



European Construction Sector Observatory

Country profile Netherlands

June 2018

In a nutshell

After a number of years of stagnation, the Dutch **construction sector** is expected to fare even better than the overall economy over the coming years. However, the workforce in the broad construction sector declined by 5.2% between 2010 and 2016. This was accompanied by a decline in construction of buildings, with the number of people employed falling by 10.3% between 2010 and 2016. On the other hand, the total turnover of the broad construction industry in 2016 amounted to EUR 144.3 billion, a 5.8% increase compared to 2010.

Workforce in the broad
construction sector 2010-2016  **5,2%**

Nevertheless, the Dutch **housing market** is traditionally associated with a limited supply due to the limited development space in major cities. The number of **households** in the Netherlands has experienced a continuously increasing trend, having risen by 5.3% over 2010-2016, from 7.3 million to 7.7 million. The market is characterised by a strong social housing market, with about 80% of the total 2.9 million rental dwellings being owned and managed by housing associations. Following the **National Reform Programme** of 2017, low income earners and people on benefits will be compensated for rent increases through the housing benefit, through a number of loans backed by government guarantees and aiming to reduce the current high mortgage debt of Dutch households.

Number of households
2010-2016  **5,3%**

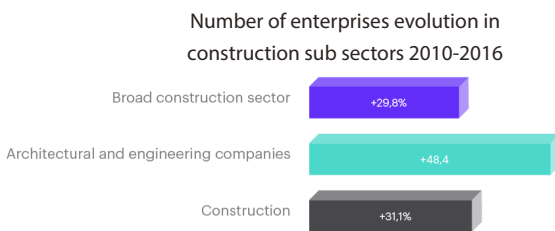
The Netherlands is particularly advanced in terms of **energy efficiency** in the built environment, as promoted by a policy framework governed by the Energy Agreement for Sustainable Growth, which sets ambitious energy saving goals for 2020. Financing for energy efficiency investments in the building stock is ensured by the National Energy Saving Fund, with a budget of EUR 600 million, which provides homeowners with low-interest loans to finance energy-saving interventions through programmes such as the Energy Saving Loan. The Energiesprong scheme was also introduced, aiming to renovate 111,000 social dwellings through a budget of EUR 6.6 billion and focusing on the complete energy rehabilitation of residential buildings at no up-front cost. The Netherlands also boasts numerous schemes to provide financing, advice and networking opportunities to SMEs wishing to export and expand to foreign markets. Instances include the Dutch Trade and Investment Fund (DTIF), with a total budget of EUR 102 million, and a series of internationalisation vouchers, with a budget of EUR 3.8 million.

In conclusion, the **outlook** for the Dutch construction market in the coming years continues to be strong with a projected growth of 3% in 2017, particularly due to high growth in the residential market and transport infrastructure. However, its revival is constrained by a shortage of skilled workers, low numbers of students in related subjects, as well as an increasing proportion of older workers nearing retirement age. In this respect, making the **vocational education and training (VET)** more practical could help tackle the shortage of technical professions such as bricklayers, roofers and plasterers.

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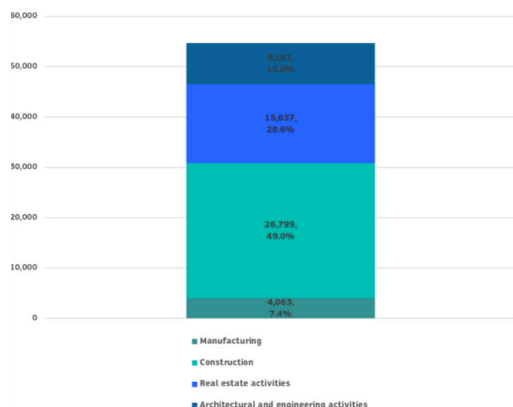
Key Figures

The number of **enterprises** in the broad construction sector in the Netherlands totalled 246,977 in 2016¹ (Figure 1), with the construction sub-sector (NACE F) accounting for 68.8% of the total firms. Overall, the number of enterprises in the broad construction sector increased by 28.9% between 2010 and 2016, mostly driven by the 48.4% growth in architectural and engineering companies, followed by 33.1% in construction and 14.5% in manufacturing. According to Bouwend Nederland (Building Netherlands), this growth is mostly attributable to the increase in one-person companies following the crisis, which make up the majority of companies in the industry. The volume index of **production** in construction² experienced an initial 12.1% drop between 2010 and 2013 due to the crisis, reaching a bottom low (Figure 2). However, it increased by 21.7% over 2013-2016 and overall increment of 7% is recorded over the period of 2010-2016.



