European Construction Sector Observatory

Country profile **Netherlands**

October 2021

In a nutshell

In 2020, GDP (gross domestic product) in the Netherlands stood at EUR 727.0 billion, representing an increase of 9.4% compared to its 2010 level but a 3.7% decline compared to 2019.

The **number of enterprises** in the Netherland's broad construction sector stood at 308,707 in 2020[1], representing an increase of 61.1% since 2010. In parallel, the **volume index of production** in the broad construction sector grew by 27.7% over the 2015-2020 period.

Volume index of production in the broad construction sector between 2015 and 2020 ↑ **27.7%**

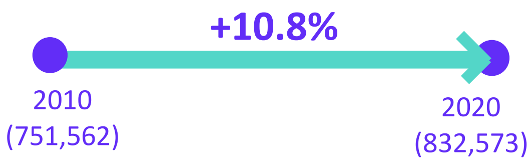
As a result, total turnover in the broad construction sector amounted to EUR 168.4 billion in 2018, representing a growth of 23.4% over the period 2010-2018. It further increased to EUR 192.4 billion in 2020[2]. This represents an increase of 41.0% since 2010 and 14.3% since 2018.

Total turnover in the broad construction sector between 2010 and 2020 ↑ **41.0%**

The **gross operating rate**[3] of the broad construction sector, an indicator of the sector's profitability, stood at 19.3% in 2018, above the 2010 level (15.8%) and also above the 2018[4] EU-27 average (16.7%). The real estate activities sub-sector was the most profitable, with a gross operating rate of 49.2%.

In terms of employment, there were 832,573 **persons employed** in the broad construction sector in 2020, a 10.8% increase compared to its 2010 level. This was mainly due to growth experienced in the architectural and engineering activities (+15.9%) and the narrow construction (+14.4%) sub-sectors, during this reference period.

Number of persons employed in the Dutch broad construction sector



The **number of households** in the Netherlands reached 7.9 million in 2020, representing a growth of 8.2% from its 2010 levels. Fuelled by declining **mortgage interest rates** (2.7% in 2020 vs. 4.8% in 2010), housing loans granted also witnessed continuous growth over the 2010-2019 period (+8.1%). These factors, combined with an increasing urbanisation rate and greater household income, contributed to a strong demand for housing, which in turn drove the housing index price up (+41.9% between 2015 and 2020).

Housing price index between 2015 and 2020 ↑ **41.9%**

The increase in housing loans has led to greater household debt in the Netherlands. The rising demand for houses was met by an increasing supply in housing stock as the residential **building permits index** grew by 18.0% in 2020 compared to the 2015 level.

However, the completion of new houses fell by 3.1% in 2019 to reach 69,322 units in 2020, representing a sharp drop to an average of 58,150 units per year over the 2010-2020 period. This is primarily due to post 2010 changes in the planning system, which also partly explains the rapid rise in house prices in recent years. The government aims to reduce the housing shortage in the Netherlands to 2.0% by 2035.

With regards to **non-residential construction and civil engineering**, in July 2020 the Dutch government announced that it is set to receive grants totalling EUR 82 million from the European Commission for the development of road, railway and water infrastructure projects[5]. The government has also taken measures to ensure the continuation of construction and infrastructure works amid the COVID-19 crisis. A special task force within the construction sector has been established to identify projects that can be brought forward or carried out on the short-term. An additional EUR 265.0 million has been assigned for these projects over the next two years[6].Notably, as of November 2021, the Dutch government had not yet submitted its national Recovery and Resilience Plan to the European Commission[7]. However, the allocated funds for the Netherlands, should the country request them, amount to an estimated EUR 6 billion in grants and up to EUR 55 billion in loans[8].

Despite these developments, the Dutch construction sector is hindered by two major issues. Firstly, the Dutch construction sector faces a shortage of skilled workers. Secondly, the issue of late payment has become more problematic, especially since the onset of the COVID-19 pandemic.

In 2020, late payments affected 47% of the total value of B2B invoices in the Dutch construction sector, compared to 35% in 2019. 42% of enterprises had to wait longer, up to 14 days past the due date on average, to turn overdue invoices into cash[9].

To summarise, governmental initiatives, coupled with positive forecasts related to construction performance indicators such as turnover and employment make the outlook of the Dutch construction sector optimistic. Moreover, government targets for reducing housing shortages and future infrastructure projects, are expected to generate further business opportunities for the sector.

Table of Contents

1

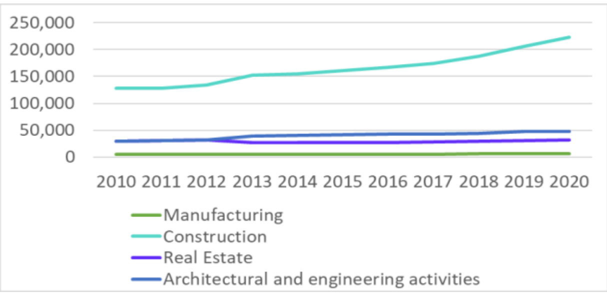
Key figures

Construction market

The **number of enterprises** in the broad construction sector in the Netherlands totalled 308,707 in 2020[10] (Figure 1), with the narrow construction sub-sector accounting for 72.1% of the total. Overall, the number of enterprises in the broad construction sector increased by 61.1% between 2010 and 2020, mostly driven by a 74.4% growth registered in the narrow construction sub-sector, followed by the architectural and engineering activities (+63.8%), the manufacturing (+17.2%), and the real estate activities (+8.9%) sub-sectors in the same period.

Number of enterprises in the broad construction sector between 2010 and 2020 **61.1%**

Figure 1: Number of enterprises in the broad Dutch construction sector between 2010 and 2020

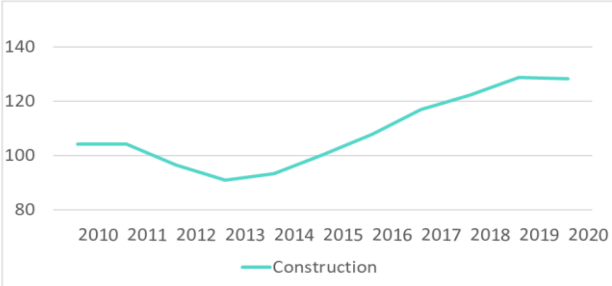


Source: Eurostat, 2021.

The **volume index of production** in the broad construction sector[11] experienced a drop of 13.3 index points (ip) between 2010 and 2013 due to the 2008 financial crisis, reaching a bottom low (Figure 2). However, it increased by 37.3 ip during 2013-2020, leading to an overall increment of 27.7% over the period of 2015-2020.

Volume index of production in the broad construction sector between 2015 and 2020 **27.7%**

Figure 2: Volume index of production in the Dutch construction sector between 2010 and 2020 (2015=100)

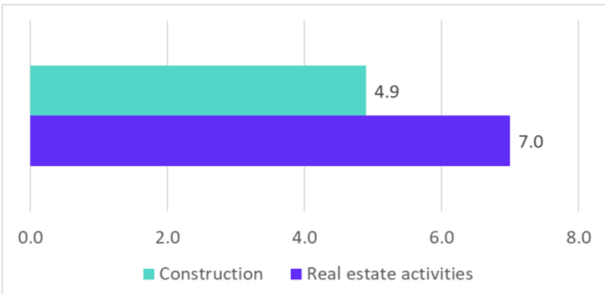


Source: Eurostat, 2021.

Total **value added at factor cost** of the broad construction sector amounted to EUR 71.2 billion in 2020[12], with the narrow construction sub-sector contributing 52.0% of the total[13] (EUR 37.0 billion). The real estate activities sub-sector contributed 28.5% of the total (i.e., EUR 20.3 billion), followed by the architectural and engineering activities (12.8% of the total i.e., EUR 9.1 billion) and the manufacturing (6.7% of the total i.e., EUR 4.7 billion) sub-sectors.

The **share of gross value added of the broad construction sector** stood at 12.9% in 2018[14], below the EU-27 average of 16.5%. In 2020, the share of narrow construction and real estate activities sub-sectors, for the same category, stood at 4.9% (EU-27 average 5.1%) and 7.0% (EU-27 average 10.3%), respectively.

Figure 3: Gross value added as a share of GDP in the Dutch broad construction sector in 2020 (%)



Source: Eurostat, 2021.

The Netherlands has twelve NUTS-2 statistical regions (provinces) namely *Groningen, Friesland* (NL)*, Drenthe, Overijssel, Gelderland, Flevoland, Utrecht, Noord-Holland, Zuid-Holland, Zeeland, Noord-Brabant*, and *Limburg* (NL). The gross value added is not equally distributed among these regions. In 2018[15], *Zuid-Holland, Noord-Brabant* and *Noord-Holland* accounted for 54.2% and 57.9% of the total **regional gross value added** in the narrow construction and real estate activities sub-sectors, respectively.

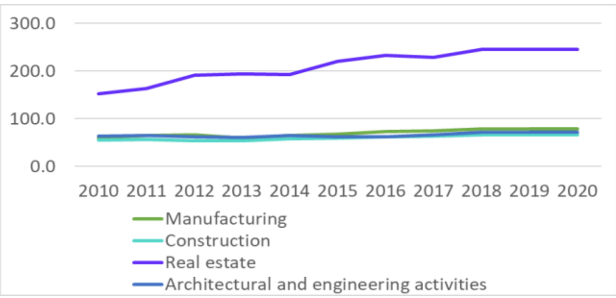
Productivity

Apparent labour productivity[16] in the broad construction sector increased from EUR 67,297 in 2010 to EUR 86,353 in 2018, representing a growth of 28.3% during the period. This is above the EU-27 average of EUR 51,960 (Figure 4). This trend is reflected in all sub-sectors. The real estate activities sub-sector reported the highest increase of 61.2%, growing from EUR 151,800 in 2010 to EUR 244,841 in 2020, followed by the manufacturing sub-sector which increased by 32.1%, from EUR 59,062 to EUR 78,011 over the 2010-2020 period. Similarly, the narrow construction sub-sector registered growth of 19.9%, from EUR 55,200 in 2010 to EUR 66,175 in 2020, while the architectural and engineering activities sub-sector grew from EUR 63,200 in 2010 to EUR 70,886 in 2020 (+12.2%).

Labour productivity in the narrow construction sub-sector between 2010 and 2020 **19.9%**

It is important to note that over the last few years, the labour productivity has stagnated.

Figure 4: Labour productivity in the broad construction sector in the Netherlands between 2010 and 2020 (EUR k)



Source: Eurostat, 2021.

Turnover and profitability

Total turnover in the broad construction sector stood at EUR 168.4 billion in 2018, a 23.4% increase compared to 2010. In 2020, it increased to EUR 192.4 billion, representing a 41.0% increase during 2010-2020. This growth was mainly driven by the narrow construction and real estate activities sub-sectors, which registered a turnover growth of 44.6% and 43.5% respectively between 2010 and 2020. Similarly, the architectural and engineering activities and manufacturing sub-sectors recorded increases of 39.0% and 16.3%, respectively, in the same period. Overall, 64.7% of total turnover was generated by the narrow construction sub-sector in 2020, followed by the real estate activities (17.3%) and architectural and engineering activities (9.7%) and manufacturing (8.3%) sub-sectors.

Total turnover of the broad construction sector between 2010 and 2020 **41.0%**

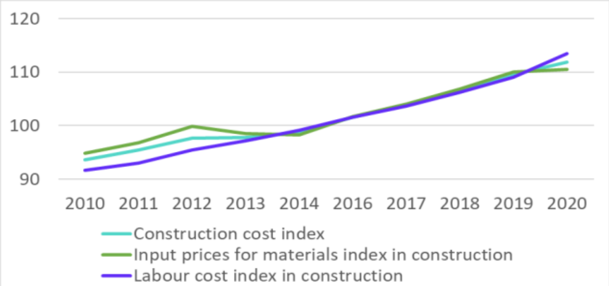
Similarly, the **gross operating surplus** of the broad construction sector amounted to EUR 32.5 billion in 2018, 51.0% above the 2010 level. This growth is explained by a significant increase of the gross operating surplus in the manufacturing (+59.7%) and real estate activities (+57.1%) sub-sectors in the same period.

At the same time, **the gross operating rate** of the broad construction sector[17], which gives an indication of the sector's profitability, stood at 19.3% in 2018, 3.5 pps (percentage points) higher than 2010 (15.8%) and slightly above the EU-27 average of 16.7%. The real estate activities sub-sector enjoyed the largest profit margin on sales (41.1% in 2018), followed by the architectural and engineering activities sub-sector (17.3% in 2018). The manufacturing and narrow construction sub-sectors had the lowest gross operating rate, standing at 10.7% each in 2018.

Construction cost has a significant influence on the profitability of the sector. Construction costs in the Netherlands have been rising over the 2015-2020 period, with the construction cost index experiencing a 11.9% increase, due to increasing material prices (+10.5%) and labour costs in particular (+13.5%). More specifically on labour costs, a recent study from the *Economisch Instituut voor de Bouw* highlighted the raising cost of self-employed workers, which Dutch construction companies extensively rely on in subcontracting arrangements[18].

The price of building materials has grown significantly from November 2020 to April 2021. This is due to the rising demand for building materials combined with the shortages and supply chain disruptions caused by the COVID-19 pandemic, resulting in delays and unforeseen cost increases[19].

Figure 5: Construction cost index between 2010 and 2020 (2015=100)



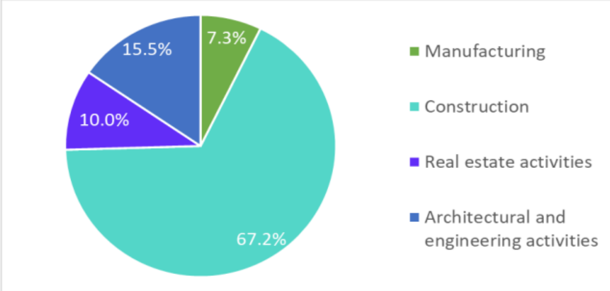
Source: Eurostat, 2021.

Employment

In 2020, there were 832,573 **persons employed** in the broad construction sector, representing an increase of 10.8% compared to the 2010 level (751,562). The narrow construction sub-sector employed 67.2% of the total workforce (i.e., 559,834 persons), followed by the architectural and engineering activities (15.5% i.e., 128,971 persons), real estate activities (10.0% i.e., 82,969 persons) and manufacturing (7.3% i.e., 60,799 persons) sub-sectors. Except for the manufacturing sub-sector, which experienced a decrease of 11.6% over the 2010-2020 period in terms of persons employed in the sector, all the other sub-sectors registered growth, with the largest increase being in the architectural and engineering activities sub-sector (+15.9%). This was followed by the narrow construction and real estate activities sub-sectors, which experienced growth of 14.4% and 1.0% respectively in the same period.

Number of persons employed in the narrow construction sub-sector between 2010 and 2020 ↑ **14.4%**

Figure 6: Percentage of people employed per construction sub-sectors in the Netherlands in 2020



Source: Eurostat, 2021.

As for **employment by specific occupation**, the demand for 'professionals' in the manufacturing and real estate activities sub-sectors experienced sharp increases of 91.2% and 47.4%, respectively, during the 2010-2020 period. Conversely, in the narrow construction sub-sector the demand for 'service and sales workers' experienced the highest increase (+203.3%), while the demand for 'managers' experienced the highest decrease (-51.8%). Similarly, demand for 'plant and machine operators and assemblers' in the manufacturing sub-sector decreased by 40.8% and 'clerical support workers' in the real estate activities sub-sector decreased by 35.2% in the same period. There are also some regional disparities in terms of employment, whereby the *Gelderland*, *Noord-Holland*, *Zuid-Holland* and *Noord-Brabant* regions concentrated 66.8% and 68.2% of employees in the narrow construction and the real estate activities sub-sectors respectively in 2018[20]. The *Zuid-Holland* region, which accounted for the highest number of employees in the narrow construction sub-sector, i.e. 22.8%, reported a 7.1% decline over the 2010-2018 period, reaching 109,900. In the real estate activities sub-sector, *Noord-Holland* (accounting for the highest share of employees, i.e. 24.0%) reported a growth of 6.6% during the same period, reaching 17,700 people.

The number of **self-employed workers** in the real estate activities and narrow construction sub-sectors increased by 29.2% and 11.1%, respectively, between 2010 and 2020. Finally, SMEs employed 82.6% of the total workforce in the broad construction sector in 2018[21], highlighting their importance in construction employment.

Self-employed workers in the narrow construction sub-sector represented 9.4% of all self-employed in the general economy in 2020 - a 0.9 pps decline compared to 10.3% in 2010. This is below the EU-27 average of 11.7%.

Stakeholders report that fraudulent self-employment represents a major concern in the Netherlands and the country is yet to enforce the related laws (e.g. the Wet DBA as introduced in 2016).

