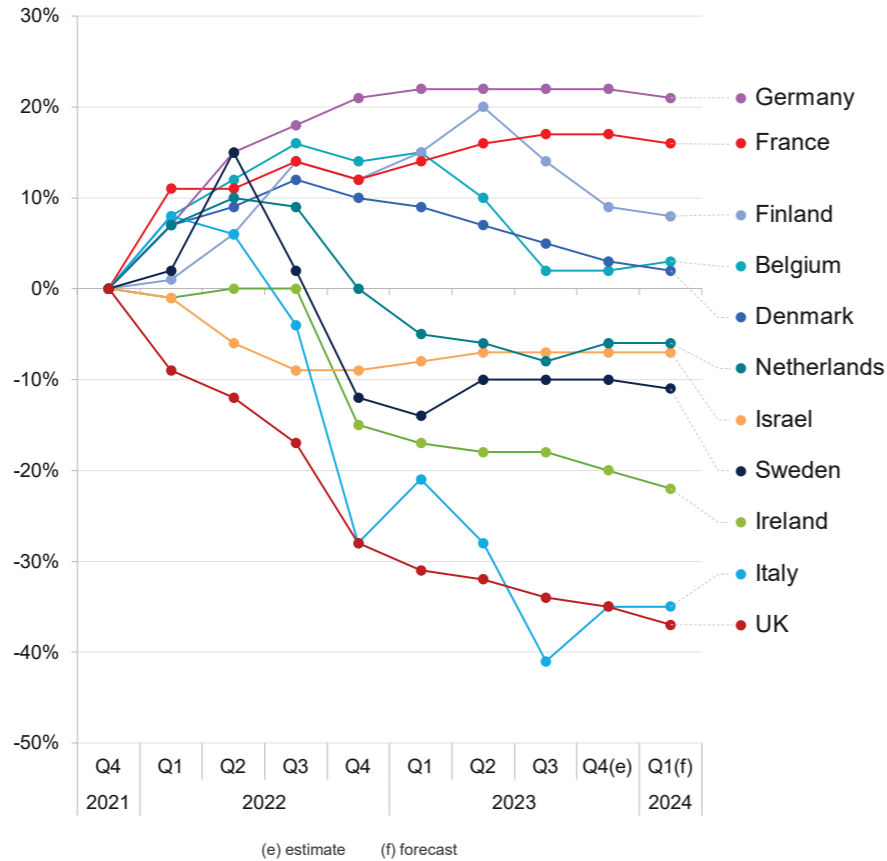
Labour

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Price change comparison against Q4 2021



YoY % price change	Level of impact on construction industry			Forecast
	Price change (e) vs (f)	Material availability	General state of supply chain	
Q1 '23 – Q1 '24 (f)				Q2 - Q3 '24 (f)
0%	■	●	◆	↘
2%	■	●	◆	↔
-6%	■	●	◆	↘
-11%	■	●	◆	↔
-6%	■	●	◆	↘
-1%	■	●	◆	↘
1%	■	●	◆	↔
3%	■	●	◆	↔
-5%	■	●	◆	↘
-17%	■	●	◆	↘
-8%	■	●	◆	↘

- >5%
- >1%-≤5%
- ≤1%
- Deficit
- Balanced
- Surplus
- ◆ Stressed
- ◆ Adequate
- ◆ Easily available
- ↑ ≥ 5%
- ↗ ≥ 1% – < 5%
- ↔ < -1% – < 1%
- ↘ ≥ -1% – < -5%
- ↓ ≥ -5%

Source: Global Data

Past trend

Lumber prices have shown diverse trends across countries. In Germany, prices have remained largely flat over the past year, as suppliers reduce cutting quantities due to a weakening residential sector. In France, prices had risen and remained elevated due to directives mandating the use of natural materials in public buildings, including those for the 2024 Summer Olympics. Israel has also seen flat prices, while other countries have experienced a declining trend due to a weakening residential sector.

Current situation

On a QoQ basis, in Q4 2023, prices have edged downward in most of the countries, reflecting the decline in the residential sector. Prices in Belgium and the Netherlands have remained almost flat indicating a balanced supply-demand scenario during this period.

Future outlook

The price of lumber is anticipated to face ongoing pressure in the upcoming quarters, primarily due to weakness in the housing market. Additionally, lumber-exporting countries such as Sweden are experiencing increased supply due to supply chain disruptions in the Red Sea, further adding to downward pressure on prices.