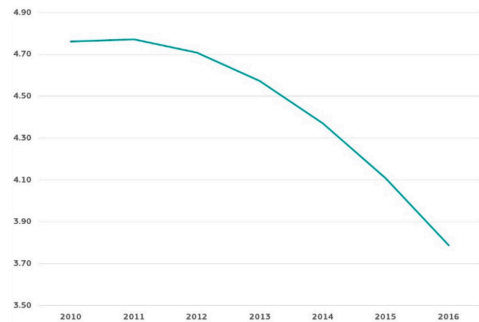
The **total added value** of the broad construction sector amounted to EUR 54.7 billion in 2016³, with the construction sub-sector contributing to 49.0% of the total⁴ (EUR 26.8 billion), followed by 28.6% of real estate activities, 15.0% of architectural and engineering activities and 7.4% of manufacturing (Figure 3). The share of gross value added of the broad construction sector in the GDP reached 11.4% in 2014⁵, slightly below the EU-28 average of 16.9%, with real estate activities having the largest contribution (Figure 4).

Figure 3: Value added in the Dutch construction sector in 2016 (EUR m)



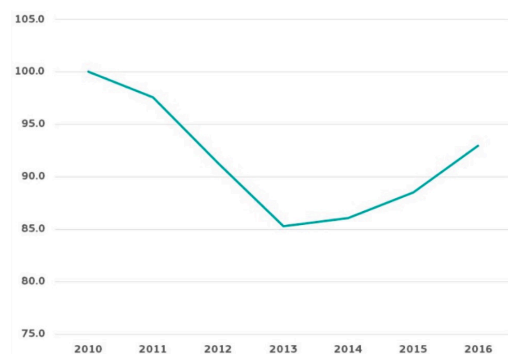
Source: Eurostat, 2017.

Figure 1: Number of enterprises in the Dutch construction sector between 2010-2016



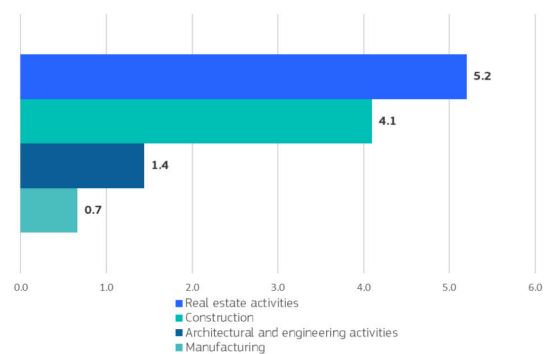
Source: Eurostat, 2017.

Figure 2: Volume index of production in the Dutch construction sector over 2010-2016 (2010=100)



Source: Eurostat, 2017.

Figure 4: Gross value added as a share of GDP in the Dutch construction sector in 2014 (%)



Source: Eurostat, 2017.

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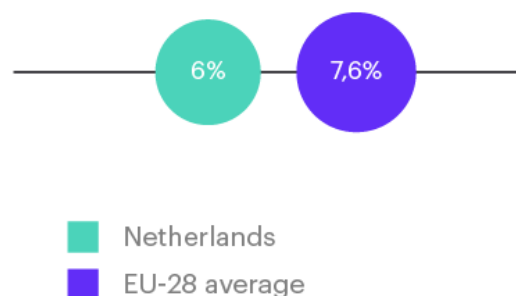
Macroeconomic Indicators

The Netherlands' **GDP** reached EUR 670.0 billion in 2016, 2.2% higher than the previous year, a 6.1% increase compared to the 2010 level (EUR 631.5 billion) and the highest since 2000, suggesting the strong and continuous growth of the Dutch economy, including employment and wages growth.

Rising exports generated the Netherlands' economy expansion at its fastest pace since the start of monetary union 17 years ago and is among the fastest growing western European economies⁶. The Netherlands' **GDP** reached EUR 670.0 billion in 2016, 2.2% higher than the previous year, a 6.1% increase compared to the 2010 level (EUR 631.5 billion) and the highest since 2000, suggesting the strong and continuous growth of the Dutch economy, including employment and wages growth. The potential GDP in 2016 amounted to EUR 675.1 billion. The output gap has been narrowing since 2013, signalling the recovery from the prolonged recessionary period, driven by increasing domestic demand and investment growth⁷. The **inflation rate** has been continuously declining since 2011, reaching a record low of 0.1% in 2016. However, inflation is expected to rise in 2017 due to higher energy prices and positive base effects⁸.