Demand for service and sales workers in the narrow construction sub-sector between 2010 and 2020 ↑ **203.3%**

The demand for services and sales workers in the narrow construction sector is estimated to have increased by 203.3% between 2010 and 2020. Services and sales workers include temporary agency workers and posted workers. Stakeholders highlight that in order to fully grasp the actual levels and status of employment in construction, site-level data would be needed as the official statistics do not capture many of the aforementioned situations.

Over the 2010-2020 period, **full-time employment** in the narrow construction and manufacturing sub-sectors decreased by 14.9% and 2.2% respectively, while it increased by 1.6% in the real estate activities sub-sector. Stakeholders report that the overall decrease of full-time employment can be partially explained by the heavy reliance of Dutch construction companies on subcontracting.

In terms of **part-time employment**, the real estate activities sub-sector reported the highest increase with 19.6% followed by the narrow construction (+15.2%) and manufacturing (+10.1%) sub-sectors between 2010 and 2020.

Full-time employment in the narrow construction sub-sector between 2010 and 2020 ↓ **14.9%**

2

Macroeconomic indicators

Economic development

In 2020, the Dutch economy contracted because of the COVID-19 pandemic and related restrictions. It led to constrained economic activity in contact-dependent services in hospitality, the retail trade, entertainment and transport[22].

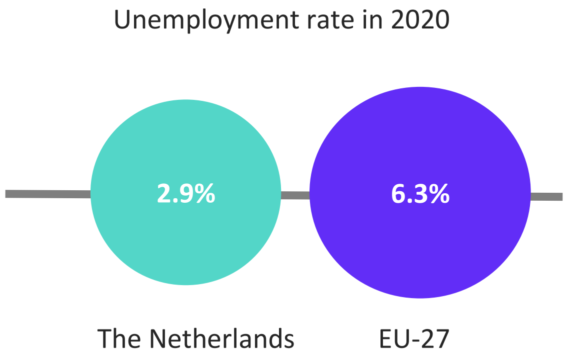
In 2020, Dutch GDP amounted to EUR 727.0 billion, representing a 3.7% decline over the previous year and a 9.4% increase compared to the 2010 level (EUR 664.8 billion). This fall in GDP was primarily due to lower household consumption and reduced investment in fixed assets leading to a declining trade balance[23].

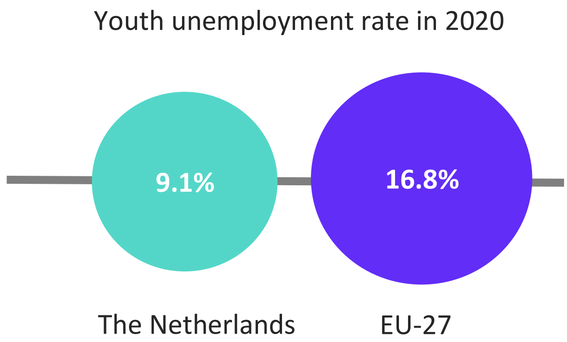
The country's **potential GDP** in 2020 amounted to EUR 754.6 billion, resulting in a negative **output gap** of -3.7%. This negative output gap suggests that the economy is overworking its resources and running above its capacity fuelled by high demand. The **inflation rate** has been continuously declining since 2012, reaching a record low of 0.1% in 2016. It picked up again in 2017, reaching 2.7% in 2019. In 2020, it reduced to 1.1%, higher than the EU-27 average of 0.7%.

Demography and employment

In 2020, the average unemployment rate (between 25-64 years) in the Netherlands reached 2.9%, well below the EU-27 average of 6.3%.

In 2020, the **unemployment rate** showed significant improvement compared to its peak of 6.5% in 2014 and its 2018 levels of 3.2%. The **youth unemployment rate (below the age of 25)** increased to 9.1% in 2020 against 6.7% in 2019, lower than 11.1% in 2010 and more than half of the EU-27 average of 16.8%.





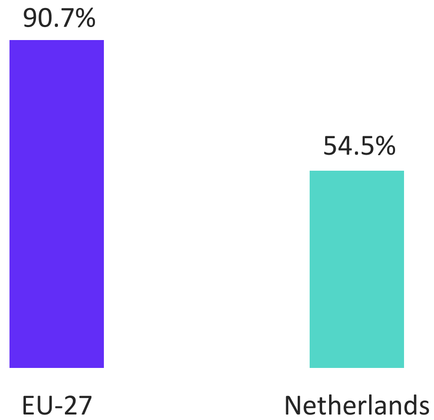
The **total population** of the Netherlands reached 17.4 million people in 2020, up by 0.6% from 2019. It is projected to increase by 3.2% by 2030 and 4.2% by 2050, reaching 18.1 million. In parallel, the **net migration rate** turned from negative to positive in 2008, and has increased from 32,471 in 2010 to 107,627 people in 2019[24], with the number of immigrants reaching 215,756 (+70.2% since 2010). However, in 2020 net migration decreased by 37.0% from 2019 reaching 67,827.

In 2020, the **working age population** made up 64.8% of the Netherland's total population, slightly above the EU-27 average of 64.3%. By 2050, this share is expected to decrease by 5.9 pps to 58.9%. In parallel, the number of **people over 65** is expected to increase from 19.5% of the population in 2020 to 26.4% by 2050, highlighting the country's ageing population and putting further pressure on the labour supply for the construction sector (see

Chapter 4 on skills shortage). Amid high current and projected public expenditure in long-term care[25], reforms have been implemented including decentralising care support and raising retirement age, while linking it to higher life expectancy[26].

Public finance

In 2020, **general government expenditure** represented 48.1% of GDP, slightly higher than in 2010 (47.9%) and lower than the EU-27 average of 53.4%. **General government deficit** amounted to -4.3% of GDP in 2020, above the -3.0% threshold of the EU's Stability and Growth Pact (SGP), but below the EU-27 average of -6.9%. Finally, **general government gross debt** stood at 54.5% of GDP in 2020 up from 48.7% in 2019 and below the EU-27 average of 90.7%. This increase is caused by the tax deferral measures, which led to a higher debt in 2020[27].



Government gross debt (% of GDP) in 2020

Entrepreneurship and access to finance

According to the World Bank Doing Business 2020 report, the Netherlands ranked 24th out of 190 countries in terms of the ease of starting a business. This is a slight decline compared to the previous year (22nd in 2019)[28].

As per the report, starting a business in the Netherlands requires four procedures, taking 3.5 days and costing no income per capita[29].

According to the Global Entrepreneurship Monitor 2019, 48.8% of the Dutch adult population perceive that the country provides many opportunities to start a business. It also states that 13.1% of the adult population (between 18-64 age) is currently not involved in entrepreneurial activities and not intending to start a business in the coming three years.

The start-up and scale-up ecosystem in the Netherlands is quickly growing in importance, as it is in Europe and worldwide[30].

According to the Start-up Genome report 2020, the Netherlands improved its start-up ecosystem, ranking 3rd in Europe and 12th worldwide. Also, the country is home to 12 unicorns (companies valued at over EUR 0.86 billion)[31].

Dutch SMEs were severely affected by the onset of the COVID-19 pandemic and several initiatives were required to help combat the negative impacts. Nevertheless, the construction sector performed well, generating 7.9% growth in SME value added in 2020[32].

In March 2020, the SME credit guarantee scheme was expanded due to the COVID-19 crisis. Under the expansion measure, the size of the credit guarantee was increased from 50.0% to 75.0%[33].

This will result in increased credit for banks, and companies will be able to borrow more and more rapidly. In addition, the scheme will be applicable to bridging loans and current account overdrafts of up to two years in duration[34].

In December 2020, European Investment Bank (EIB) and European Investment Fund (EIF) issued a EUR 795.0 million guarantee to ING, a global financial institution, to support new lending to Dutch SMEs and midcaps on favourable terms to mitigate the impact of the COVID-19 pandemic[35].

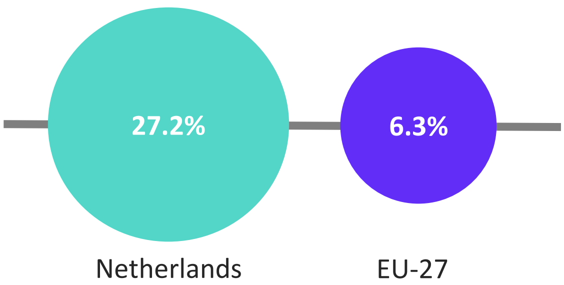
In response, ING committed to providing EUR 1.1 billion in new loans to SMEs. As per the agreement between ING and the EIB, around EUR 702 million of this total amount will have favourable lending conditions of low interest rates[36].

Over the 2018-2020 period, the EIB group accelerated the financing of Dutch SMEs. Around EUR 3.0 billion was made available through intermediary banks and funds to Dutch SMEs, which through a leverage effect from banks and private intermediaries, deployed a total of approximately EUR 12.5 billion of investments[37].

According to the Survey on the Access to Finance of Enterprises (SAFE Report) 2020, access to finance is the most important concern for approximately 9.0% of Dutch SMEs, slightly below the EU-27 average of 10.0%[38].

The survey further indicates that a 27.2% reject rate was reported from SMEs who applied for a loan (compared to a 6.3% EU-27 average). In addition to this, 2.9% of companies who successfully applied for bank loans received less than they applied for (EU-27: 6.0%)[39].

Share of SME rejected loan applications 2020



Furthermore, around 4.7% of Dutch firms did not apply for loans in the past six months of 2020 due to the fear of rejection, as compared to the 3.9% EU-27 average[40].

In terms of access to finance, **loans to non-financial corporations** decreased over the 2010-2020 period, from EUR 313,788 billion in 2010 to EUR 292,290 billion in 2020 (-6.9%).

Loans to non-financial corporations between 2010 and 2020 ↓ **6.9%**

The Dutch government has taken several measures to improve access to finance for SMEs, such as launching '**Qredits**', which provide loans of up to EUR 250,000 to SMEs, focusing on the hospitality, retail and business services sectors. In March 2020, the government allocated EUR 6.0 million to a temporary emergency measure under which small companies were granted a six-month deferment on repayments and the interest rate on loans was lowered to 2.0%[41].

In 2020, the Dutch government introduced the SME Loan Guarantee (*Borgstellingskrediet MKB*, BMKB) scheme to support entrepreneurs during the COVID-19 crisis[42].

The BMKB scheme is aimed at companies with a maximum of 250 employees (FTE – full time equivalent) with an annual turnover of up to EUR 50.0 million or a balance sheet total of up to EUR 43.0 million. In January 2021, the maximum limit for the BMKB loan was temporarily increased from EUR 1.0 million to EUR 1.5 million[43].

Other notable initiatives include:

- **One Single Hub**, which came into force in August 2020 with an overall budget commitment of EUR 15.0 million, combines regional ecosystems for start-ups in one single national ecosystem thereby supporting networks and organizations for start-ups and scale-ups, such as incubators and accelerators[44].
- **Damage Compensation COVID-19** (*Tegemoetkoming schade* COVID-19) implemented by the Netherlands Enterprise Agency (RVO) to help SMEs with liquidity needs. It provides compensation of EUR 4,000 to companies in the sectors most affected by the government COVID-19 measures, for losses as a result of forced closure, curtailment of meetings and/or negative travel advice abroad[45].
- **Temporary bridging scheme for self-employed entrepreneurs** (*Tijdelijke Overbruggingsregeling Zelfstandig Ondernemers*- Tozo) adopted by the Municipality of Residence, Netherlands to support self-employed entrepreneurs affected by the COVID-19 crisis. The Tozo consists of two parts: a supplementary subsistence allowance when income decreases below the social minimum because of the COVID-19, and a working capital loan to deal with liquidity problems resulting from the COVID-19 crisis[46].

3

Key economic drivers of the construction sector

Business confidence

In 2020, business confidence indicators, particularly consumer and industry confidence, worsened compared to the previous year.

The **consumer confidence** indicator deteriorated to -13.2 in 2020 from -7.6 in 2019, remaining below the 2010 level of -4.5 and above the EU-27 average of -14.6. The **industry confidence** indicator reached -10.8 in 2020. This is below the 2010 levels of -4.4 and above the EU-27 average (-14.4). It remains significantly below the 2019 levels (1.7). Similarly, the **construction confidence** indicator declined from 20.1 in 2019 to 0.6 in 2020. This is well above the 2010 level (-28.3) and the EU-27 average of -9.3.

According to Statistics Netherlands, confidence in the construction sector slightly decreased in the third quarter of 2021 compared to the second quarter. This is mainly due to labour shortages caused by the COVID-19 pandemic[47].

Moreover, the **investment ratio** fluctuated a little over the 2010-2020 period, with its current value standing at 21.2% compared to 18.8% in 2010. Similarly, **investment per worker** considerably increased by 53.5%, reaching EUR 131,184 in 2018[48], surpassing 2010 levels of EUR 85,469.

With regards to sub-sectors, the real estate activities sub-sector recorded the highest investment per worker with EUR 117,000 in 2018[49] compared to EUR 85,100 in 2010, exhibiting a 37.5% increase during this period. It is followed by the narrow construction sub-sector with EUR 6,800 in 2018[50], an increase of 83.8% from 2010 levels. The architectural and engineering activities sub-sector recorded an increase of 52.9%, increasing from EUR 1,700 in 2010 to EUR 2600 in 2018[51].

Domestic sales

The ranking of the **top five most domestically sold** construction products has remained unchanged during the 2010-2020 period, except “Doors, windows and their frames etc.”, which was replaced by “Other structures and parts of structures etc.”. Also, out of the list of top five most sold construction products, the top three products have not changed since 2017. The top five most domestically sold construction products are presented in Table 1, including a comparison with the most sold in the EU-27. These represented 61.6% of total domestic construction product sales in 2020.

Table 1: Top five most domestically sold construction products in the Netherlands and in the EU 2020

	The Netherlands			EU-27
	Product	**Value (EUR m)**	**Share in construction product domestic sales (%)**	**Product**
1	Prefabricated buildings of metal (group 251110)	1,442.0	18.1	Other structures and parts, etc. (group 251123)
2	Prefabricated structural components for building or civil engineering (group 236112)	1,102.5	13.9	Ready-mixed concrete (group 236310)

3	Other structures and parts, etc. (group 251123)	895.7	11.3	Doors, windows, etc. (group 251210)
4	Windows, French windows, etc. (group 162311)	762.8	9.6	Prefabricated buildings of metal (group 251110)
5	Tiles, flagstones, bricks, etc. (group 236111)	701.0	8.8	Prefabricated structural components for building or civil engineering (group 236112)

Source: PRODCOM, 2021.

Export of construction-related products and services

The Netherlands is a major exporter of ”Other structures and parts of structures” and “Prefabricated buildings of metal”. The top five of the most exported products has remained stable during 2010-2019, with the exceptions of “Towers and lattice masts of iron or steel” and “Other worked ornamental or building stone etc.”, which were replaced by “Other structures and parts of structures etc.” and “Wooden frames for paintings” respectively. However, in 2020, “Pallets, box pallets and other load boards of wood” was replaced by “Towers and lattice masts of iron or steel” which are among the top five construction exports. The **top five most exported** construction products from the Netherlands and the EU-27 are summarised in Table 2. Together, these made up 52.8% of all construction products exports in 2020.

Table 2: Top five most exported construction products in the Netherlands and in the EU in 2020

	The Netherlands			EU-27
	Product	**Value (EUR m)**	**Share in construction product export sales (%)**	**Product**
1	Other structures and parts, etc. (group 251123)	807.0	20.9	Ceramic tiles and flags (group 233110)
2	Prefabricated buildings of metal (group 251110)	459.1	11.9	Other structures and parts, etc. (group 251123)
3	Doors, windows, etc. (group 251210)	391.4	10.1	Fibreboard of wood, etc. (group 162115)
4	Towers and lattice masts of iron or steel (group 251122)	199.8	5.2	Doors, windows and their frames etc. (group 251210)
5	Wooden frames for paintings, etc. (group 162914)	183.2	4.7	Marble, travertine, alabaster etc. (group 237011)

Source: PRODCOM, 2021.

In terms of the **cross-border provision of construction services**[52], the Netherlands exported EUR 3.8 billion worldwide in 2020, showing a 37.4% increase from 2014[53]. The export of construction services within EU-27 stood at EUR 1.8 billion in 2020. In parallel, worldwide imports reached EUR 3.1 billion including EUR 1.8 billion from the EU-27 in 2020. Thus, the Netherlands achieved a **trade surplus** in the cross-border provision of construction services of EUR 0.7 billion (EUR 700 million) in 2020. Importantly, the EU Single Market remains the main destination of Dutch construction services export with a 47.8% share in 2020.

Access to finance in the construction sector

According to the Survey on the Access to Finance of Enterprises (SAFE) 2020, access to finance continues is the biggest concern for 7.1% of the Dutch SMEs, below the EU-27 average of 9.9%[54].

As per the report, bank loans are still the main source of financing for 42.2% of SMEs in the Netherlands, slightly below the EU-27 average of 47.6%. Between April and September 2020, 17.7% Dutch SMEs applied for a bank loan, while 4.7% did not apply due to fear of rejection. In addition, out of those who applied for a bank loan, 27.2% saw their applications rejected, which is more than triple the EU-27 average of 6.3%[55].