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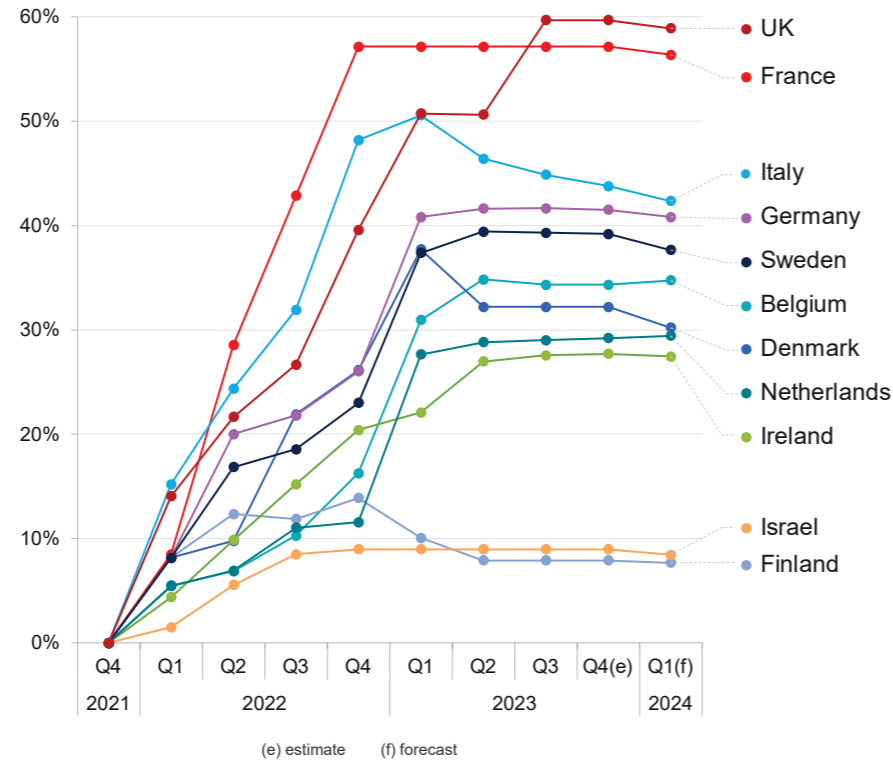
Labour

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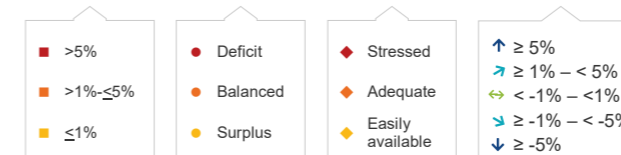
Methodology

Price change comparison against Q4 2021



YoY % price change	Level of impact on construction industry			Forecast
	Price change (e) vs (f)	Material availability	General state of supply chain	

5%	■	●	◆	↘
-1%	■	●	◆	↘
-5%	■	●	◆	↘
0%	■	●	◆	↘
0%	■	●	◆	↘
3%	■	●	◆	↘
-5%	■	●	◆	↘
1%	■	●	◆	↘
4%	■	●	◆	↘
-1%	■	●	◆	↔
-2%	■	●	◆	↘



Source: Global Data

Past trend

Brick prices have been increasing since Q2 2022. Despite the easing of energy prices, prices have continued to rise due to producers' inability to offset reduced input costs following previous losses. In recent quarters prices have been flat due to a weak housing sector.

Current situation

Amid a weakening residential sector prices have remained flat across all the countries, on a QoQ basis.

Future outlook

Prices are anticipated to decline in Q1 2024 across all countries, with a continued gradual decrease expected in the following quarters. However, stability is foreseen in Israel as producers adjust supplies to match declining demand.

Commodities Plasterboard

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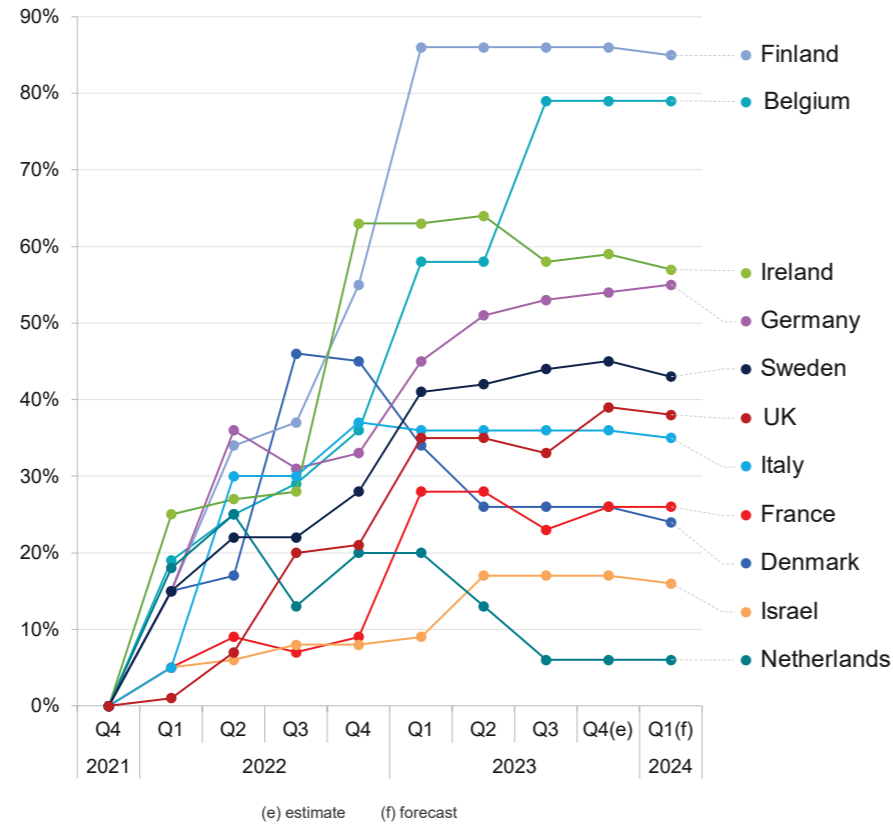
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Price change comparison against Q4 2021