In 2016, the average **unemployment rate** in the Netherlands reached 6.0%, below the EU-28 average of 7.6%⁹. This is an improvement compared to the peak of 7.4% in 2014 but is still considerably above the 2008 level (3.7%). Due to the crisis, youth unemployment (below age of 25) reached 10.8% in 2016, lower than 2010 (11.1%) and below the EU-28 average of 18.7%. In terms of the total population, the Netherlands amounted to 17 million people in 2016. It is projected to increase by 8.3% by 2030 and by 13.3% until 2050, reaching 19.2 million. In parallel, net migration turned from emigration to immigration in 2008, and has increased from 32,471 in 2010 to 55,018 people in 2015, with the number of immigrants reaching 166,872. This is likely to constitute an additional driver for housing demand and workforce capacity. In 2015, the **working age population** made up 65.3% of the Netherlands' total population, in line with the EU-28 average of 65.8%. By 2050, this share is expected to decrease to 59.3%. In parallel, the proportion of people over 65 will increase from 18.2% to 25.2% of the total, highlighting the country's ageing population. As a result, the projected increase in long-term care¹⁰ public expenditure is high, being set to increase from 4.1% of GDP in 2013 to 7.5% in 2060 (compared to 1.7% in 2013 and 3.0% in 2060 for the whole Euro area). The Netherlands' authorities will publish a comprehensive evaluation of the reform in 2018¹¹.

Unemployment rate in 2017



In 2016, the **general government expenditure** represented 43.6% of GDP, the lowest since 2010 and lower than the EU-28 average of 46.6%¹². The **general government deficit** amounted to 0.4% of GDP in 2016, below the 3% threshold of the EU's Stability and Growth Pact (SGP) and the EU-28 average of 1.7%¹³. **General government gross debt** amounted to 62.3% of GDP in 2016, considerably above the 2010 level (59.3%), signalling a slow steady increase of government's lending to support the growth. Policy reforms and cost-cutting in healthcare and pension have contributed to addressing fiscal sustainability risks, although high public expenditure on long-term care, which is the highest in the EU, still threatens government finances¹⁴.

The Dutch economy has a developed financial market that is characterised by available and affordable capital. The Netherlands ranks 28th out of 137 economies in terms of **financial market development**, according to the 2017-2018 Global Competitiveness Report. Dutch government is actively supporting the development of **SMEs** by removing the barriers for business creation, promoting fiscal cuts for young entrepreneurs and creating a positive image of being self-employed. Despite overall improvements, **access to finance** is a challenge for Dutch SMEs, particularly loan financing. Outstanding loans to non-financial corporations have decreased by 0.64% over 2010-2016, from EUR 313.8 billion to EUR 311.8 billion. Moreover, the share of SMEs that were granted the full requested loan increased from 60% in 2010 to 89% in 2015, indicating growing economic confidence of the banking sector, as well as industry. In terms of credit conditions, the Dutch authorities introduced a number of measures to improve alternative sources of financing, for example, the establishment of a fund of funds for later stage venture capital investment, a micro-credit institution and the provision of seed capital by regional development agencies¹⁵. The Dutch government is implementing several policies aimed at easing the access and affordability of external financing for SMEs. The **Guarantee Scheme for SMEs (Borgstelling MKB Kredieten – BMKB)** was introduced to facilitate access to loans for SMEs that

do not have sufficient collateral for the bank. Under the scheme, the government offers guarantees up to EUR 1.5 million, thus lowering the risk for the financial institution providing the loan¹⁶. Other measures to support access to finance include the launch of the microcredit institution **Qredits**, as well as an online one-stop-shop for entrepreneurs (**Nationale Financieringswijzer**), providing knowledge, skills and networks to find appropriate financing for their business¹⁷. Moreover, in 2017 the European Investment Fund (EIF) together with the European Fund for Strategic Investment (EFSI) and the Netherlands Investment Agency (NIA) are introducing a EUR 100 million co-investment programme – the **Dutch Growth Co-Investment Programme**, which supports innovative and fast-growing SMEs and small mid-caps in the Netherlands¹⁸.

The Netherlands ranked 20th in 2018 out of 190 countries in terms of starting a business¹⁹, a slight increase compared to previous year (22nd in 2017)

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 8.5). Restrictive labour regulations and inefficient government bureaucracy are seen as the most problematic factors for doing business in the Netherlands²⁰.