Access to finance remains an obstacle due, on the one hand, to the high dependence of the construction sector on bank financing, and on the other hand, by the reluctance of the latter to provide credit (influenced by a risk-adverse attitude). However, with the situation in the construction sector improving[56], banks may change their attitude to providing finance to the sector.

Also, Dutch companies face a relatively high rejection rate in their credit applications. Firms taking out smaller loans also have to pay more mark-ups, on average, than in other countries. This is primarily due to the high market concentration in the banking sector in Netherlands and the absence of a national credit register. Nevertheless, many alternative sources of financing as well as providers have emerged in the country in recent years. The Dutch authorities are also planning to create new instruments and expand those already in existence to improve access to finance for SMEs[57].

According to EIB Investment Survey (EIBIS) 2020, 19.0% of Dutch SMEs in the construction sector cited 'availability of finance' as a long-term barrier to investment[58].

As per the survey, the highest levels of dissatisfaction among Dutch firms in the construction sector are related to the cost of finance (13.0%), higher than the EU average of 5%, followed by the collateral requirements and type of external finance (both at 5.0%). Only 3.5% of all firms in the Netherlands could be considered as financially constrained by external financing in 2019. Firms in the construction sector were the least negative about the availability of external (-9.0%) and internal (-6.0%) finances[59].

In order to deal with the COVID-19 crisis, the government introduced measures to provide financial support to SMEs. They received a tax-free allowance, on top of the cost of wages allowance to assist in paying their fixed costs up to a maximum of EUR 50,000[60].

The Business Loan Guarantee scheme *(Garantie Ondernemingsfinanciering, GO)* has been extended to help businesses cope with the COVID-19 crisis. The amount of guarantee provided by the government has been increased to EUR 150 million. The maximum guarantee percentage has been increased from 50% to 80% for large companies and 90% for SMEs[61].

In May 2020, the Dutch Government launched the Small Loans Corona Guarantee Scheme *(Klein Krediet Corona Garantieregeling* KKC*)* to aid small companies that have been impacted by the pandemic. It provides bridging loans of between EUR 10,000 to EUR 50,000[62]. The loan is provided by the bank and the Dutch Government guarantees 95% of the loan. The total budget for this scheme is EUR 750 million[63].

A special bridging loan called the Corona Bridging Loan (COL) was announced by the government in April 2020. The scheme supports start-ups, scale-ups and innovative SMEs with the finance needed to fight the COVID-19 crisis. The COL was developed by the Ministry of Economic Affairs and Climate Policy, in close cooperation with Techleap.nl, the Regional Development Organisation (ROMs) and Invest-NL. The Dutch government provided an initial EUR 100 million for the fund, and this amount was doubled by the allocation of a further EUR 100 million by Invest-NL[64].

In order to address liquidity shortages arising from the COVID-19 pandemic, the Dutch government introduced a loan guarantee scheme in April 2020. The scheme covers loans granted by banks as of 24 March 2020[65].

As per the scheme, the Dutch state will guarantee 90.0% of new loans to SMEs and 80.0% of new loans to large enterprises. Banks are required to provide a six-month moratorium on loan repayments before they can invoke the state guarantee on loans provided under this scheme[66].

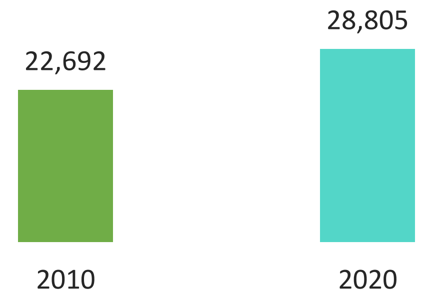
Access to housing

The **number of households** in the Netherlands has continuously increased since 2010, reaching 7.9 million in 2020. This represents an 8.2% increase compared to the 2010 level of 7.3 million. At the same time, the share of the **total population living in cities and greater cities** increased from 39.4% in 2010 to 53.5% in 2019[67]. The ongoing growth in the number of households is one of the main drivers for the sustained demand for housing in the Netherlands[68].

It is expected that 800,000 new households will be added by 2040 due to the rise in immigration and increase in the number of domestic and international students. Cities with a population

of more than 100,000 are projected to absorb almost 75.0% of this total[69].

In parallel, **mean equivalised net income** reached EUR 27,352 in 2019, above the 2010 level (EUR 22,692) and the EU-27 average of EUR 19,567. In 2020, it further increased to 28,805 making an increase of 26.9% during the 2010-2020 period.



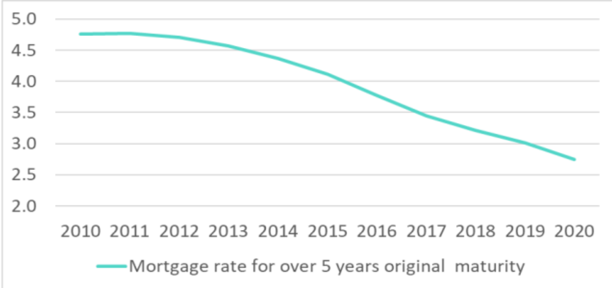
Mean equivalised net income in the Netherlands (in EUR)

Moreover, lending to households for home purchases picked up, with **total outstanding residential loans** growing by 8.1%, from EUR 668.7 billion in 2010 to EUR 722.7 billion in 2019. This increase in residential loans is partly supported by the declining mortgage rates. In fact, **interest rates on mortgages (for over five years maturity)** declined from 4.8% in 2010 to 2.7% in 2020 (Figure 7).

The mortgage rate is relatively high in the Netherlands due to the high loan-to-value of Dutch mortgages, long maturity of Dutch mortgages and the free option to prepay 10.0% of the mortgage per year[70].

In order to protect financial stability, the Dutch government has taken measures to reduce the incentive to take on high mortgages. From 1 January 2019 the maximum rate of mortgage interest deductibility was reduced by 0.5 pps. From this year, 3 pps per annum will be deducted in four steps. As a result, the final target of a maximum deductible rate of around 37.0% will be achieved by 2023[71].

Figure 7: Mortgage rates for loans for over 5 years original maturity (%) between 2010 and 2020

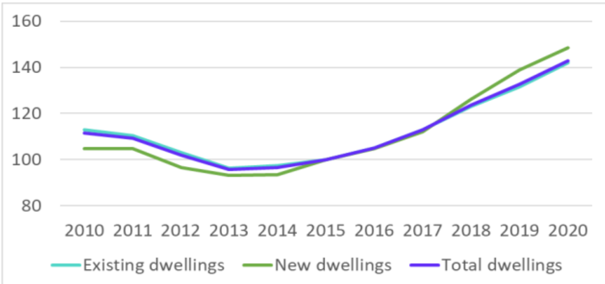


Source: ECB MFI Interest Rate Statistics, 2021.

Consequently, house prices are rising in the Netherlands due to a growing demand fuelled by lower mortgage interest rates, relaxations in lending criteria and rising income – as well as the persisting housing shortage (more details below). In fact, the **house price index** for total dwellings increased by 42.8% over the 2015-2020 period, mostly driven by a 48.4% and 41.9% increase in new dwellings and existing dwellings over the same reference period, respectively (Figure 8).

House price index for existing dwellings between 2015 and 2020 ↑ **41.9%**

Figure 8: House price index in the Netherlands between 2010 and 2020 (2015=100)



Source: Eurostat, 2021.

The average house price increased by 8.6% in 2020 compared to 2019, following a year-on-year rise of 7.2% in 2019. Amsterdam recorded the highest rise in the price of homes, up by 5.3% in 2020, according to Statistics Netherlands[72].

The Netherlands faces housing shortages, particularly in major cities such as Amsterdam, Utrecht, The Hague, Rotterdam and Groningen. After the 2008 financial crisis, the country experienced a prolonged period of weak residential construction. This has led to a significant housing shortage in the Netherlands.

According to estimates, the government's target is to reduce the shortage of households in Netherlands to 2.0% by 2035. The country currently has a shortage of 331,000 homes, representing 4.2% of the housing stock[73].

In 2020, the total number of dwellings sold in the Netherlands rose by 7.7% year-on-year to 235,511 units, an improvement from almost zero growth in 2019, according to Statistics Netherlands. *West-Nederland* accounted for about 47% of all property transactions in 2020, followed by *Zuid-Nederland* (21.9%), *Oost-Nederland* (21%), and *Noord-Nederland* (10.2%). In contrast, completions fell by 3.1% from 2019, to 69,322 units. This worsened the housing shortage in the Netherlands, which was estimated at about 200,000 units in 2019. The completions dropped sharply to an average of 58,150 units annually from 2010 to 2020 - mainly due to post-2010 changes in the planning system - which partly explains the rapid rise in house prices in recent years[74].

In order to address the current housing shortage, the Dutch government has set a target of constructing 845,000 new homes by 2030[75].

Driven by a gradual output in the construction sector, this target was just met in 2018 and 2019. However, the decline in business permits in 2019 indicates that it is unlikely that the country will achieve this target in the coming years. Moreover, the target of constructing 75,000 new homes per year also understates the actual building requirements going forward, so even if it is met shortages may persist. According to a 2019 report, it is estimated that there will be a requirement of another 20,000 to 40,000 homes beyond the 75,000 target to achieve the government's initial objectives[76].

The government abolished the transfer tax of 2% applicable on first time homebuyers aged 18-35 (up to EUR 400,000) from 2021. This should boost demand in the coming years[77].

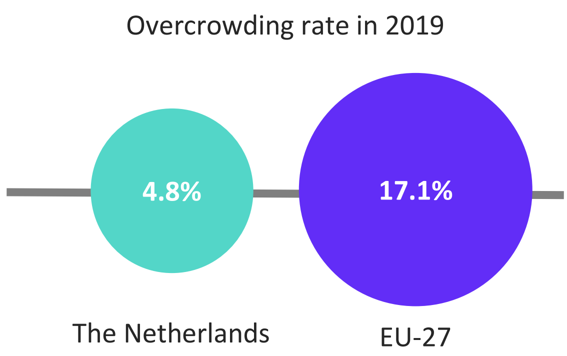
At the same time, the **building permits index** for dwellings grew by 17.9% between 2015 and 2020. For one dwelling buildings, the index rose by 32.8%, while it negligibly increased by 0.4% in the case of two and more dwellings in the same period.

Building permit index for one dwellings between 2015 and 2020 ↑ **32.8%**

This slight increase is partly explained by the '**nitrogen problem**' ('*stikstofproblematiek*'). Due to this issue, housing corporations are building less, and many projects are being postponed[78]. In fact, the 'nitrogen problem' creates additional near-term risks to new housing construction. According to the judgment of the Council of State in June 2019, construction projects that lead to the high nitrate deposition near the 118 *Natura 2000* nature protection areas across the Netherlands are currently not permitted without compensatory measures. In turn, this is expected to reduce housing completions by about 36,000 dwellings during 2020-2024, in the absence of any policy steps. Nevertheless, the Dutch government has introduced several measures to minimise the impact on new construction, but it still remains a significant source of uncertainty[79].

In terms of the **home ownership rate**, 74.2% of the population earning above 60.0% of median equivalised income owned their dwelling in 2019, compared to 70.5% in 2010. This is slightly above the EU-27 average of 73.6%. It rose again to 74.7% in 2020, a 4.2 pps increase on 2010. In contrast, the population earning below 60% of median equivalised income shows a decline in ownership. It declined from 39.1% in 2010 to 34.1% in 2019, below the EU-27 average of 50.3%. In 2020, It further declined to 33.8%.

Moreover, the **housing cost overburden rate**[80] was at 9.9% in 2019[81], slightly above the EU-27 average of 9.4%[82]. However, it decreased to 8.3% in 2020. Likewise, the **overcrowding rate**[83] was at 4.8% in 2019, well below the EU-27 average of 17.1%[84]. In 2020, it remained at the same level (4.8%). Conversely, the **severe housing deprivation rate**[85] stood at 1.5% in 2019, the highest since 2010 and one of the lowest in the EU region, well below the EU-27 average of 4.0%. This also remained at the same level in 2020 (1.5%)[86].



Infrastructure

According to the 2019 World Economic Forum Global Competitiveness Report[87], the Netherlands ranks 2nd out of 141 economies in terms of its overall infrastructure quality[88].

Netherlands has a notable transport infrastructure. More than 33,000 kilometres of dedicated cycling lanes facilitate sustainable living and well-being. Efficiency of train services, seaport services, air transport services and the quality of roads all score highest among EU countries and top global performers[89]. As per the 2019 Global Competitiveness Report, the country performs best in Europe in terms of quality of road infrastructure (2nd worldwide), followed by efficiency of seaport services (2nd worldwide), and efficiency of air transport services (3rd worldwide). In terms of 'efficiency of train services' and 'railroad density', the Netherlands ranked 6th and 8th respectively[90]. In 2019, the country's road density declined by 14.1%, reaching 67.0km/km^2, compared to 78.0 km/km^2 in 2010. Its railroad density also dropped by 18.0% over the same period, totalling 73.0 km/km^2 in 2019[91].

In September 2020, the Dutch government launched the National Growth Fund, making available EUR 20 billion as a grant over the next five years[92].

The fund is intended for investments that contribute to economic growth, such as knowledge development, infrastructure, research and innovation. Details about investment plans were announced in April 2021. Around EUR 2.5 billion was reserved for low-carbon public transit infrastructure projects[93].

In July 2020, the government of the Netherlands made an announcement that it will receive grants to a total of EUR 82 million from the European Commission intended for infrastructure projects. The grants are provided under the Trans-European Transport Network (TEN-T). EUR 62 million will be allocated directly to road, railway, and water projects in the Netherlands[94].

The Dutch government has taken measures for the continuation of construction and infrastructure works in the COVID-19 crisis. A special task force within the construction and engineering sector has been established to identify projects that can be brought forward or carried out immediately. An additional EUR 265.0 million has been allocated to this work over the next two years[95].

Furthermore, the Dutch government has made some developments on addressing transport bottlenecks, such as the increasing traffic on roads, rail, water and in the air. However, there remains room for further improvement[96].

4

Key issues and barriers in the construction sector

Company failure

The number of **company births** in the narrow construction sub-sector increased by 64.3%, from 12,284 in 2010 to 20,178 in 2018[97]. Conversely, number of **company deaths** decreased to 7,982 in 2018[98] from 10,977 in 2010, representing a decline of 27.3% during the period. The enterprise death rate in the narrow construction sub-sector has been dropping continuously since 2012, standing at 4.1% in 2017, well below the 2010 level of 7.4%. However, in 2018, it increased slightly to 4.6%, representing a 0.5 ppt increase from 2017. At the same time, the real estate activities sub-sector experienced a 17.0% increase in company births (from 1,962 in 2010 to 2,296 in 2018) and 28.8% reduction in deaths (from 2,191 to 1,559). Similarly, company births in architectural and engineering activities sub-sector declined by 6.7%, whereas company deaths increased by 15.6% from 1,921 to 2,221 between 2010 and 2018.

Company births in the narrow construction sub-sector between 2010 and 2018 — **64.3%**

Company deaths in the narrow construction sub-sector between 2010 and 2018 — **27.3%**

At the same time, the number of insolvent companies (excluding one-man businesses) in the construction sector decreased slightly from 291 in 2019 to 253 in 2020, according to the Statistics Netherlands[99].

Trade credit

According to the Atradius Payment Practices Barometer 2020 survey, 55.0% of total B2B sales were made on credit by Dutch businesses in 2020[100].

As per the survey, 42.0% of Dutch businesses reported an average 36.0% increase in the total value of their B2B sales transacted on credit compared to before the pandemic[101].

According to the SAFE 2020 results, trade credit constituted a relevant source of financing for 26.9% of SMEs in 2020, below the EU-27 average of 27.7%[102].

As per the survey, 12.3% of Dutch SMEs used trade credit in the last six months (between April and September 2020), as compared to the EU-27 average of 13.6%. However, 14.2% of SMEs have not used it recently, above the EU-27 average of 13.8%[103].

In terms of availability, 12.2% of respondents consider that trade credit availability improved in 2020 (compared to EU-27 average of 13.4%), while 72.8% of respondents consider the availability to have remained unchanged (compared to EU-27 average of 64.7%) and most likely to stay the same in the near future[104].

To evaluate a customers' credit quality during the COVID-19 pandemic, the Dutch construction sector focused more on customer profitability, ability to generate cash and financial flexibility. They began to source credit information directly from their customers. Customer information, financial statements, and bank references were the most common sources of creditworthiness assessment[105].

After the onset of the COVID-19 pandemic, the construction sector strengthened their credit management practices by sending outstanding payment reminders more frequently, requesting letters of credit more often, and resorting to self-insurance. Businesses plan to increase the use of reminder letters and to practise self-insurance in the coming years[106].

Due to strong credit management and proactive government intervention, revenue and cash flow were largely unaffected by the negative impacts of the pandemic for most of the survey respondents. However, the greatest challenge to profitability in 2021 will be to maintain an adequate amount of cash flow for the construction sector [107].