YoY % price change	Level of impact on construction industry			Forecast
	Price change (e) vs (f)	Material availability	General state of supply chain	

0%	■	●	◆	↘
14%	■	●	◆	↔

-4%	■	●	◆	↘
7%	■	●	◆	↔
1%	■	●	◆	↘
2%	■	●	◆	↘
-1%	■	●	◆	↘
-2%	■	●	◆	↔
-8%	■	●	◆	↘
7%	■	●	◆	↔
-12%	■	●	◆	↘

■ >5%	● Deficit	◆ Stressed	↑ ≥ 5%
■ >1%-≤5%	● Balanced	◆ Adequate	↗ ≥ 1% - < 5%
■ ≤1%	● Surplus	◆ Easily available	↔ < -1% - < 1%
			↘ ≥ -1% - < -5%
			↓ ≥ -5%

Source: Global Data

Past trend

Amid rising energy prices, plasterboard prices began to increase from Q2 2023 and have remained elevated throughout 2023. Despite weak demand from the housing sector, prices have stayed flat as producers have not adjusted prices to reflect the decrease in energy prices. Additionally, there is a demand for renovation-related work.

Current situation

On a quarterly average basis plasterboard prices remained relatively stable in Q4 2023 across most countries, except for France and the UK, where prices saw increases of 2.5% and 4.5% respectively. These increases can be attributed to rising production and wage costs, coupled with distributors maintaining higher prices.

Future outlook

Soft demand in the construction industry, particularly in new residential construction, is anticipated to lower prices in the upcoming quarters. However, prices may remain flat in certain countries due to the demand for renovation work.



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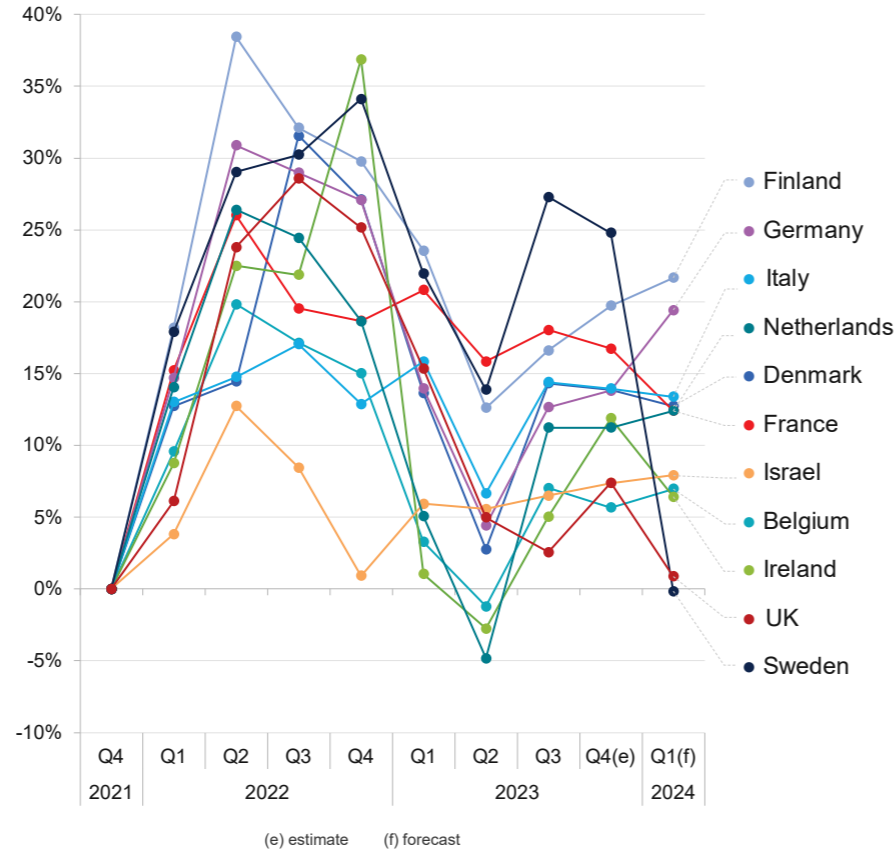
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Price change comparison against Q4 2021