3

Key economic drivers of the construction sector

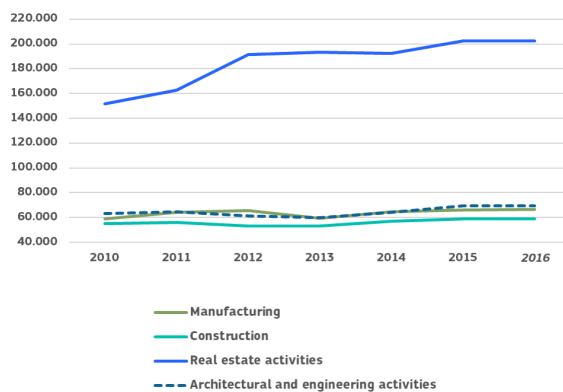
Productivity

Labour productivity in the broad construction sector has shown an increasing trend of 10.1% between 2010 and 2014²¹, from EUR 67,297 to EUR 74,070 (Figure 5). All construction sub-sectors experienced an increase of labour productivity over the period of 2010-2016²². Namely, real estate activities recorded the largest increase of 33.4% in productivity, from EUR 151,800 in 2010 to EUR 202,500 in 2016, the highest among the sub-sectors. The manufacturing sub-sector grew by 12.4% increase over the same period, from EUR 59,062 to EUR 66,400. Productivity in architectural and engineering activities increased by 9.9%, from EUR 63,200 to EUR 69,500 and the narrow construction sub-sector rose by 6.5%, from EUR 55,200 to EUR 58,800 over the period of 2010-2016.

Labour productivity in the
broad construction
in 2010-2014

↑ 10,1%

Figure 5: Labour productivity in the construction sector in the Netherlands over 2010-2016 (EUR k)



Source: Eurostat, 2017.

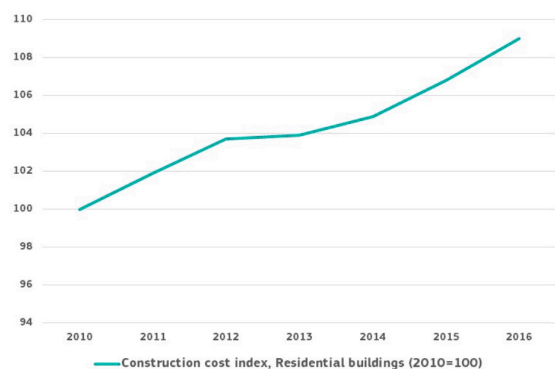
Profitability

The total **turnover** of the broad construction industry in 2016²³ amounted to EUR 144.3 billion, a 5.8% increase compared to 2010. The construction sub-sector accounted for 61.5% of the total turnover, followed by real estate activities (18.5%), architectural and engineering activities (10.5%) and manufacturing (9.5%). The gross operating surplus of the broad construction sector amounted to EUR 22.1 billion in 2014²⁴, 2.9% below the 2010 level. The **gross operating surplus** of the broad construction sector²⁵, which gives an indication of the sector's profitability, was 17.0% in 2014, 1.2 percentage points higher than 2010 (15.8%), and lower than the EU-28 average of 17.9% in 2014²⁶. However, construction costs have been rising, with the construction cost index experiencing a 9.0% increase over 2010-2016, due to increasing material prices (+8.0%) and particularly labour costs (+11.0%), thus threatening the profitability of the sector (Figure 6).

Total turnover of the broad
construction industry
in 2010-2016

↑ 5,8%

Figure 6: Construction cost index over 2010-2016 (2010=100)



Source: Eurostat, 2017.

Lower revenues linked with the increased number of enterprises and increasing costs suggest strengthening of competition in the construction sector, especially among self-employed and SMEs.

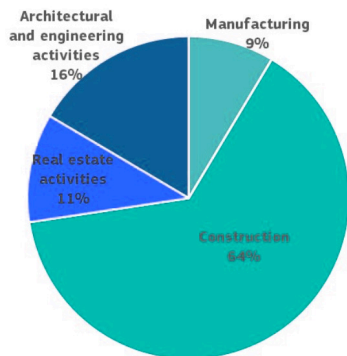
Employment

In 2016²⁷, the broad construction sector employed 712,116 people. The number of persons employed in the broad construction sector declined by 5.2% between 2010 and 2016.

In 2016²⁸, the broad construction sector **employed** 712,116 people. The number of persons employed in the broad construction sector declined by 5.2% between 2010 and 2016. The construction sub-sector employed 64% of the total construction workforce in 2016 (Figure 7), however it has experienced a 6.8% decrease since 2010. Within the construction sub-sector, activities in construction of buildings saw a particular decline, with the number of people employed falling by 10.3% between 2010 and 2016.