Late payment

According to the CRIBIS Dun & Bradstreet Payment Study 2020, 69.2% of Dutch businesses reported receiving payment on time, compared to the EU-28[108] average of 44.3%. While this is an improvement compared to last year, it is 4.6 pps less than in 2018[109]. Likewise, the percentage of Dutch firms paying over 90 days late stood at 0.6% on average in 2019, well below the EU-28[110] average of 3.9%, but above the 2018 levels of 0.3% Hence, payment performance appears to be slightly deteriorating.

Furthermore, 36.0% of respondents in the Netherlands ranked 'Risk of a pan-European recession' as a main challenge of their customers paying on time and in full over the next 12 months, according to European Payment Report 2020[111]. At the same time, only 11.0% of respondents agreed that late payments have an adverse impact on their liquidity, well below the EU average of 45.0%. Finally, 32.0% of Dutch SMEs would prefer the introduction of new legislations to solve the problem of late payments, below the EU average of 50.0%[112].

In June 2020, 73.3% of firms in the Netherlands made their payments by the due date, and only 0.4% firms took more than 90 days, according to CRIBIS D&B Payment Study[113].

In March 2013, the EU Directive 2011/7/EU, which establishes that payments in the EU should be made within 60 days, was transposed into Dutch law through a new act limiting the provisions of the Dutch Civil Code on the contractual payment deadline. According to the act, interest for late payment must be calculated on the basis of the European Central Bank's reference rate[114].

In 2020, in order to turn overdue invoices into cash, businesses had to increase their credit period (on average 25 days past the due date, compared to 10 days last year), losing 90% of the value of their B2B receivables that were not paid within 90 days[115].

After the onset of the pandemic, 56.0% of the total value of B2B invoices was overdue, compared to 32.0% in 2019. The increase in late payments resulted in the lengthening of Days Sales Outstanding (DSO). 49.0% of the businesses surveyed in the Netherlands reported DSO increases of more than 10.0%. Due to increased customer payment defaults, businesses need to take protective measures to avoid suffering liquidity shortages. This included delaying payment to their suppliers and increasing the amount of time, costs and resources spent on managing outstanding receivables[116].

Late payments affected 47.0% of the total value of B2B invoices in the Dutch construction sector as compared to 35.0% in 2019. 42.0% of enterprises had to wait longer, up to 14 days past the due date on average to turn overdue invoices into cash[117].

DSO in the construction sector stands at a 25-day average. Average DSO increases of more than 10.0% were reported by 24.0% of businesses. 75.0% of businesses in the construction sector reported an increase in DSO of up to 10.0%. 52.0% of the Dutch construction industry revealed that there were no negative impacts on the revenue levels due to the pandemic downturn.

59.0% of businesses in the Dutch construction sector delayed payments to suppliers to avoid liquidity issues caused by late payments[118].

Time and cost of obtaining building permits and licenses

The Netherlands ranked 88th in 2019 with respect to "dealing with construction permits", worse than the previous year (84th in 2018) according to the World Bank's Doing Business 2020 report[119].

As per the report, only four procedures are required to register a firm, below the OECD high income average of 4.9, taking 3.5 days to complete (well below the average of 9.2 days). Furthermore, 13 procedures are required to complete the formalities to build a warehouse[120], close to the OECD high-income average (12.7), taking 161 days, above the OECD high-income average (152.3) (Table 3). Moreover, the cost of completing the formalities to build a warehouse represents 3.6% of the value of the warehouse, above the OECD high-income average of 1.5%[121].

Table 3: Construction procedures timing and costs in the Netherlands in 2020[122]

Procedure	Time to complete	Associated costs
Obtain report on the soil conditions from soil researching company	30 days	EUR 9,650
Hold a consultation with the municipal authorities	15 days	no charge
Submit a request for a building permit to the Municipal Executive (Mayor and Aldermen)	98 days	EUR 72,358
Notify Municipality if there is a heating installation	0.5 days	no charge
Notify building inspector two days before construction work begins	0.5 days	no charge
Request and receive inspection at foundation stage	1 day	no charge
Request and receive inspection at roof stage	1 day	no charge
Notify building inspector upon completion of work	0.5 days	no charge
Notify Fire Department upon completion of work	0.5 days	no charge
Receive final inspection	1 day	no charge
Request water and sewage connection	6 days	no charge
Receive inspection for water and sewage connection	1 day	no charge
Obtain water and sewage connection	21 days	EUR 370

Source: Doing Business overview for the Netherlands, Word Bank, 2020.

In 2019, the number of permits had already started to decrease in the Netherlands. This was due to new restrictive measures linked to environmental protection. In 2020, these were released, and builders and real estate developers became more familiar with the new rules. The number of permits issued for new homes was approximately 10% higher in the fourth quarter of 2020 than at the end of 2019[123].

In the non-residential market, the number of permits issued for the likes of factories, warehouses, schools and hospitals increased to more than pre-pandemic levels[124].

Skills shortage

The number of **job vacancies** in the narrow construction sub-sector experienced a significant increase of 147.7%, growing from 5,763 in 2010 to 14,275 in 2020. Similarly, the number of job vacancies in the real estate activities sub-sector increased from 1,075 in 2010 to 1,475 in 2020, witnessing an increase of 37.2% over the same period. While employment prospects in the construction sector are promising, it is important to note that a very large share of the vacancies may remain unfilled due to skill shortages and lack of appropriate training.

Number of job vacancies in the narrow construction sub-sector between 2010 and 2020 **147.7%**

In Netherlands, overall **adult participation in learning** is high, standing at 19.5% in 2019[125], considerably higher than the EU-27 average of 10.8%. However, the participation of low-skilled workers in adult learning is limited, standing at 9.9% in 2019. This highlights an increasing risk of their professional skills becoming outdated[126].

In parallel, **adult participation in education and training** in the narrow construction sub-sector slightly decreased from 17.9% in 2010 to 17.8% in 2020. In the real estate activities sub-sector, this rate increased from 26.4% to 29.2% over the same period. Moreover, the number of tertiary students in engineering, manufacturing and construction increased by 34.5% between 2010 and 2019[127], from 10,382 to 13,962.

Number of tertiary students in engineering, manufacturing and construction between 2010 and 2019	↑ **34.5%**

Despite the high tertiary attainment rate of 49.4% in 2018[128], demand for high-skilled workers and medium-skilled workers is expected to grow by 2.4 million and 1.3 million respectively until 2025. However, supply is projected to grow by 1.0 million for high-skilled workers and to reduce for medium-skilled workers over the same period[129].

In March 2019, the government announced a budget increase of EUR 35.0 million for the programme *'Tel mee met taal'* for the period 2020-2024. The programme, with a total budget of EUR 425.0 million, aims to promote digital skills to illiterate Dutch native speakers. Implemented by *UWV/ Leerwerkloketten,* the Language Accord for Employers further aims to support employers by improving employees' basic skills and making basic skills a part of their human resource (HR) policy. Until now, almost 250 employers have already joined the Language Agreement with 10,000 workers following the language course[130].

The Twente Fund for Craftmanship Budget was implemented by *Leerwerkloket Twente* in cooperation with *Loopbaanstation* for the period 2019-2022 with a budget of EUR 8.3 million. The fund pays a maximum of EUR 5,000 per training course per participant[131].

The Fund for Craftsmanship is a collaboration of entrepreneurs, educational institutions, public employment services and local and regional governments. It supports employed or self-employed people and job seekers who wish to develop and acquire new skills in any area of vocational training. In May 2020, a total of 2,667 applications were received, of which 747 were granted[132].

In January 2020, the Dutch government introduced a new inter-ministerial basic skills programme for the period 2020-2024 with a budget of EUR 25.0 million[133].

The programme is aimed at developing basic skills, improving quality assurance in adult basic skills education and training and strengthening the role of local and regional governments[134].

Sector and sub-sector specific issues

Material efficiency and waste management

In the Netherlands, mineral waste from construction and demolition activities decreased by 1.7%, from 20.4 million tonnes in 2010 to 20.1 million tonnes in 2018[135]. This is well below the EU-27 average of 280.7 million tonnes in 2018[136].

Furthermore, the Dutch construction sector generated the highest volume of waste and consumed more than half of all recycled materials in 2016[137,138]. In this regard, the government has set an ambitious target of reducing the use of its primary resources by 50% by 2030 and becoming a complete circular economy by 2050[139].

The Netherlands produces a lot of waste but is also one of the most advanced European countries in waste recycling. The relatively high waste production is related to the fact that the Netherlands produces large quantities of goods for export[140]. In July 2018, the Netherlands became a member of the Platform for Accelerating the Circular Economy (PACE). This membership should further help the country in learning from the experiences of other developed economies to better transition itself into a waste free economy[141].

The main legislation encompassing all national environmental legislation is the Environmental Management Act (*Wet Milieubeheer* – Wm), which explains an integrated approach to environmental management in the Netherlands and defines the roles of the national, regional, and municipal government[142]. Specifically, waste is addressed under Chapter 10 of the Wm. Moreover, waste policy is explained under the second National Waste Plan (LAP-2), which includes waste management plans for each sector as well as targets. For CDW, the target is to maintain the 95.0% recovery rate until 2021[143].

Climate and energy

Emissions of greenhouse gases (carbon monoxide and dioxide, methane and nitrous oxides) from activities related to the narrow construction subsector and real estate activities in the Netherlands amounted to a total of 3,765,820 tonnes and 323,391 tonnes in 2019, respectively. Emissions in the narrow construction sub-sector increased by 10.6%, while the real estate activities sub-sector experienced a 34.5% drop during the period 2010-2019, demonstrating that emissions have been decreasing compared to 1990s levels.

Greenhouse gas emissions in the real estate activities sub-sector between 2010 and 2019 ↓ **34.5%**

In 2019, the Dutch government adopted a National Climate Agreement (*Klimaatakkoord*) and Climate Act (*Klimaatwet*) to reduce emissions. The Climate Act develops a governance framework for reducing domestic greenhouse gas (GHG) emissions by 95.0% by 2050. Its intermediate reduction target is 49.0% by 2030.

Based on current policies, the Netherlands Environmental Assessment Agency (PBL) expects GHG emissions to fall by 43-48% by 2030[144]. Some additional policy measures would therefore be needed to meet the 2030 target.

The PBL added that to meet the targets set in the Fit for 55 package, the Netherlands must accelerate its climate policy so that emissions are reduced more by 2030[145].

The climate agreement also relies upon the construction sector and particularly the energy efficient renovation of public and private buildings to achieve their objectives. Additional funds will be made available to implement measures from the Climate Agreement. These funds will be split between on a fund to insulate housing, an emergency fund, agriculture, reducing nitrogen emissions, bicycle parking facilities, electric transportation and municipalities. These budgetary resources are added on top of the climate budget that was provided as part of the Coalition Agreement[146].

At the same time, it is taking a leading role in developing a market for low-carbon hydrogen to partly replace natural gas and drive emission reductions in hard-to-decarbonise sectors like industry and heavy transportation. This will help drive cost reductions that are needed for this important technology to play a key role in accelerating clean energy transitions around the world[147],

5

Innovation in the construction sector

Innovation performance

As per the European Innovation Scoreboard 2021, the Netherlands is classified as a strong innovator[148].

According to the report, Netherland's main strengths lie in attractive research systems, as well as linkages and use of information technologies. It scores particularly well on foreign doctorate students, public-private co-publications and international scientific co-publications. On the other hand, its growth has decreased because of reduced performance on sales of innovative products, product innovators, employment in innovative enterprises, PCT patent applications and government support for business R&D. However, it also scored above average on the climate change related indicators[149]. Regarding the national target of 2.5% of its GDP in R&D spending, under the Europe 2020 Strategy, the Netherlands with 2.2% is close. However, this remains below other top innovative EU economies[150,151].

In addition, the number of annual **constructions related patent applications** stood at 121 in 2020, which is above the 2010 level of 98 patents (+23.5%). However, only one Dutch construction and materials firm ranks within the top 1,000 EU companies by R&D, according to the 2020 EU Industrial R&D Investment Scoreboard[152].

Eco-innovation and digitalization

As per the EU Eco-Innovation Index 2021, the Netherlands stood at the 9th position with a score of 124, slightly above the EU-27 average score of 121[153].

Apart from on socio-economic outcomes and **eco- innovation activities**, the Netherlands scored above the EU-27 average on three out of five indicators including eco-innovation inputs, outputs and resource efficiency outcomes[154].

According to the **European Commission Digital Economy and Society Index (DESI) 2020**, the Netherlands ranked 4th, with a 67.7 score, out of the EU-28[155] countries (average score: 52.5). In comparison with the previous year, the Netherlands increased its score in human capital, use of internet services, integration of digital technology and digital public services. It also performed well in terms of connectivity ranking sixth in Europe[156].

Dutch SMEs regard 'simplified administration', 'working efficiently' and 'following the trends' as the main advantages of digitalisation. In 2020, three-quarters of Dutch SMEs used digitisation for administrative tasks and half of SMEs saw digitisation as an opportunity for their businesses[157].

According to the Global Innovation Index 2020, the Netherlands ranked among the top five global leaders in innovation. It is ranked 2nd within the EU. The country is one of the best-equipped countries to develop innovative solutions for the pandemic[158].

Various measures have been introduced to promote and integrate the use of digital technologies within the Dutch economy.

In 2018, the Dutch government published the Smart Industry Implementation Agenda (*Implementatieagenda Smart Industry*) for the period 2018-2021. This agenda aims to increase productivity and employment opportunities while solving societal challenges through the reduction of raw materials and energy consumption. In addition to the manufacturing industry, it also includes companies active in the chemical and construction sectors[159].

Another noteworthy programme is the '**Construction Agenda 2017-2021**'[160], consisting of 11 roadmaps and 6 overarching themes together with the involvement of more than 50 representatives from social groups, the government and the construction sector. The programme targets infrastructure, utility construction and housing market segments within the broad construction sector and encourages mutual cooperation between established firms and SMEs.

According to **EIB Group survey on investment and investment finance 2020 for the Netherlands,** 76.0% firms have implemented, either fully or partially, at least one of the digital technologies in 2020, below the EU-27 average (63.0%). As per the report, around 47.0% of the construction firms adopted Drones in 2020. Similarly, Internet of Things (IoT) and Augmented or virtual reality were adopted by 44.0% and 38.0% respectively by the Dutch construction firms in 2020. Contrarily, only 19.0% of construction firms adopted 3-D printing[161].

In June 2018, the Dutch government established the Construction and Innovation Centre (*Bouw end Techniek Innovatiecentrum- BTIC*), created to tackle the sustainability challenges of the construction sector, with a target to establish long-term knowledge sharing programmes to foster innovation. The Construction and Innovation Centre connects the private sector to policymakers, encouraging bilateral communication. It also contributes to the Dutch Construction Agenda targets in terms of innovation[162]. BTIC has created five knowledge and innovation programmes including Integral Energy Transition for Existing Buildings (IEBB), Digitisation, Circularity, Infrastructure, Area Development and Climate Adaptation. The BTIC initiated a consortium that started in December 2019 with IEBB. With the grant of EUR 13.8 million in the context of the Multi-Annual Mission-Driven Innovation Programmes (MMIPs) and a programme worth EUR 21.4 million, it has planned to develop affordable and user-friendly renovation concepts in the coming years[163].

The Netherlands' smart policy innovation is also facilitating urban renewal and green building projects. The country has set its target of a fully circular economy by 2050 and is working towards a 50% reduction in primary raw material use at the midway mark of 2030. The policy also has measures to make the building and construction sector more sustainable as well[164].

A new policy measure to further strengthen the country's leading position in innovation is the Thematic Technology Transfer (TTT) Regulation of the Netherlands Enterprise Agency. The scheme was created to encourage private investors to invest in knowledge-based start-ups through a thematic technology transfer fund. The scheme was available till December 2020 and is temporarily suspended[165].

In 2019 the **Circular Innovation Implementation Programme** (*Uitvoeringsprogramma Circulaire Economie*) was launched. This programme translates the five transition agendas into concrete projects and actions for 2019 – 2023. It will be updated regularly, and the Netherlands Environmental Assessment Agency (PBL) will publish a progress report every two years[166].

The Netherlands is also at the forefront of the implementation of **Building Information Modelling** (BIM) in the construction sector. Compared to other European countries, BIM adoption is high in the Netherlands, as currently 80.0% Dutch architects make use of it. This is mainly due to the digitalisation of the market and the cooperation between different stakeholders in the construction sector. These stakeholders include main contractors, builders, electrical installation companies, and advisors[167].

With regards to BIM implementation in, the Dutch Building Information Council (BIR) is a main actor. BIR is active in the development, promotion and implementation of Open BIM Standards[168], which allows the classification of the large amount of data generated during a construction project and the exchange information, thus increasing cooperation between construction parties and fostering healthy competition on the market. To this end, the Netherlands has created a **BIM Gateway (BIM-loket)**[169], which it intends to be a national portal for information and management of Open BIM Standards in the Netherlands, thus stimulating their use. By placing the standards into one coherent system, the BIM-loket allows stakeholders to reduce their maintenance costs and employ the use of BIM bots to boost productivity[170].