YoY % price change	Level of impact on construction industry			Forecast
	Price change (e) vs (f)	Material availability	General state of supply chain	

YoY % price change	Price change (e) vs (f)	Material availability	General state of supply chain	Forecast
-2%	■	●	◆	➔
5%	■	●	◆	➔
-2%	■	●	◆	➔
7%	■	●	◆	↔
-1%	■	●	◆	↔
-7%	■	●	◆	↔
2%	■	●	◆	↔
4%	■	●	◆	➔
5%	■	●	◆	↔
-13%	■	●	◆	➔
-18%	■	●	◆	➔

■ >5%	● Deficit	◆ Stressed	↑ ≥ 5%
■ >1%-≤5%	● Balanced	◆ Adequate	➔ ≥ 1% - < 5%
■ ≤1%	● Surplus	◆ Easily available	↔ < -1% - < 1%
			➔ ≥ -1% - < -5%
			↓ ≥ -5%

Source: Global Data

Past trend

Amid supply chain disruptions, diesel prices peaked in H1 2022 and began a decline from Q1 2023 onwards. This downward trend persisted until Q2 2023, but in the last two quarters, there has been volatility due to geopolitical events and fluctuations in global crude oil prices.

Current situation

In Q4 2023, diesel prices remained relatively stable on a quarterly average basis across several countries, except for notable increases in Ireland, the UK, and Finland, where prices rose by 6.5%, 4.7%, and 2.7%, respectively. However, prices saw a sharp decline in December in these countries and are expected to continue falling in Q1 2024.

Future outlook

Given the fluctuations in international crude oil prices, driven by OPEC+ nations' production cuts and geopolitical tensions, diesel prices are expected to remain volatile in the short term.

However, in Sweden there was a significant decrease in diesel prices in January 2024 and prices are expected to fall by 20% in Q1 2023, due to a fuel tax reduction. The Swedish government is also aligning efforts to meet greenhouse gas reduction targets, including plans to ban diesel cars in Stockholm by 2025.

Methodology

Linesight has commissioned independent global research to track construction activity, materials and commodity prices.

The approach and methodology for the collection of construction material pricing and other indicators is based on primary and secondary research.

Primary and secondary research

Primary research is conducted on a quarterly basis with stakeholders in the value chain, including manufacturers and suppliers/distributors of the target materials, to ascertain market information on prices in recent quarters, and also on projections for changes in the coming quarter and remainder of the year. The market analysis also involves a thorough assessment of secondary sources of data on materials and labour prices, in addition to underlying demand and supply trends that will impact market prices.

Sources include GlobalData's Construction Intelligence Center (CIC), the World Bank, IMF, OECD, as well as country specific national statistics offices, such as the U.S. Bureau of Economic Analysis, Bureau of Labor Statistics, and also industry specific associations and publications.

Definitions

- All commodities are raw materials
- Nominal data series do not exclude changes in prices and are also referred to as current prices series. Annual changes in nominal data for construction output will include changes in construction activity, as well as changes in costs for materials and equipment.
- Real data series are calculated by keeping prices constant (so, are also referred to as constant price series), and therefore, they reflect changes in activity only. Growth rates in nominal terms can overstate the pace of growth in construction activity if there is high inflation stemming from rising prices for key inputs.
- Level of impact rating reflects a combination of factors: price change (compared to recent past beyond the last quarter), the importance of the material, and general state of the supply chain in terms of stability.
- The key site locations and their respective project values indicated in the sector maps are based on information sourced from the Global Data Intelligence Center and data available in the public domain at the time of writing this report. These maps are indicative only and do not represent the exact project values.

Abbreviations

QoQ	Quarter on Quarter
YoY	Year on Year
MoM	Month on Month
GDP	Gross Domestic Product
CPI	Consumer Price Index (wherever not specified)
e	estimated
f	forecasted
EV	Electric Vehicles
DC	Data Centre

Disclaimer

The construction market insights report contains information, data, and analysis related to the construction industry. While we strive to provide accurate and up-to-date information, it is important to note that the commodity market is subject to various factors, uncertainties, and changes that may impact the accuracy or reliability of the report's contents.

Linesight assumes no responsibility or liability for any inaccuracies, errors, omissions, or losses that may arise from your reliance on the information presented in the report. It is essential that users exercise their independent judgement, conduct their own research, and seek professional advice before making any decisions based on the information contained within the report.

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