As for **employment by specific occupation**, the manufacturing sub-sector experience a sharp decrease in plan and machine operators (-36.3%), managers (-35.6%) and skilled agricultural, forestry and fishery workers (-18.5%) in 2010-2016. Contrary, the demand in workforce has increased for professionals (+56.6%), clerical support workers (+23.4%) and technicians and associate professionals (+23.4%). The structure of employment in narrow construction sector shows decreasing demand for managers (-54.3%) and plant and machine operators (-20.4%) and increasing employment for service and sales (+116.7%) and professionals (+29.0%), which shows less of focus on the "brick and mortar".

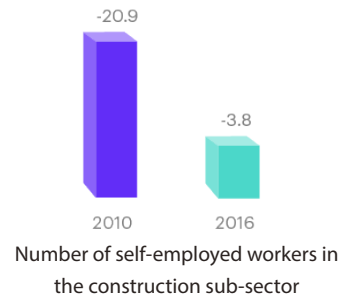
Figure 7: Percentage of people employed by construction sub-sector in the Netherlands in 2016



Source: Eurostat, 2017.

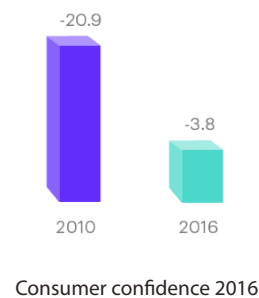
The number of **self-employed workers** in the construction sub-sector has experienced fluctuations over 2010-2016, reaching 120,400 in 2016, 2.7% above the 2010 level (117,200), while the amount of self-employed in the real estate sector substantially increased by 18.9% over the same period 9.4% of all the self-employed in the general economy in 2016, compared to 10.3% in 2010 and to 12.9% of the EU-28 average in 2016, while real estate – 0.9% of all self-employed in the general economy, compared to 1.2% of EU-28 average over the same period. Moreover, there has been a 12.6% decrease in part-time and a 13.7% decline in full-time employment

in the construction sub-sector between 2010 and 2016, from 73,800 to 63,700 and 382,200 to 333,900, respectively. SMEs employ 80.0% of the entire workforce of the broad construction sector, slightly lower than 2010 (81.3%).



Business confidence

Business confidence in the overall Dutch economy has generally demonstrated an improvement in the last two years showing positive indicators. The **consumer confidence indicator**, after being negative until 2013, the indicator became positive, reaching 3.6 in 2016, which is above the EU-28 average of -6.3. Similarly, the **industry confidence** turned positive in 2015, reaching 0.6 and rose by 1.0 in 2016, which is well above the EU-28 average of -2.5. Concerning the construction confidence index, it remained negative until 2015, going from -28.3 in 2010, reaching a bottom low in 2013 (-40.5), to -0.1 in 2015. It subsequently started to improve and considerably increased reaching 11.5 in 2016, which well above the EU-28 average of -13.9. Moreover, the **investment ratio** has been fluctuating since 2010, however overall it has increased from 19.7% to 20.8% over the period of 2010-2016. Similarly, **investment per worker** dropped by 11.9% from EUR 101,649 to EUR 89,523 in 2013 but it has considerably increased in 2014, reaching the 2010 levels of EUR 101,600.



However, according to Bouwend Nederland, the Dutch construction industry is resilient and entrepreneurial, and business confidence is on the rise. However, it expressed a concern about the low number of new students in construction-related subjects, which is a threat to the growth of the sector (see Skills shortage)²⁹. Nevertheless, according to the Central Bureau of Statistics (CBS), business confidence in the construction industry has been improving and is among the highest compared to other sectors³⁰.

Domestic sales

The ranking of the most domestically sold construction products in the Netherlands has remained constant since 2010. The value of domestic sales has seen important declines between 2010 and 2015, particularly for “Other structures” (-61.7%), “Prefabricated structural components for building or civil engineering” (-46.0%) and “Windows, French windows and their frames” (-24.5%). Conversely, “Prefabricated buildings of metal” has experienced a 38.3% increase in its domestic sale value. The **top 5 most domestically sold construction products** are presented in Table 1, including a comparison with the most sold in the EU-28. These represented 50.7% of total domestic construction product sales in 2015.

Table 1: 5 most domestically sold construction products in the Netherlands and in the EU in 2015

The Netherlands			EU-28
Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
Other structures (group 251123)	1,021.4	16.0	Other structures (group 251123)
Prefabricated buildings of metal (group 251110)	626.8	9.8	Doors, windows, etc. (group 251210)
Tiles, flagstones, bricks, etc. (group 236111)	580.1	9.1	Ready-mixed concrete (group 236310)
Prefabricated structural components for building or civil engineering (group 236112)	547.7	8.6	Prefabricated buildings of metal (group 251110)
Windows, French windows, etc. (group 162311)	466.5	7.3	Prefabricated structural components (group 236112)

Source: PRODCOM, 2017

Export of construction-related products and services

The ranking of the most exported products has remained relatively stable since 2010, with the exception of “Towers and lattice masts of iron or steel” and “Other worked ornamental or building stone”, which were replaced by “Pallets, box pallets etc.” and “Portland cement, aluminous cement, etc.”. The **top 5 most exported construction products** from the Netherlands and the EU-28 are summarised in Table 2. Together, these made up 56.5% of all construction products exports in 2015.