Open BIM is used by companies on big projects for seamless workflows, effective collaboration, and better business outcomes.

ProRail and VolkerWessels entered a partnership for the extension of the track between *Zwolle Ijssel* and *Herfte*. Two new tracks between Zwolle and the railway junction at *Herfte* will be built combining BIM with Geographic Information Science (GIS). This will allow deeper data integration, greater transparency and easier collaboration across platforms. A free rail junction at *Herfte* will also be built. This is a so-called 'dive-under', a tunnel of approximately 700 metres, through which trains will cross each other above and below. The project will be completed in mid-2022[171].

Another joint venture company Sassevaart is using a BIM platform from Allplan – a global design software company – for the construction of the New Lock Terneuzen in the Netherlands. Currently under construction and measuring 427m long, 55m wide, and 16.4m deep, New Lock Terneuzen will form part of the Rotterdam-Paris Inland Waterway. The use of BIM will overcome the challenges of coordinating the construction works with various parties as well as avoiding loss of information. The project is due for completion in 2023[172].

In December 2020, the GEOBIM (Geospatial and Building Information Modelling) 2020 conference was held virtually based on the theme of construction 4.0 practices. Out of five awardees two of them were Dutch companies who continue to use exemplary digital innovations and practices across architecture, engineering and construction (AEC) industry[173].

The Dutch government also promotes the need for BIM adoption through education by several professional courses. The Building Information Council collaborates with Dutch universities of applied sciences to improve the integration of BIM in education and encourages them to share experiences. The BIR (Bouw Informatie Raad) Programme Office functions as a sounding board in this regard[174].

6

National and regional regulatory framework

Policy schemes

Housing policy in the Netherlands is implemented by the **Ministry of the Interior and Kingdom Relations (BZK)**[175], which is in charge of setting the legal framework related to the development of construction activities[176].

In the Netherlands, **housing associations** are responsible for the rent and sale of social housing and provide homes for older people and the disabled. Around 75.0% of the 3.0 million rental homes in the Netherlands belong to these associations[177]. The renting conditions of these social dwellings are established by the government, and the current threshold (in 2021) is EUR 752.3 per month (EUR 737.1 per month in 2020). In addition, each year these associations must let 80.0% of their dwellings to low-income tenants with an annual income up to EUR 39,055 (in 2021) and 10.0% to people with an annual income up to EUR 43,574 (in 2021). The remaining 10.0% can be allocated to people with higher incomes[178].

Housing associations contribute to the **removal of accessibility barriers**, improving the accessibility to quality housing for elderly people, people with disability and those needing assisted housing. In addition, these associations are also in charge of maintaining the neighbourhoods and surroundings, including alleyways and parking spaces[179].

The housing market in Netherlands is characterised by large owner-occupied and social housing sectors, each of which receive subsidies through different channels. The **Social Housing Guarantee** (*Waarborgfonds Sociale Woningbouw* - WSW) is an active actor which provide securitisations and guarantees to lenders. The WSW obtains capital for the provision of guarantees through the capital market and guarantees loans to housing associations for social housing projects or the construction of buildings of public interest[180].

The Dutch government has also planned to boost construction through a tax credit against the levy on landlords totalling EUR 100 million per annum. This will offer a direct stimulus to housing associations and other landlords engaged in building more affordable rental homes. The amount of tax credit can also be used flexibly over time to respond immediately to the necessity to build more affordable homes[181].

Furthermore, the government has planned to allocate EUR 1.0 billion, spread evenly over 10 years, for targeted tax reductions for social housing corporations building new homes[182]. In addition, the government announced adjustments to the rent-setting system for social housing, as part of the September 2019 housing market package mentioned before. This implies that more homes remain in the regulated sector rather than transitioning to the private rental market[183].

Currently, the market faces a shortage of housing, i.e. a lack of rental houses and affordable houses for sale. The construction of new homes and the privatisation of social housing is insufficient to solve the shortage of rental housing[184].

The Dutch government announced plans to build 150,000 low rent homes. The aim is to build 25,000 social homes a year, beginning in 2022. Some 10,000 "flexible" homes will also be built in the next two years. Funding will come from a EUR 1.0 billion fund established in 2019 to boost the housing market[185].

The private rental market does not receive any subsidies from the government. Currently, it constitutes about 13.0% of the overall number of homes and remains relatively underdeveloped. This results in a shortage of rental housing and high rents[186].

The Dutch government has taken several measures with regards to private rental housing. In May 2019, the **Mid-priced Rental Segment Measures Act** (*Wet maatregelen middenhuur*) was adopted. The Act defines that homes in the mid-priced rental segment can be allocated on the basis of the housing allocation set out in the Housing Act (*Huisvestingswet*)[187].

This amendment to the 2014 Housing Act included two objectives. Firstly, it aims to clarify that municipalities can use the housing regulation to allocate homes in the mid-rental segment. Secondly, it simplifies the market test for housing corporations. This makes it easier for them to build mid-priced rental homes if this is desired at a local level[188].

In September 2019, the government introduced investment subsidies amounting to EUR 1.0 billion for a Residential Construction Stimulus Programme (*Woningbouwimpuls*), aimed at boosting construction. The amount will be distributed over a period of four years and will be available to municipalities where shortages are most acute[189].

The Dutch government is planning to build 75,000 homes per year until 2025 to meet the existing housing shortage, as well as expected demographic developments[190].

In order to combat the national housing crisis, a group of 34 organisations, from the housing and insurance sector across the Netherlands, have introduced the Housing Action Agenda which will provide 1 million new homes by 2031. According to the plan, construction of more affordable and owner-occupied homes is to be increased from 71,000 to 100,000 houses per year. The plan suggests that one-third of the new homes should be social housing, another third should be in the so-called middle sector, and a third should be in private housing[191].

The Dutch research agency Platform 31- a knowledge and network organization which connects policy, practice and science to comprehensively tackle current issues within cities and regions - has proposed potential solution to the housing crisis. The agency suggests matching multiple households to each property. Research agencies estimate that by adopting some of the proposed policies, housing shortages across the country can be reduced by about 15,000 units annually to about 264,000 units[192].

The Dutch government introduced several regulations in 2021[193]. These include:

- **Exemption of Property Transfer Tax (2%)** for first-time homebuyers aged between 18-35 years. A higher property transfer tax for buy-to-let investors from 2% to 8% was made effective from January 2021.
- **Dutch National Mortgage Guarantee (NHG)** has been raised from EUR 310,000 to EUR 325,000. For energy-efficiency measures the financing cost is EUR 344,500.
- **Tax deduction on mortgage interest rates** was reduced from 46% in 2020 to 43% in 2021. The rate further decreases to 40% in 2022 and 37% in 2023.
- **Dual-income buyers can get a higher mortgage in 2021.** The contributions of the lower earning partners of two-income households increased to 90% of the maximum mortgage in 2021 from 80% in 2020.

The next Dutch government will need to invest around EUR 20 billion to promote major housing and infrastructure in the coming years. The investment will be for 14 major projects which are complex in nature and are currently in the planning phase. Much of the funding (EUR 109 billion out of EUR 142 billion) comes from private sources, with the municipality contributing EUR 13.7 billion. However, the remaining funds must be provided by the central government[194].

Building regulations

The three main pieces of regulation covering all aspects of building regulations are the New Housing Act, the Building Decree and the Spatial Planning Act.

- **New Housing Act[195]** (*Nieuwe Woningwet*), in force since July 2015, defines the core tasks and activities of housing associations, as well as the procedures relative to construction and the provision of construction permits. In addition, the Housing Act also ensures a clear separation of Services of General Economic Interest (SGEI) activities and non-SGEI activities, limiting government aid only to the former.

- **Building Decree** (*Bouwbesluit*) records requirements and establishes minimum criteria for health, safety, usability, energy efficiency and the environment for the construction of buildings in the Netherlands[196]. In addition, the Building Decree sets the regulatory framework regarding the refurbishment, construction, demolition and occupancy of any building in the Netherlands. Amendments are effective as of 1 January 2021, imposing **Almost Energy Neutral Building requirements** (*Bijna Energieneutrale Gebouwen, BENG*) for office buildings[197]. This will be applicable for all construction companies and businesses that want to have a new building built.
- Additionally, there is a new law proposal – the Quality Assurance Act for construction (*Wet kwaliteitsborging voor her bouwen)* – expected to come into effect by 2022. It involves a new set of quality assurance measures[198]. The construction company, and not the local government, become responsible for compliance with the Building Decree.
- **Spatial Planning Act** (*Wet op de Ruimtelijke Ordening*) defines what may be built and where the construction can take place, as well as the size and structure of the construction project depending on rules and regulations established in the area concerned[199]. Implementation of the spatial planning policy is mainly done at municipal level due to their knowledge of the local environment. Their interests are presented on spatial visions, which are policy papers summarising the priorities for infrastructure and spatial planning[200].

In 2017, amendments were made to the Environment and Spatial Planning Laws to make it quicker and easier for projects to get off the ground. This legislation is expected to come into force in 2021[201]. In addition, due to the highly regulated use of land for residential and business purposes, the **Zoning Plan** contains regulations on a detailed scale for every plot of land in a municipality. These regulations indicate and determine the use of the plot (i.e., agricultural, industrial, residential, etc.) and the dimensions (building height, volume, number of stories) of the buildings permitted, as well as the exact location of a new building on a plot of land. The Zoning Plan is the decisive mechanism for allowing or denying a general environmental permit (*omgevingsvergunning*) by the municipality of each region[202].

In May 2019, the Council of State ruled that the Dutch legal frameworks for nitrogen deposits put in place by the government do not meet the criteria set by European standards. This judgment stopped the permit granting procedure for new-build projects in the vicinity of Natura 2000 areas. In addition, construction projects were also halted due to the tightening of the PFAS (*Perfluoroalkyl and Polyfluoroalkyl Substances*) standard, which has the objective to improve the natural environment and limit the spread of polluted soil[203].

The Dutch government has formed the **Environment and Planning Act** (*Omgevingswet*) which combines and simplifies the regulations for spatial planning, housing, infrastructure, the environment, nature and water in a single law. This is a complete overhaul of the current existing legal framework. The act replaces 15 existing laws, including the Water Act, the Crisis & Recovery Act and the Spatial Planning Act. The new act will result in fewer regulations and at the same time decisions on projects and activities can be made better and more quickly[204].

A new law has been introduced related to construction companies that build housing for people requiring care in the form of sheltered housing or homes for assisted living. The law specifies the need to have an outdoor space such as a garden or balcony for all houses of fifty square meter and over. The effective date of its coming into effect is not yet decided[205].

To improve the overall quality of work in the construction sector a new law is expected to come into effect from July 2022. The new law requires construction companies, quality controllers, business consumers (who build/convert and use utilities such as offices, schools and hospitals) and private consumers (who build/convert and use houses) to hire an independent and certified quality controller. This person will assess the building plan for any risks and will check the construction site to make sure regulations are being followed. An all-in-one permit for physical aspects will be enough to start a project. Also, builders will need to focus more on the wants of consumers[206].

Insurance and liability related regulations

By law or under a typical construction contract, Construction All Risks (CAR) is the most common insurance in the construction sector, covering all damages that may arise during the construction process[207].

During the construction process, CAR provides insurance against risks. In order to cover its liability as employer, each party needs to take out the requisite liability insurance and business liability insurance. In addition, the parties must also either have already taken out or receive professional indemnity insurance, as well as fire insurance and storm and tempest insurance[208].

In the Netherlands, the only compulsory insurance in construction is the WAM (*Wet Aansprakelijkheidsverzekering Motorrijtuigen*) concerning construction accidents. Parties can choose to additionally insure themselves[209]. The Ministry of Housing, Spatial Planning and the Environment is in charge of establishing the rules for construction. The Title 7.12 Construction Agreement of the Civil Code defines the general contractual liabilities among parties in the construction sector, including the duties of the partners, the liabilities for materials and equipment, the reparation of construction defects or the dissolution of the construction agreement, among others[210].

Further to the provision of the Civil Code, the general conditions, and in particular the uniform general conditions regarding building contracts (UAV), are also widely used. UAV contracts establish a period of liability of five years following the completion of the works, and a statutory warranty period of ten years is generally applied for building defects.

Moreover, in the Netherlands, the legal provisions of the contracts generally act as standard clause acts, constituting the main reference for formation of contractual relations in the construction sector. Therefore, liabilities are often defined in the contractual agreements. However, the large variety of contract models may hinder the understanding of these liabilities. In order to tackle this issue, the Dutch Institute for Construction Law (*Instituut voor Bouwrecht*) has issued a practical guide that compiles and summarises the main features of construction contracts.

7

Current status and national strategies to meet Construction 2020 objectives

TO 1 – Investment conditions and volumes

Total **investment by the broad construction sector**[211] has generally increased after its lowest point in 2012 (Figure 9), highlighting the accelerating recovery by the sector in the aftermath of the economic crisis. In fact, investment by the real estate activities sub-sector grew by 37.0% over the 2010-2019[212] period, going up from EUR 35.6 billion to EUR 48.8 billion. Similarly, investment by the narrow construction sub-sector increased by 75.8% between 2010 and 2019[213], from EUR 2.3 billion to EUR 4.0 billion.

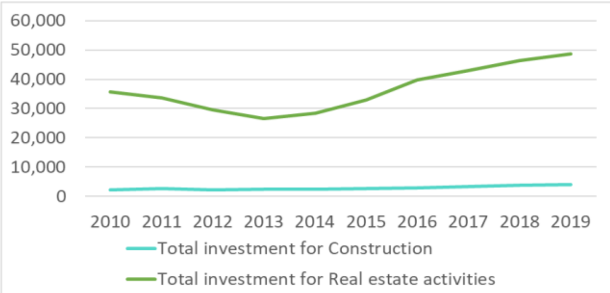
Total investment by the narrow construction sub-sector between 2010 and 2019 **75.8%**

Total investment by the real estate activities sub-sector between 2010 and 2019 **37.0%**

In parallel, **investment in intellectual property products** by the narrow construction sub-sector increased by 43.6%, from EUR 600.0 million in 2010 to EUR 861.5 million in 2019[214]. Similarly, investment by the real estate activities sub-sector for this category increased by 17.8%, reaching EUR 109.6 million in 2019[215] as compared to EUR 93.0 million in 2010.

Investment in intellectual property products by the narrow construction sub-sector between 2010 and 2019 **43.6%**

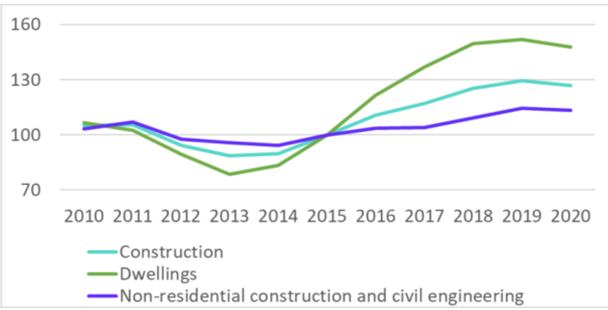
Figure 9: Investment by the Dutch broad construction sector between 2010 and 2019[216] (EUR m)



Source: Eurostat, 2021

The **investment index in the broad construction sector**[217] has experienced moderate growth since 2015, rising by 26.9% over 2015-2020 (Figure 11). This growth was mainly driven by investment in dwellings by the whole economy and non-residential construction and civil engineering which increased by 47.8% and 13.2%, respectively, between 2015 and 2020. In absolute terms, **investment in the broad construction** sector totalled EUR 84.9 billion in 2019[218], out of which EUR 44.5 billion were invested in non-residential and civil engineering and EUR 40.4 billion was allocated to dwellings[219].

Figure 10: Investment index in the Dutch construction sector between 2010 and 2020 (2010=100)



Source: AMECO, 2021.

Total Investment in dwellings by the whole economy over the 2015-2020 period **47.8%**

After declining continuously between 2010 and 2016, total **household renovation spending** increased to EUR 1.5 billion in 2019, marking a 7.4% growth over the previous year. However, this is well below the EU-27 average of EUR 73.7 billion and represents an overall decline of 1.3% against the 2010 level (EUR 1.4 billion). In 2019, spending on renovation stood at 0.4% of total household disposable income, lower than the EU-27 average of 0.9%.

Furthermore, the Ministry of Infrastructure and Environment manages the **Infrastructure Fund** (*Infrastructuurfonds*), which provides funding for the construction, management, maintenance and operation of infrastructure, such as roads, railways and waterways. The fund is set to operate until 2031 with an overall budget of EUR 5.5 billion[220].

In June 2020, the Dutch government introduced a package amounting to over EUR 44.0 million to support construction workers and accelerate construction works which got affected due to COVID-19[221].

This primarily consists of maintenance work on the Dutch infrastructure, such as the accelerated execution of asphalt work, maintenance and renovation of locks, tunnels or bridges or work for coastline maintenance. The construction of an innovative lane and service area on the A58 between Tilburg and Eindhoven is expected to be put out on the market soon and the tender for a major project for the widening of the A1 between Apeldoorn and Azelo will be brought this year instead of next year[222].

In order to support its infrastructure projects, the Netherlands received EUR 62.0 million from the European Commission in July 2020. The funds will be used for road, rail and water projects[223].

Most of these infrastructure projects come under the **Trans-European Transport Network (TEN-T) programme**, which aims to create a single cross-border network for land, water and air transport within the EU. A total of 11 projects in which Dutch parties are involved will receive a subsidy worth EUR 82.0 million[224].

In the current Multiannual Financial Framework, the financial allocation from the EU Cohesion Policy funds for the Netherlands, including national co-financing, stands at EUR 2.4 billion. This is equal to around 0.05% of the country's annual GDP. By 2019, the Netherlands had spent EUR 1.3 billion on the selected projects[225]. The Dutch civil service scheme ABP (*Stichting Pensioenfonds ABP*), Europe's largest pension fund through its asset management arm APG (*Algemene Pensioen Groep*), is planning to increase the share of its investments in domestic infrastructure in the Netherlands. Specified domestic projects would be heating networks to facilitate the energy transition and light rail connections between large cities[226].

The Dutch government is introducing EUR 646.0 million into and setting aside EUR 3.5 billion from the National Growth Fund, for ten projects designed to ensure greater economic growth in the Netherlands. The funds will be directed to the areas of research; development and innovation; transport infrastructure and knowledge development. A EUR 20.0 million investment fund has been set up for this purpose[227].

The infrastructure projects include the expansion of the metropolitan public transport system and the urbanisation of southern Randstad, for which the fund will set aside funding of up to EUR 1.0 billion for the Old Line project. The National Growth Fund will also set aside funding up to EUR 1.5 billion for the Extension of North-South Metro line project. For the Eindhoven/Brainport line, it will set aside EUR 30.0 million[228].

In December 2020, the European Investment Bank (EIB) and Vesteda, a Dutch residential investor focusing on government-regulated-rental segment, aiming to offer affordable homes to middle-income households; signed a EUR 150.0 million financing agreement. The loan has a term of 10 to 15 years. Vesteda plans to use the funds in 2021 and 2022 to improve the sustainability of the homes in its existing portfolio and for the acquisition of new residential complexes. It will also use the financing for homes in the government-regulated rental segment, so it can also offer affordable homes to middle-income households[229].

The European Investment Bank (EIB) has signed a EUR 240.0 million loan agreement with Gasunie, the public limited company that manages and maintains the infrastructure for large-scale transport and storage of gas in the Netherlands, for the construction of a nitrogen facility in Zuidbroek, near Groningen. The new plant will produce nitrogen, which will be compressed and blended with imported gas, before it goes into the Dutch gas network, thus allowing for the reduction of gas output from the Groningen field, as mandated by the government[230].

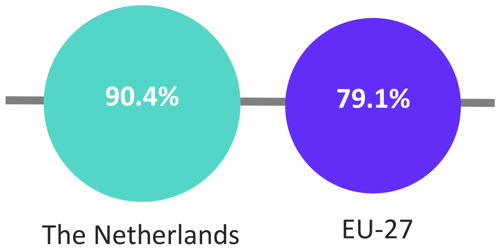
In 2020, the EIB Group invested almost EUR 1.2 billion in infrastructure[231]. In parallel, the Netherlands also benefitted from investments from the **European Fund for Strategic Investments** (EFSI). As of December 2020, the financing under EFSI amounted to EUR 4.4 billion and is set to trigger additional investments of EUR 18.3 billion. Within the infrastructure and innovation framework, 40 projects have been approved, amounting to EUR 3.2 billion and are set to trigger EUR 14.0 billion in total investments. As for the SME framework, 23 agreements have been approved, involving a total financing of EUR 1.2 billion, and are set to trigger investments of up to EUR 4.4 million[232].

TO 2 – Skills

The Netherlands has a well-developed system for **vocational education and training (VET)**. The **employment rate of recent VET graduates** was at 90.4% in 2019[233], up from 87.9% in 2018, significantly above the EU-27 average of 79.1%. However, the share of early leavers from education and training slightly increased in 2019, from 7.3% in 2018 to 7.5% in 2019. This is below the EU-28 average of 10.2%[234]. In addition, the dropout rate in VET increased from 4.7% in 2017 to 5.1%[235].

In February 2019, the Education Council introduced a number of recommendations to combat this dropout rate. One of them was to integrate the pre-vocational (VMBO) and the vocational (MBO) tracks to reduce the number of transitions, because transitions lead to a high risk of drop out[236].

Employment rate of recent VET graduates, 2019



To encourage adult learning, the government established the Work Position Incentive (*Stimulans Arbeidsmarktpositie*; STAP) budget. This offers a personal development budget of up to EUR 1,000 per year for individuals with or without a job as of 1 January 2022. Another large-scale initiative addresses adult illiteracy. In March 2019, the government earmarked EUR 425.0 million for the Count With Language programme for 2020-2024, an increase of EUR 35.0 million over 2015-2019. The aim is to reach out to illiterate Dutch native speakers and promote digital skills. The Language Accord for Employers, implemented by *UWV/Leerwerkloketten*, aims to support employers by improving the basic skills of their employees and to make basic skills part of their HR policy[237].

The 2018 quality agreements allow each vocational secondary school to frame their own strategy and priorities for 2019-2022, in consultation with regional partners. The 2019-2022 quality agreements aim to further improve the quality of VET provision. Funding of approximately EUR 400.0 million a year was earmarked for quality agreements, of which 25% is performance-based[238].

A subsidy scheme was introduced to support the joint development of flexible VET programmes in 2019. EUR 20.0 million is available over 4 years for the development of innovative programmes, working methods and materials addressing regional skills needs that can also be used in other VET programmes[239].

More specific to the construction sector, a collaboration between training institutions in construction launched a joint platform (**bouwopleiders.nl**) dedicated to school pupils, school leavers and graduates, who are interested in a career in construction, providing them information and advice on the training offer in the sector[240].

In terms of paying attention to circular construction at all educational levels and in all educational programmes in 2021, the Dutch government has planned to offer a circular architect training programme and a circular commissioning training programme. This is a part of Circular Construction Economy Transition Agenda[241,242].

TO 3 – Resource efficiency / Sustainable construction

The energy saving strategy is mainly developed in the **Energy Agreement for Sustainable Growth** (*Energie akkoord*), a voluntary agreement launched by the Social and Economic Council of the Netherlands (SER) and signed in 2013 with more than 40 participants, including the 36 largest municipalities in the Netherlands[243]. The agreement also aims at creating at least 15,000 jobs per year in the construction and installation sectors, for instance, as a result of energy savings and local energy generation[244].

During 2017-2020, the Netherlands' production of renewable energy grew by over 70.0% from 140 petajoules (PJ) to an expected 239 PJ. This is mainly driven by measures and incentive instruments, such as the Sustainable Energy Production Incentive scheme (SDE+) and offshore wind energy policy[245].

For the building sector in particular, the agreement stipulates that 300,000 existing residential buildings per year should be renovated and upgraded by at least two energy classes by 2020 (corresponding to an improvement in energy efficiency of 20-30%). All new buildings in the Netherlands must be nearly-zero energy by the end of 2020. Rented buildings must have an average label B for social housing, and a minimal label C for 80.0% of the private rental stock by 2020[246].In addition, in accordance with the amendment to the 2012 Building Decree, all office buildings larger than 100 square metres (m^2) will be obliged to be more energy efficient and, as a minimum, have an energy label C from 2023 onwards. In order to meet this requirement, the Dutch government will support with advice and grants. The amendment states that from 1 January 2023 it will be prohibited to use an office building that does not have a minimum energy label C[247].

In order to make financing for energy efficiency in the existing building stock affordable and readily available the **National Energy Saving Fund** (*Nationaal Energiebespaar fonds* - NEF) was set up in 2014 under the Energy Agreement. The NEF provides **Energy Saving Loans** (*Energiebespaarlening voor particulieren*) to homeowners with low-interest rates to finance energy-saving measures. These measures include insulation or more efficient heating systems, as well as installing solar panels for a cleaner energy supply[248].

In March 2020, the European Investment Bank (EIB) announced its plans to support the NEF with a loan of EUR 150.0 million[249].

The NEF currently has a total of EUR 1.0 billion available to offer loans up to EUR 25,000 per house to homeowners and homeowner associations in the Netherlands who want to reduce their energy bills[250].

Moreover, under the Energy-saving at Home subsidy scheme (***Subsidie energiebesparing eigen huis* - SEEH),** homeowner associations can obtain energy saving subsidies for buildings covering up to 20% of the costs of insulation works if they choose at least two types of insulation measures (e.g. insulation of roof, wall, floor, replacement of glass, etc.)[251]. A total of over EUR 56.0 million was allocated as a subsidy for energy saving measures (funds spread across the years 2016, 2017 and 2018). The scheme will remain available till 31 December 2022[252].

In 2020, renewable energy accounted for 11.1% of total Dutch energy consumption. This was 8.8% in 2019. The increase was largely due to rising solar and wind power capacity. Consumption of biomass was up as well, particularly co-firing at coal-fired power plants[253].

In July 2021, the Dutch government announced a EUR 2.1 billion funding for the Porthos (Port of Rotterdam CO_2 Transport Hub and Offshore Storage) project. The funding comes from the Sustainable Energy Transition Subsidy Scheme (SDE++), which was set up in support of projects that help reduce the collective carbon emissions of the Netherlands[254].

In October 2020, the European Commission also proposed awarding EUR 102.0 million in funding to the Porthos project. In 2021, companies will begin preparation of the construction of the capture plants. The Porthos system will be constructed over the course of 2022 and 2023 and put into operation in 2024[255].

TO 4 – Single Market

As per the EU Single Market Scoreboard 2020, the Netherlands performs well and is above the EU average in terms of trade integration market for goods and services[256].

As per the report, the country's score regarding the transposition deficit doubled in 2019 (0.6%) as compared to 2018 (0.3%) but stayed in line with the EU-28[257] average (0.6%). In terms of the average delay for overdue directives, it stood at 12.0 months, slightly higher than the EU-28 average (11.5 months) in 2019, but above the 2018 levels (10.8 months)[258]. Furthermore, the conformity deficit for the country stood at 1.4% in 2019, slightly above the EU-28 average of 1.2%.

In terms of Internal Market Information Systems, the Netherlands performs fairly well. However, its performance was below the EU-28 average in all five indicators. The number of pending cases under infringement worsened in 2019 with 26 cases, compared to 2018 (23 cases), while it is below the EU-28 average (29 cases). This is primarily due to the limited use of the EU Pilot tool which increased the number of infringement proceedings against several member states. With regards to improvement in the public procurement system, the Ministry of Economic Affairs released an 'Agenda for Better Public Procurement' (*Actieagenda Beter Aanbesteden*) in February 2018. The objective is to boost the procurement expertise of municipalities and government entities, including by improved cooperation between public buyers. In 2018, only 4.0% of procedures in the country involved more than one buyer, one of the lowest levels in the EU. Moreover, the government is also taking measures to digitalise the procedures for procurement. In the Netherlands, e-procurement services are provided to contracting authorities by the market together with the **TenderNed** system which is run by the government[259].

In terms of the regulatory environment in the construction sector, the Netherlands appears to offer a **higher level of compliance with the Services Directive** compared to other member states. Horizontal authorisation schemes have not been established, and therefore do not constitute a barrier for the provision of construction services by foreign providers. Recently, the Dutch government set up a web platform[260] on Brexit to act as an early warning system for SMEs[261]. The objective is to enable SMEs to track upcoming legislation and empower them to take advantage or mitigate any potential negative impacts.

TO 5 – International competitiveness

According to the World Bank Doing Business 2020 report, the Netherlands ranked 1st out of 190 countries in ease of trading across borders in 2019[262].

As per the report, it takes one hour to be compliant in terms of documentation to be border compliant (including customs clearance and inspections; inspections by other agencies, if applied to more than 20% of shipments; and handling and inspections that take place at the economy's port or border). There is no cost to export for both documentary and border compliance[263].

The **internalisation of construction products** in the Dutch construction sector has shown signs of growth for the past few years. The export values of all construction-related products increased from EUR 2.3 billion in 2010 to EUR 3.9 billion in 2020, marking an increase of 66.0%. The Netherlands' share of exports of all construction-related products in 2020 stood at 46.9% of total production value, higher than the 2010 level of 29.5%. This is also well above the 2019 EU-27 average of 11.3%.

Export value of all construction-related products between 2010 and 2020 — **66.0%**

Similarly, the export value of architectural services has boomed, growing significantly by 1906.1%, from EUR 1.3 million in 2010 to EUR 25.6 million in 2019. It decreased to EUR 5.5 million in 2020 however, registering a drop of 78.6% over the previous year. The 2010 – 2020 period all together enjoyed remarkable growth of 329.1%.

Export value of architectural services between 2010 and 2020 ↑ **329.1%**

In the context of **inward FATS (foreign affiliates statistics)**[264], value added at factor cost in the narrow construction and the real estate activities sub-sectors increased by 78.9% and 152.4%, respectively, between 2010 and 2018[265]. Similarly, turnover in the narrow construction and the real estate activities sub-sectors grew by 51.0% and 128.0%, respectively, during the 2010-2018 period.

According to the SBA (Small Business Act for Europe) Fact Sheet 2019, the Netherlands performed well in the context of involvement in the trade community and availability of information. Despite an increase in the share of SMEs that export online outside the EU, its performance is in line with the EU average[266].

The Dutch government introduced the **Export Credit Insurance (ECI)** facility to reduce the risks of exporting to foreign markets. The scheme is particularly addressed to the export of capital goods or capital-intensive services to non-EU countries, in high-risk sectors including contracting, dredging, construction and shipbuilding. It aims to mitigate the risk of non-payment from foreign buyers, safeguarding national competitiveness and boosting exports[267].

Moreover, the **International Business Network** (*Netwerk Internationaal Ondernemen* – NIO), an independent consultative body consisting of several trade promotion organisations and the Dutch Ministry of Foreign Affairs, launched the **internationaal ondernemen.nl** portal, providing information on business opportunities in foreign markets across all sectors (including construction and infrastructure) and support to internationalisation and exporting[268].

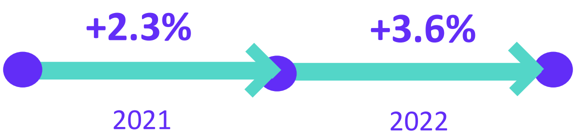
8

Outlook

After witnessing an annual decline of 3.7% in GDP in 2020 due to the COVID-19 pandemic, the Dutch economy is expected to revive and register growth post 2020.

The country's GDP is expected to grow by 2.3% in 2021 and 3.6% in 2022, reaching EUR 770.6 billion.

Expected GDP growth in 2021 and 2022



Conversely, the **volume index of production** in the broad construction sector is expected to decrease annually by 3.0 ip in 2021. Further in 2022 it is expected to increase annually by 2.0 ip.

As a result, the **turnover** of the broad construction sector is projected to increase annually by 3.9% in 2021, reaching a value of EUR 199.9 billion. The narrow construction sub-sector is expected to contribute a major share (64.6%) to total turnover in 2021, whereas turnover in the architectural and engineering activities sub-sector is expected to increase annually by 5.0%, making it the highest among the sub-sectors.

Similarly, the **total value added** of the broad construction sector is expected to increase annually by 3.9% in 2021, reaching EUR 74.0 billion. This is forecast to be driven primarily by an annual growth in the value added of the architectural and engineering activities sub-sector (+5.0%) in 2021. The narrow construction sub-sector is expected to contribute a major share (52.0%) to total turnover in 2021.

In parallel, the number of **persons employed** in the broad construction sector is also expected to annually increase by 4.0% to 865,858 in 2021. Most of this increase is forecast to come from the annual increase in the architectural and engineering activities sub-sector (+5.0%). The narrow construction sub-sector is expected to contribute a major share (67.1%) to the total number of persons employed in 2021.

With regards to the Dutch **housing market**, which suffered from housing shortages, it is expected to improve in the upcoming years, backed by governmental measures. Demand is also expected to increase due to low interest rates. The government aims to reduce the shortage of households in Netherlands to 2.0% by 2035. This is even important, with a forecasted 800,000 additional households by 2040, partly due to the rise in immigration. However, in 2021 and 2022, the sales volume is expected to fall to 220,000 and 210,000, respectively[269].

In the case of **non-residential construction and civil engineering,** it is expected to be primarily driven by the government's focus on the National Growth Fund which aims to allocate EUR 20.0 billion of grants over the next five years. The fund is intended for investments contributing to economic growth, such as knowledge development, infrastructure, research and innovation and low-carbon public transit infrastructure projects. Moreover, the Ministry of Infrastructure and Environment which manages the **Infrastructure Fund** (*Infrastructuurfonds*) providing funds for the construction, management and maintenance of infrastructures, is set to operate until 2031 with an overall budget of EUR 5.5 billion.