Table 2: 5 most exported construction products in the Netherlands and in the EU in 2015

The Netherlands			EU-28
Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
Prefabricated buildings of metal (group 251110)	428.7	18.8	Ceramic tiles and flags (group 233110)
Other structures (group 251123)	398.5	17.5	Other structures (group 251123)
Doors, windows, etc. (group 251210)	304.4	13.4	Fibreboard of wood or other ligneous materials (group 162114)
Pallets, box pallets etc. (group 162411)	79.8	3.5	Marble, travertine, etc. (group 237011)
Portland cement, aluminous cement, etc. (group 235112)	74.4	3.3	Doors, windows, etc. (group 251210)

Source: PRODCOM, 2017

In terms of **cross-border provision of construction services**, the Netherlands exported EUR 2.2 billion worldwide and EUR 866 million to the EU-28 in 2016

In parallel, imports from the world reached EUR 1.2 billion and from the EU-28 EUR 635 million in 2016. Thus, the Netherlands achieved a **trade surplus** of EUR 1 billion in 2016.

the EU-28 average of EUR 18,463. These factors are boosting demand for dwellings and household spending power, thus contributing to the revival of the housing market, which had weakened due the 2008 crisis. Total housing loans to households have seen an increase, with the total outstanding residential loans growing from EUR 632.3 billion in 2010 to EUR 634.4 billion in 2014 (+0.3%), reaching EUR 655 billion in 2015. This has also been stimulated by the mortgage interest rates, which have seen a decreasing trend since 2010 (Figure 8).

Access to finance in the construction sector

In the Dutch construction sector, similarly to other EU countries, **access to finance** remains an important obstacle due to the average willingness of banks to provide credit, which has been improve since 2016, and, at the same time, the high dependence of the construction sector on bank finance, however overall situation for the construction sector has been improving³¹. Banks have introduced stricter lending requirements since the crisis. However, 70% of construction companies are relying partially or completely on debt financing, according to a recent survey. Thus, 50% of construction and civil engineering companies reported reductions in their equities. Around 40% of these experienced a 25% fall in their equity, 30% reported a decline between 25% and 100%, and the remaining 30% saw a fall in their equity in the excess of 100%³². Therefore, according to the Building and Infrastructure Contractor Federation (Aannemersfederatie Nederland Bouw en Infra – AFNL), the construction sector is in need of extension and expansion of external financing. The AFNL advocates that the Ministry of Economic Affairs extend the SME Guarantee Scheme (see Access to finance in the national economy), so that construction SMEs can have better access to external credit. In addition, **Funding Circle**, the world's largest online marketplace for SME loans, has been active for 2 years in the Netherlands, where construction companies have benefitted most from such loan schemes³³.

Access to housing

The Dutch housing market is traditionally associated with a limited supply due to the limited development space in major cities. The number of **households** in the Netherlands has experienced a continuously increasing trend, having risen by 5.3% over 2010-2016, from 7.3 million to 7.7 million. Moreover, the share of total population in cities and greater cities grew from 43.7% in 2010 to 56.6% in 2014³⁴. In parallel, the **mean equivalised net income** experienced a 5.4% increase between 2010 and 2015, from EUR 22,692 to EUR 23,925, vastly above the EU-28 average of EUR 18,463. These factors are boosting demand for dwellings and household spending power, thus contributing to the revival of the housing market, which had weakened due the 2008 crisis. Total **housing loans to households** have seen an increase, with the total outstanding residential loans growing from EUR 632.3 billion in 2010 to EUR 634.4 billion in 2014 (+0.3%), reaching EUR 655 billion in 2015³⁵. This has also been stimulated by the mortgage interest rates, which have seen a decreasing trend since 2010 (Figure 8).

Number of households in the Netherlands
2010 and 2016

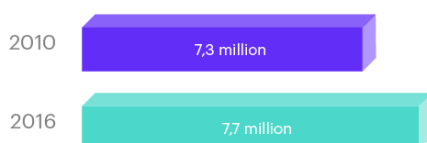
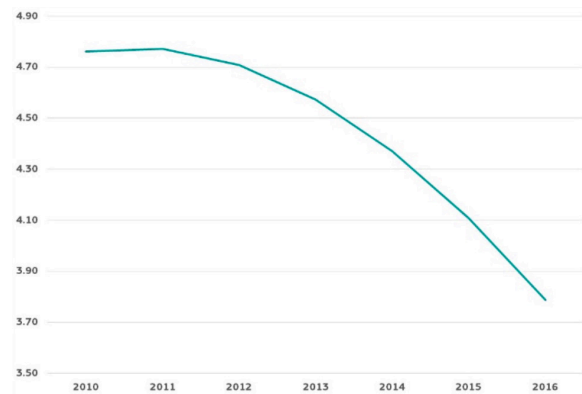


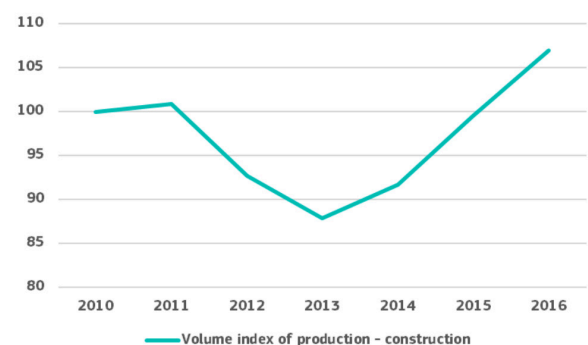
Figure 8: Mortgage rates for loans for over 5 years original maturity (%) (2010-2016)



Source: ECB MFI Interest Rate Statistics, 2017.

Consequently, the housing market has begun its recovery since 2014, both in terms of house prices and dwelling transactions, signalling an improvement in demand. In fact, the **house price index** had dropped by 14.7% over 2010-2013, but started to pick up again in 2014, being 9.0% above the 2013 bottom low by 2016 (Figure 9). This was even more accentuated in cities such as Amsterdam and The Hague, where the price of existing dwellings grew by 17.2% and 9.1% in the first two quarters of 2017, respectively. Similarly, property transactions rose by 20.5% compared to 2015, reaching 214,793 units in 2016, which is the highest level since 2008, according to Central Statistics Bureau³⁶.

Figure 9: House price index in the Netherlands between 2010-2016 (2010=100)



Source: Eurostat, 2017.

Dutch households report the highest share of outstanding residential mortgage debt in the EU, equal to 108% of GDP in 2014³⁷, due to the important promotion of homeownership since the 1980s, whereby the government allows the deductibility of most mortgage interest payments at marginal tax rate, under certain conditions³⁸.

In 2016 the residential mortgage market stood at 95.3% of GDP, however this declining trend is unlikely to last, given strong housing demand. The mortgage tax relief implies higher risks for banks, since households spend on dwellings more than they can afford, and distorts the housing market, according to the IMF³⁹. To prevent excessive mortgage growth and indebtedness, the government introduced a series of reforms, including reducing the loan-to-value (LTV) ratio from 102% in 2016 to 100% in 2018⁴⁰.

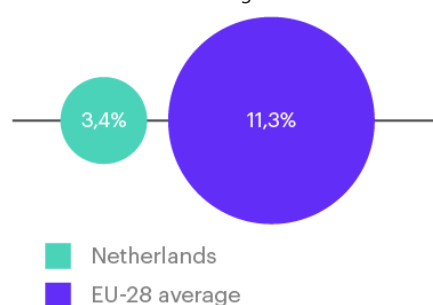
In general, the Netherlands have a strong culture and tradition of renting, rather than owning dwellings, compared with other EU Member States. Furthermore, the Dutch housing market is characterised by a strong social housing market, with about 80% of the total 2.9 million rental dwellings being owned and managed by housing associations. About a third of social housing tenants are seniors over 65, but social housing also accommodates about half of all the young people living independently⁴¹.

Despite the increasing demand from both owner-occupiers and renters, construction of new dwellings is lagging behind, thus also contributing to the price increases. The number of **building permits** issued in 2016 has unexpectedly fallen. Throughout 2016, some 51,000 permits were granted, which is 5% less than in 2015⁴². Therefore, the housing shortage has increased by about 50,000 dwellings over 2012-2015, and will reach about 300,000 dwellings by 2020, particularly in areas around Utrecht, Amsterdam, and The Hague⁴³. In order to meet the increasing demand for dwellings, it is estimated that about 70,000 owner-occupied and rented homes need to be built each year until 2020, which will be a challenge due to a lack of capacity in the construction sector and investment restrictions on housing associations⁴⁴.