Taking the factors mentioned above into account - predictions of GDP recovery, increasing turnover and employment, along with government measures to revive the housing market and planned infrastructure projects - the outlook for the Dutch construction sector is optimistic and promising.

References

1 Please note that this 2020 data is a nowcast - please refer to the methodology notes for further details.
2 Please note that this 2020 data is a nowcast - please refer to the methodology notes for further details.
3 The gross operating rate is the ratio of Gross Operating Surplus to Turnover, and is an indicator of profitability
4 More recent data is not available.
5 Government of the Netherlands, European funding for Dutch infrastructure. https://www.government.nl/topics/infrastructure/news/2020/07/16/european-funding-for-dutch-infrastructure
6 International Network for Government Science Advice, implemented measures to support construction and infrastructure work, April 2020. https://www.ingsa.org/covid/policymaking-tracker/europe/netherlands/
7 Mondaq, No Dutch Recovery And Resilience Plan (Yet) https://www.mondaq.com/financial-services/1112772/no-dutch-recovery-and-resilience-plan-yet
8 European Union countries' recovery and resilience plans, https://www.bruegel.org/publications/datasets/european-union-countries-recovery-and-resilience-plans/
9 International Network for Government Science Advice, implemented measures to support construction and infrastructure work, April 2020. https://www.ingsa.org/covid/policymaking-tracker/europe/netherlands/.
10 Please note that this 2020 data is a nowcast - please refer to the methodology notes for further details.
11 No data is available for the breakdown into production in construction of buildings and production in civil engineering.
12 Please note that this 2019 data is a nowcast - please refer to the methodology notes for further details.
13 Please note that the share of each sub-sector in the value added of the broad construction sector should not be compared to the shares of the Gross Value Added in the GDP, since the GDP also includes taxes and excludes subsidies.
14 Data for broad construction is unavailable for subsequent years.
15 Data unavailable for subsequent years.
16 Apparent labour productivity refers to the Gross Value Added per person employed
17 The gross operating rate is the ratio of Gross Operating Surplus to Turnover and is an indicator of profitability.
18 Economisch Instituut voor de Bouw https://www.eib.nl/publicaties/12757/#:~:text=De%20publicatie%20'Monitor%20ZZP'ers,de%20CAO%20Bouw%20en%20Infra.
19 Chambers and Partners, Construction Law 2021. https://practiceguides.chambers.com/practice-guides/construction-law-2021/netherlands/trends-and-developments
20 Data unavailable for subsequent years.
21 Data unavailable for subsequent years.
22 European Commission, Economy and finance forecast 2021. https://ec.europa.eu/economy_finance/forecasts/2021/winter/ecfin_forecast_winter_2021_nl_en.pdf
23 CBS 2021, economic contraction 0.4 percent in q4 2020. https://www.cbs.nl/en-gb/news/2021/12/economic-contraction-0-1-percent-in-q4-2020
24 Data unavailable for 2020.
25 Long-term care services refer to the organisation and delivery of a broad range of services and assistance to people who are limited in their ability to function independently on a daily basis over an extended period of time, due to mental and/or physical disability. These services include assistance with activities of daily living (ADL), such as eating, bathing, dressing, etc., as well as basic medical services (wound dressing, medication, palliative care, etc.), Instrumental Activities of Daily Living (IADL) (meals, shopping, housework) and sometimes cash benefits to pay for services mainly provided by the private sector.
26 European Commission, Country Semester Report, the Netherlands 2020 – February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN
27 European Commission, draft budget, the Netherlands (October 2020). https://ec.europa.eu/info/sites/default/files/economy-finance/2021_dbp_nl_en.pdf
28 World Bank Group, Doing Business 2020, Economy Profile for the Netherlands. http://www.doingbusiness.org/data/exploreeconomies/netherlands
29 Ibidem.
30 European Commission, SME fact sheets 2021 background document, Netherlands. https://ec.europa.eu/docsroom/documents/46085
31 Ibidem.
32 Ibidem.
33 Government of the Netherlands- Coronavirus: expanded SME credit guarantee scheme gets accelerated launch. https://www.government.nl/latest/news/2020/03/15/coronavirus-expanded-sme-credit-guarantee-scheme-gets-accelerated-launch
34 Ibidem.
35 European Commission, ING and EIB Group come to the aid of Dutch SMEs and Mid-Caps during COVID-19, December 2020. https://ec.europa.eu/commission/presscorner/detail/en/ip_20_2358
36 Ibidem.
37 EIB, EIB group accelerates SME financing in the Netherlands- EUR 3 billion in three years. https://www.eib.org/en/press/all/2021-071-eib-group-accelerates-sme-financing-in-the-netherlands-eur-3-billion-in-three-years
38 Survey on the Access to Finance of Enterprises (SAFE) 2020. https://ec.europa.eu/docsroom/documents/43871
39 Ibidem.

40 Survey on the Access to Finance of Enterprises (SAFE) 2020. https://ec.europa.eu/docsroom/documents/43871

41 Government of the Netherlands- Coronavirus: Dutch government adopts package of new measures to save jobs and the economy. https://www.government.nl/latest/news/2020/03/19/coronavirus-dutch-government-adopts-package-of-new-measures-designed-to-save-jobs-and-the-economy

42 Netherlands Enterprise Agency (RVO), Guarantee of SME loans (BMKB), January 2021. https://www.rvo.nl/subsidie-en-financieringswijzer/borgstelling-mkb-kredieten-bmkb

43 Ibidem.

44 European Commission, 2021 SME Country Fact Sheet's Background Document for Countries. https://ec.europa.eu/growth/sites/default/files/background_documents_of_the_sme_fact_sheets_2021.zip

45 Ibidem.

46 Ibidem.

47 Statistics Netherlands, Business confidence higher at the start of the third quarter. https://www.cbs.nl/en-gb/news/2021/32/business-confidence-higher-at-start-of-third-quarter

48 Data unavailable for subsequent years.

49 Data unavailable for subsequent years.

50 Data unavailable for subsequent years.

51 Data unavailable for subsequent years.

52 According to Eurostat, construction services comprises Construction Abroad (code 250) and Construction in the Compiling Economy (code 251). They do not include architectural services or engineering services.

53 Data prior to 2014 is not available

54 SME access to finance conditions 2019 SAFE results – Netherlands. https://ec.europa.eu/docsroom/documents/38442

55 Ibidem.

56 Atradius, Market Monitor - Construction industry – Netherlands, March 2020. https://atradiuscollections.com/global/reports/market-monitor-construction-netherlands-2020.html

57 European Commission, Country Semester Report, the Netherlands 2020 – February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN

58 European Investment Bank- EIBIS 2020 - Netherlands overview, 2020. https://www.eib.org/attachments/efs/eibis_2020_netherlands_en.pdf

59 Ibidem.

60 Government of Netherlands, Expansion of entrepreneurial schemes for the emergency package for jobs and the economy. https://translate.google.com/translate?sl=auto&tl=en&u=https://www.rijksoverheid.nl/actueel/nieuws/2020/05/28/uitbreiding-op-ondernemersregelingen-noodpakket-banen-en-economie

61 Netherlands Enterprise Agency, Business Loan Guarantee Scheme (GO). https://business.gov.nl/subsidy/business-loan-guarantee-scheme/

62 Van Doorne, New-financing- government measures to provide credit support. https://www.vandoorne.com/en/knowledge-sharing/new-financing--government-measures-to-provide-credit-support/

63 Netherlands Enterprise Agency, Small credit guarantee for SMEs - KKC. https://english.rvo.nl/subsidies-programmes/small-credit-guarantee-smes-kkc

64 Amsterdam Business News, Start-ups, scale-ups and SMEs from North Holland account for more than 30% of bridging loan applications. https://www.iamsterdam.com/en/business/news-and-insights/news/2020/north-holland-bridging-loan-applicants

65 European Commission- State aid: Commission approves Dutch guarantee scheme of up to €10 billion to support the economy in context of coronavirus outbreak, April 2020. https://ec.europa.eu/commission/presscorner/detail/en/IP_20_687

66 Ibidem.

67 Data unavailable for subsequent years.

68 Bouwinvest Dutch Real Estate Market Outlook 2020-2022, https://www.bouwinvest.nl/media/4305/bouwinvest-dutch-real-estate-market-outlook-2020-2022.pdf

69 Bouwinvest Dutch Real Estate Market Outlook 2020-2022, https://www.bouwinvest.nl/media/4305/bouwinvest-dutch-real-estate-market-outlook-2020-2022.pdf

70 The Dutch mortgage market: overview and recent developments, May 2020. https://www.aegonassetmanagement.com/netherlands/news-and-insights/the-dutch-mortgage-market-overview-and-recent-developments/

71 National Reform Programme 2020- The Netherlands. https://ec.europa.eu/info/sites/info/files/2020-european-semester-national-reform-programme-netherlands_en.pdf

72 Global Property Guide, The Netherlands: pandemic not-enough to cool down its red-hot housing market. https://www.globalpropertyguide.com/Europe/Netherlands/Price-History

73 Housing Shortage: 845,000 Homes Must Be Built By 2030- June 2020. https://nltimes.nl/2020/06/16/housing-shortage-845000-homes-must-built-2030

74 Global Property Guide, The Netherlands: pandemic not-enough to cool down its red-hot housing market. https://www.globalpropertyguide.com/Europe/Netherlands/Price-History

75 Ibidem.

76 Ibidem.

77 Global Property Guide, The Netherlands: pandemic not-enough to cool down its red-hot housing market.

https://www.globalpropertyguide.com/Europe/Netherlands/Price-History

78 European Commission, Country Semester Report, the Netherlands 2020 – February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN

79 Ibidem.

80 The housing cost overburden rate is the percentage of the population living in households where the total housing costs represent more than 40 % of disposable income.

81 Data unavailable for 2019.

82 Eurostat, Housing cost overburden rate by age, sex and poverty status - EU-SILC survey. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvho07a&lang=en

83 The overcrowding rate is defined as the percentage of the population living in an overcrowded household.

84 Eurostat, Overcrowding rate. http://ec.europa.eu/eurostat/product?code=ilc_lvho05a&language=en&mode=view

85 Eurostat, Severe housing deprivation rate is defined as the percentage of population living in the dwelling, which is considered as overcrowded, while also exhibiting at least one of the housing deprivation measures. Housing deprivation is a measure of poor amenities and is calculated by referring to those households with a leaking roof, no bath/shower and no indoor toilet, or a dwelling considered too dark.

86 Eurostat, Severe housing deprivation rate by age, sex and poverty status - EU-SILC survey. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_mdho06a&lang=en

87 World Economic Forum, The Global Competitiveness Report 2019. http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

88 As the World Economic Forum Global Competitiveness Index – Special Edition 2020 did not provide updated data on infrastructure, this report relies on the data provided by the 2019 edition.

89 OECD Economic Survey, The Netherlands, June 2021. https://www.oecd.org/economy/surveys/Netherlands-2021-OECD-economic-survey-overview.pdf

90 World Economic Forum, The Global Competitiveness Report 2019. http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

91 Data unavailable for 2020.

92 OECD Economic Survey, The Netherlands, June 2021. https://www.oecd.org/economy/surveys/Netherlands-2021-OECD-economic-survey-overview.pdf

93 Ibidem.

94 Government of the Netherlands, European funding for Dutch infrastructure. https://www.government.nl/topics/infrastructure/news/2020/07/16/european-funding-for-dutch-infrastructure

95 International Network for Government Science Advice, implemented measures to support construction and infrastructure work, April 2020. https://www.ingsa.org/covid/policymaking-tracker/europe/netherlands/

96 European Commission, Country Semester Report, the Netherlands 2020 – February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN

97 Data unavailable subsequent years.

98 Data unavailable subsequent years.

99 Statistics Netherlands, Fewer bankruptcies in 2020. https://www.cbs.nl/en-gb/news/2021/02/fewer-bankruptcies-in-2020

100 Atradius Payment practices barometer, The Netherlands: 2021 optimism prevails despite COVID https://group.atradius.com/publications/payment-practices-barometer/the-netherlands-2020-domestic-credit-grows-amid-export-caution.html

101 Ibidem.

102 Survey on the Access to Finance of Enterprises (SAFE) 2020. https://ec.europa.eu/docsroom/documents/43871

103 Ibidem.

104 Ibidem.

105 Ibidem.

106 Ibidem.

107 Ibidem.

108 As the EU-27 average data was not available, the EU-28 average was used for comparative purpose.

109 DNB (2020). Payment Study 2020, https://www.dnb.com/content/dam/english/business-trends/DNB_Payment_Study_2020.pdf

110 Data unavailable for EU-27, considered EU-28 for comparative purpose.

111 Intrum: European Payment Report 2020, Special Edition COVID-19 White Paper https://www.intrum.com/media/8279/epr-2020-special-edition-white-paper_final.pdf

112 Ibidem.

113 CRIBIS DNB (2020). Payment Study 2020, COVID-19 edition https://www.dnb.com/content/dam/english/business-trends/DNB_Payment_Study_2020.pdf

114 Euler Hermes- Collection Profile- The Netherlands, https://www.eulerhermes.com/content/dam/onemarketing/ehndbx/eulerhermes_com/en_gl/erd/collection/Netherlands.pdf

115 Atradius- Payment Practices Barometer- Netherlands, November 2020. https://group.atradius.com/publications/payment-practices-barometer/the-netherlands-2020-domestic-credit-grows-amid-export-caution.html

116 Ibidem.

117 Ibidem.

118 Ibidem.

119 World Bank Group, Doing Business 2020. https://www.doingbusiness.org/content/dam/doingBusiness/country/n/netherlands/NLD.pdf

120 The warehouse in this example is defined as a structure for general storage activities, with two stories, above ground and with total constructed area of approx. 1,300 square meters. The ground, on which the warehouse is built is owned by the company that will use it and valued at 50 times income per capita. There are architectural and technical plans prepared for the warehouse, which are also taken into account and counted as procedures if their preparation requires obtaining further documentation or getting prior approvals from eternal agencies. Finally, in this example the warehouse takes 30 weeks to construct, excl. all delays due to administrative and regulatory requirements.

121 Ibidem.

122 As the publication of the WB Doing Business report 2021 was not available at the time of the writing, this report relies on the data provided by the 2020 edition.

123 ING Bank, Weak recovery in building permits could hinder future construction in the eurozone. https://think.ing.com/snaps/eurozone_building_permits_weak_recovery_could_hinder_future_construction/

124 Ibidem.

125 Data unavailable for 2020.

126 European Commission- Education and Training Monitor 2020- Netherlands. https://op.europa.eu/en/publication-detail/-/publication/7c1a4fed-2498-11eb-9d7e-01aa75ed71a1/language-en/format-PDF/source-171316235

127 Data unavailable for 2020.

128 Data unavailable for 2019.

129 European Commission, Country Semester Report, the Netherlands 2020 – February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN

130 Education and Training Monitor 2019 – Netherlands. https://ec.europa.eu/education/sites/education/files/document-library-docs/et-monitor-report-2019-netherlands_en.pdf

131 Education and Training Monitor 2020 – Netherlands. https://op.europa.eu/en/publication-detail/-/publication/7c1a4fed-2498-11eb-9d7e-01aa75ed71a1/language-en/format-PDF/source-171316235

132 Ibidem.

133 European Commission, Country Semester Report, the Netherlands 2020 – February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN

134 Ibidem.

135 Data unavailable for subsequent years.

136 Eurostat, Generation of waste-by-waste category, hazardousness and NACE Rev. 2 activity, https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

137 Construction sector leading in waste and recycling, November 2019. https://www.cbs.nl/en-gb/news/2019/45/construction-sector-leading-in-waste-and-recycling

138 Data unavailable for subsequent years.

139 The Netherlands joins leading group on Circular Economy. https://www.government.nl/latest/news/2018/07/17/the-netherlands-joins-leading-group-on-circular-economy

140 CBS 2021, The Netherlands in numbers 2020 edition. https://longreads.cbs.nl/the-netherlands-in-numbers-2020/how-much-do-we-recycle/

141 The Netherlands joins leading group on Circular Economy, July 2018. https://www.government.nl/latest/news/2018/07/17/the-netherlands-joins-leading-group-on-circular-economy

142 Government of the Netherlands, Environmental Management Act. https://www.government.nl/topics/environment/contents/roles-and-responsibilities-of-central-government/environmental-management-act

143 European Commission, Screening template for Construction and Demolition Waste management in The Netherlands. September 2015. http://ec.europa.eu/environment/waste/studies/deliverables/CDW_The%20Netherlands_Factsheet_Final.pdf

144 COMMISSION STAFF WORKING DOCUMENT Country Report The Netherlands 2020, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN

145 NL Times, Europe asks Netherlands to set more ambitious climate targets https://nltimes.nl/2021/09/24/europe-asks-netherlands-set-ambitious-climate-targets

146 Climate Agreement – Klimaatakkoord, June 2019. https://www.klimaatakkoord.nl/binaries/klimaatakkoord/documenten/publicaties/2019/06/28/national-climate-agreement-the-netherlands/20190628+National+Climate+Agreement+The+Netherlands.pdf

147 Ibidem.

148 European Commission, European innovation scoreboard 2021- The Netherlands, https://ec.europa.eu/docsroom/documents/45927

149 Ibidem.

150 European Commission, Country Semester Report, the Netherlands 2020 – February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN .

151 Data for BERD and R&D personnel is available only till 2012. Hence, not taken.

152 The 2020 EU Industrial R&D Investment Scoreboard, https://iri.jrc.ec.europa.eu/scoreboard/2020-eu-industrial-rd-investment-scoreboard

153 European Eco-Innovation Scoreboard 2021. https://ec.europa.eu/environment/ecoap/indicators/index_en

154 Ibidem.

155 As the EU-27 average data was not available, the EU-28 average was used for comparative purpose.
156 Digital Economy and Society Index (DESI) 2020- The Netherlands. https://ec.europa.eu/digital-single-market/en/scoreboard/netherlands
157 Ibidem.
158 Invest in Holland, The Netherlands ranks in Top 5 of Global Innovation Index 2020, September 2020. https://investinholland.com/news/the-netherlands-ranks-in-top-5-of-global-innovation-index-2020/
159 Dutch Digitalisation Strategy, June 2018. https://www.government.nl/binaries/government/documents/reports/2018/06/01/dutch-digitalisation-strategy/Dutch+Digitalisation+strategy+def.pdf
160 European Commission, European Innovation Scoreboard 2019. https://ec.europa.eu/docsroom/documents/35903
161 EIB Group survey on investment and investment finance 2020 – The Netherlands. https://www.eib.org/attachments/efs/eibis_2020_netherlands_en.pdf
162 2019 SBA Fact Sheet - Netherlands. https://ec.europa.eu/docsroom/documents/38662/attachments/21/translations/en/renditions/native
163 BTIC, https://btic.nu/integrale-energietransitie-bestaande-bouw/
164 The Netherlands adds a circular building touch, November 2019. https://ec.europa.eu/environment/ecoap/about-eco-innovation/policies-matters/netherlands-adds-circular-building-touch_en
165 The Netherlands adds a circular building touch, November 2019. https://ec.europa.eu/environment/ecoap/about-eco-innovation/policies-matters/netherlands-adds-circular-building-touch_en
166 European Commission, Eco-Innovation in the Netherlands, EIO Country Profile 2018-2019. https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio_country_profile_2018-2019_netherlands.pdf
167 USP – BIM use is on the rise in Europe- 2019. https://www.euro-mat.com/news/usp-bim-use-is-on-the-rise-in-europe/
168 A standard is a central and formal determination of information and process agreements set down in a document. The goal of the standard is to make interoperability possible and thus to enable IT systems to exchange data and share information and knowledge. An open standard is a standard with an open standardisation process. Therefore, the definition includes issues such as easily accessible documentation, no intellectual property rights constraints, open participation in addition to independence and the sustainability of the standardisation organisation.
169 BIM-loket, "BIM-loket" in short. http://www.bimloket.nl/169
170 BIM + geospatial interoperability would avoid another CAD + GIS quagmire, October 2019. https://www.geospatialworld.net/blogs/bim-geospatial-interoperability-would-avoid-another-cad-gis-quagmire/#:~:text=The%20Netherlands%20has%20created%20a,Netherlands%20including%20related%20geospatial%20standards.
171 Redshift, Better together: OpenBIM leads to connected design and build ecosystems. https://redshift.autodesk.com/openbim/#3-companies-leading-the-charge
172 KHL Group, International construction, BIM used on Netherlands canal project. https://www.international-construction.com/news/BIM-used-on-Netherlands-canal-project/8009920.article
173 Geospatial world, GEOBIM 2020 awards exemplary construction 4.0 practices. https://www.geospatialworld.net/news/geobim-2020-awards-recognize-exemplary-construction-4-0-practices/
174 Bouw Informatie Raad- https://www.bouwinformatieraad.nl/p/90/Activities
175 Government of Netherlands: Ministry of the Interior and Kingdom Relations https://www.government.nl/ministries/ministry-of-the-interior-and-kingdom-relations
176 Ministry of the Interior and Kingdom relations: Housing and renting: https://www.government.nl/topics/housing/contents/rented-housing
177 Ministry of the Interior and Kingdom relations: Housing and renting: https://www.government.nl/topics/housing/contents/rented-housing;
178 Social housing vs Private housing (free sector) in the Netherlands- 2020. https://www.iamexpat.nl/housing/netherlands-rentals/social-housing-private-free-sector#:~:text=Social%20housing%20in%20the%20Netherlands,)%20is%20737%2C14%20euros.
179 Ministry of the Interior and Kingdom relations: Housing and renting: https://www.government.nl/topics/housing/contents/rented-housing
180 Social Housing Guarantee (WSW) website https://www.wsw.nl/over-wsw/
181 European Commission, National Reform Programme 2020 - The Netherlands, https://ec.europa.eu/info/sites/info/files/2020-european-semester-national-reform-programme-netherlands_en.pdf
182 European Commission, Country Semester Report- The Netherlands 2020, February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN
183 Ibidem.
184 NRC, 'Tekort aan huurwoningen bereikt in 2018 hoogtepunt', February 2017. https://www.nrc.nl/nieuws/2017/02/13/tekort-aan-huurwoningen-bereikt-in-2018-dieptepunt-a1545774 .
185 European Commission, Country Semester Report- The Netherlands 2020, February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN
186 European Commission, Country Semester Report- The Netherlands 2020, February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN
187 Middle Rent Measures Act, June 2019. https://www.pharosadvocaten.nl/nl/wet-maatregelen-middenhuur/
188 Ibidem.
189 European Commission, National Reform Programme 2020 - The Netherlands https://ec.europa.eu/info/sites/info/files/2020-european-semester-national-reform-programme-netherlands_en.pdf
190 Ibidem.
191 I am Expat, Housing sector and municipalities call for 1 million new homes by 2031. https://www.iamexpat.nl/housing/real-estate-news/housing-sector-and-municipalities-call-1-million-new-homes-2031
192 Netherlands news live, adapt multiple households to each property.

https://netherlandsnewslive.com/adapt-multiple-households-to-each-property/215625/
193 Mister Mortgage, changes to mortgage rules. https://mistermortgage.nl/changes-mortgage-rules-2021/
194 Netherlands news live, next government needs to invest another 20 billion euros in housing and infrastructure. https://netherlandsnewslive.com/next-government-needs-to-invest-another-20-billion-euros-in-housing-and-infrastructure/181893/
195 Housing Europe: Netherlands review their Housing Act http://www.housingeurope.eu/blog-455/netherlands-review-their-housing-act
196 Institute for Housing and Urban Development Studies (HIS). European Experiences of Building Codes for Promoting Sustainable Housing: http://www.ihs.nl/fileadmin/ASSETS/ihs/Marketing/prospective_students_pages/ECO_and_MFUI/EU_Experiences_of_Building_codes.pdf
197 Business.gov.nl- New buildings must meet BENG requirements, https://business.gov.nl/amendment/new-buildings-beng-energy-efficiency-requirements/
198 Ploum Rotterdam, Quality Assurance Act for building: where are we now? https://www.ploum.nl/wet-kwaliteitsborging-voor-het-bouwen-waar-staan-we-nu/
199 Government of Netherlands. Spatial planning and infrastructure: https://www.government.nl/topics/spatial-planning-and-infrastructure/contents/spatial-planning-in-the-netherlands
200 Summary National Policy Strategy for Infrastructure and Spatial Planning: https://www.government.nl/topics/spatial-planning-and-infrastructure/documents/publications/2013/07/24/summary-national-policy-strategy-for-infrastructure-and-spatial-planning
201 Business.gov.nl- Building regulations, https://business.gov.nl/regulation/building-regulations/
202 Baker&McKenzie, Doing Business in the Netherlands, 2016. http://www.bakermckenzie.com/-/media/files/insight/publications/2016/07/doing-business-in-the-netherlands-2016/dbiemeadoingbusinessnetherlandsjul16.pdf?la=en
203 European Commission, National Reform Programme 2020 - The Netherlands, https://ec.europa.eu/info/sites/info/files/2020-european-semester-national-reform-programme-netherlands_en.pdf
204 Government of the Netherlands, Revision of Environment and Planning laws. https://www.government.nl/topics/spatial-planning-and-infrastructure/revision-of-environment-planning-laws
205 Netherlands Enterprise Agency, Outdoor space obligatory for sheltered housing. https://business.gov.nl/amendment/outdoor-space-obligatory-sheltered-housing/
206 Netherlands Enterprise Agency, measures to improve quality in the construction sector. https://business.gov.nl/amendment/measures-improve-quality-construction-sector/
207 DLA Piper- Real World Law Construction, October 2019. https://www.dlapiperrealworld.com/law/index.html?t=construction&s=forms-of-contract-procurement-methods&q=insurances&c=NL
208 Ibidem.
209 Thomson Reuters Practical Law, Construction and Projects: The Netherlands. https://uk.practicallaw.thomsonreuters.com/1-505-9872?transitionType=Default&contextData=(sc.Default)&firstPage=true
210 Dutch Civil Code, http://www.dutchcivillaw.com/legislation/dcctitle771212.htm
211 This includes total investment by the construction and real estate sub-sectors, defined as gross fixed capital formation, i.e. acquisitions minus disposal, of total fixed assets (e.g. machinery and equipment, vehicles, dwellings and other buildings).
212 Data unavailable for 2020.
213 Data unavailable for 2020.
214 Data unavailable for 2020.
215 Data unavailable for 2020.
216 Data unavailable for 2020.
217 This includes total investment (i.e. gross fixed capital formation) in dwellings and non-residential construction and civil engineering by investors in the general economy (e.g. industry, financial and non-financial services, households, agricultural sector, etc.).
218 Data unavailable for 2020.
219 The indicator gross fixed capital formation in non-residential and civil engineering refers to the Eurostat indicator «Other buildings and structures»
220 Government of the Netherlands, An Infrastructuurfonds Rijksbegroting 2018, May 2019. https://www.rijksoverheid.nl/documenten/jaarverslagen/2019/05/15/infrastructuurfonds-2018
221 Accelerate and invest in infrastructure projects, June 2020. https://www.rijksoverheid.nl/ministeries/ministerie-van-infrastructuur-en-waterstaat/nieuws/2020/06/19/versnellen-en-investeren-in-infraprojecten
222 Ibidem.
223 European money for Dutch infrastructure, July 2020. https://www.rijksoverheid.nl/ministeries/ministerie-van-infrastructuur-en-waterstaat/nieuws/2020/07/16/europees-geld-voor-nederlandse-infrastructuur
224 Ibidem.
225 European Commission, Country Semester Report- The Netherlands 2020, February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN
226 IPE, ABP plans increase in Dutch infrastructure investments, November 2020. https://www.ipe.com/news/abp-plans-increase-in-dutch-infrastructure-investments/10048780.article
227 Government of the Netherlands, Government allocates EUR 646 million to projects designed to boost economic growth, April 2021. https://www.government.nl/latest/news/2021/04/21/government-allocates-%E2%82%AC646-million-to-projects-designed-to-boost-economic-growth
228 Ibidem.
229 EIB, Netherlands: Vesteda and EIB sign financing agreement. https://www.eib.org/en/press/all/2020-389-vesteda-and-european-investment-bank-sign-financing-agreement
230 EIB, Netherlands: EIB supports energy security.

https://www.eib.org/en/press/all/2020-083-eib-supports-energy-security-in-the-netherlands

231 The Netherlands and the EIB https://www.eib.org/en/projects/regions/european-union/netherlands/index.htm

232 Investment Plan: The Netherlands - December 2020. https://ec.europa.eu/info/strategy/priorities-2019-2024/economy-works-people/jobs-growth-and-investment/investment-plan-europe/investment-plan-results/investment-plan-netherlands_en

233 Data unavailable for 2019.

234 European Commission, Education and Training Monitor 2020, the Netherlands. https://op.europa.eu/en/publication-detail/-/publication/7c1a4fed-2498-11eb-9d7e-01aa75ed71a1/language-en/format-PDF/source171316235

235 European Commission, Country Semester Report- The Netherlands 2020, February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN

236 European Commission, Education and Training Monitor 2019, the Netherlands. https://ec.europa.eu/education/sites/education/files/document-library-docs/et-monitor-report-2019-netherlands_en.pdf .

237 European Commission, Education and Training Monitor 2020, the Netherlands. https://op.europa.eu/en/publication-detail/-/publication/7c1a4fed-2498-11eb-9d7e-01aa75ed71a1/language-en/format-PDF/source-171316235

238 Ibidem.

239 Ibidem.

240 Bouwend Nederland, Website Bouwopleiders.nl live, June 2016. http://www.bouwendnederland.nl/nieuws/2764077/website-bouwopleidersnl-live

241 Circular Construction Economy, 2018. https://hollandcircularhotspot.nl/wp-content/uploads/2019/09/Circular-Construction-Economy.pdf

242 The Circular Construction Economy Transition Agenda sets out the strategy for achieving a circular construction economy by 2050 and contains the agenda for the 2018-2021 period. This Agenda has been drawn up by a transition team made up of experts from the fields of science, the government, and market participants.

243 National Reform Programme 2020 The Netherlands, https://ec.europa.eu/info/sites/info/files/2020-european-semester-national-reform-programme-netherlands_en.pdf

244 Ibidem.

245 Ibidem.

246 Global Buildings Performance Network, Netherlands. http://www.gbpn.org/databases-tools/rp-detail-pages/netherlands#RegulatoryMeasures

247 Energy Performance of Companies and Buildings in the Netherlands, December 2018. https://www.pegasuslegalregister.com/2018/12/20/energy-performance/

248 Government of the Netherlands, Energy Agreement for Sustainable Growth. https://www.government.nl/topics/energy-policy/contents/energy-agreement-for-sustainable-growth

249 EIB funds Dutch homes with €150m energy efficiency loans, March 2020. https://www.energylivenews.com/2020/03/10/eib-funds-dutch-homes-with-%E2%80%8Ee150m-energy-efficiency-loans/

250 Ibidem.

251 Rijksdienst voor Ondernemend Nederland, Subsidie energiebesparing eigen huis. http://www.rvo.nl/subsidies-regelingen/subsidie-energiebesparing-eigen-huis

252 Energy-saving at home subsidy scheme (SEEH), Novmber 2019. https://www.iea.org/policies/7732-energy-saving-at-home-subsidy-scheme-seeh

253 Statistics Netherlands, 11 percent of energy consumption from renewable sources in 2020. https://www.cbs.nl/en-gb/news/2021/22/11-percent-of-energy-consumption-from-renewable-sources-in-2020

254 IEA, SDE++ funding for Porthos to develop its CCS project, July 2021 https://www.iea.org/policies/13920-sde-funding-for-porthos-to-develop-its-ccs-project

255 Offshore energy, Porthos CCS project: Industry targets EUR 2 billion in Dutch subsidies. https://www.offshore-energy.biz/porthos-ccs-project-industry-targets-e2-billion-in-dutch-subsidies/
Offshore energy, Porthos CCS project in play for EUR 102 million EU funding. https://www.offshore-energy.biz/porthos-ccs-project-in-play-for-e102m-eu-funding/

256 European Commission, EU Single Market Scoreboard 2020 – Netherlands. https://ec.europa.eu/internal_market/scoreboard/performance_by_member_state/nl/index_en.htm

257 As the EU-27 average data was not available, the EU-28 average was used for comparative purpose.

258 European Commission, EU Single Market Scoreboard 2020 – Netherlands. https://ec.europa.eu/internal_market/scoreboard/performance_by_member_state/nl/index_en.htm

259 European Commission, Country Semester Report- The Netherlands 2020, February 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0518&from=EN

260 Web platform: www.hulpbijbrexit.nl

261 World Bank Doing Business 2020, Economy profile- Portugal. https://www.doingbusiness.org/content/dam/doingBusiness/country/p/portugal/PRT.pdf

262 Ibidem.

263 Ibidem.

264 Inward FATS describe the overall activity of foreign affiliates resident in the compiling economy. A foreign affiliate within the terms of inward FATS is an enterprise resident in the compiling country over which an institutional unit not resident in the compiling country has control.

265 Data unavailable for subsequent years.

266 2019 SBA Fact Sheet - Netherlands. https://ec.europa.eu/docsroom/documents/38662/attachments/21/translations/en/renditions/native

267 Government of the Netherlands, Export Credit Insurance (ECI). https://www.government.nl/topics/enterprise-and-innovation/contents/excport-credit-insurances-eci

268 Internationaal Ondernemen, http://www.internationaalondernemen.nl/nl

269 Housing shortage and low interest rates are driving up house prices, https://economics.rabobank.com/publications/2021/march/housing-shortage-and-low-interest-rates-are-driving-up-house-prices/