Moreover, the **overcrowding rate** was recorded the lowest rate compared to EU-28 average of 11.3%, stood at 3.4% in 2015 but higher than the 2010 level of 2.3%.

The **housing cost overburden rate** was relatively high, at 11.3% in 2015, well above the EU-28 average of 6.7% and the lowest value recorded since 2010 (14.1%). In this respect, **residential building stock** is mostly driven by home ownership, where 67.8% of population own their home and 32.2% were let out for tenants. These numbers remained constantly stable since 2010. The same trend holds for the population earning above 60% of median equalised income, with 72.1% of the population owning of a dwelling and 27.9% renting one.

The overcrowding rate in 2015



Infrastructure

The Netherlands ranks 3rd out of 137 in terms of its infrastructure, according to the 2017-2018 Global Competitiveness Report⁴⁵.

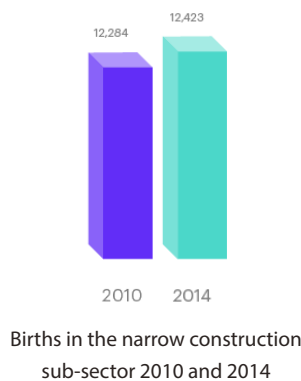
In particular, it performs best in terms of the quality of its port infrastructure (1st), followed by air transport infrastructure (4th), quality of roads (5th), and overall infrastructure quality (5th). It scores slightly lower for the quality of its railroad infrastructure (6th). Nevertheless, according to Mobiel Nederland, a coalition of 25 community groups, more investment in infrastructure is required, especially in transport, since accessibility will experience pressure in the coming years. Cuts of approximately EUR 26 billion in the budget of the Ministry of Infrastructure and Environment for the period 2010-2028, of which EUR 12 billion from the Infrastructure Fund (see TO 1 - Investment conditions and volumes), have already resulted in lower maintenance spending and in projects being delayed or cancelled⁴⁶.

4

Key issues and barriers in the construction sector

Company failure

The **business demography** in the broad construction sector has been fluctuating showing similar trends across most sub-sectors. **Company births** in the narrow construction sub-sector slightly increased by 1.1%, from 12,284 in 2010 to 12,423 in 2014⁴⁷. Conversely, **the number of company deaths** dropped by 17.3%, from 10,977 to 9,082. Similarly, the real estate activities sub-sector experienced a 0.4% drop in company births (from 1,962 in 2010 to 1,954 in 2014) and 16.5% in deaths (from 2,191 to 1,829). Company births in architectural and engineering activities declined by 3.6% whereas company deaths increased by 18.7% from 1,921 to 2,280. Nevertheless, the net amount of enterprises has been on the rise (see Key figures).



The number of companies in the Netherlands being declared bankrupt continues to decrease, showing an improvement in the national economy in 2017. According to Statistics Netherlands, the number of bankruptcies is recorded at its lowest level since 2001. Bankruptcies in the trade sector saw the largest number of 67, followed by financial institutions of 35 and the construction industry of 25 in 2017 alone⁴⁸. The Netherlands experienced a least number of bankruptcies in Europe in 2017, however due to Brexit impact, the number of bankruptcies is expected to increase somewhat, up to 5%⁴⁹. Similarly, a number of insolvencies has been decreasing and policies of bank loans have been relaxed in favour of construction companies, showing the positive outlook for 2017. However, companies operating in infrastructure projects, are under scrutinised attention due to a declining number of orders⁵⁰.

Trade credit

In 2017, 35% of domestic and foreign B2B sales were made on credit. This shows that the Netherlands is fairly open to granting trade credit to B2B customers. On average, 39% of the sales were transacted to domestic B2B customers and only 31% of the sales to foreign B2B on credit, slightly lower than previous year of 39.9% and 33.9% in 2016, respectively. Total amount of B2B sales on credit is below the regional average of 38.8% and almost in line with that of Spain, stood at 37.8%. Like many other Western European countries, respondents in the Netherlands were more unwilling to offer credit terms to foreign B2B customers, highlighting a greater degree of trust when trading with domestic B2B customers. In according to SAFE Report, only 22% of respondents have applied for trade credit in the Netherlands, below the EU-28 average of 35%, due to sufficient internal funds in 2016. Over 50% of respondents claimed that availability of trade credit remained unchanged and will continue the same in the near future⁵¹.

Late payment

The Netherlands reported a generally good public administration-to-business payment (PA2B) behaviour

The share of punctual payments is 53.6%, and was 14.5 percentage points above the EU average in 2016, while the share of Dutch companies that pay over 90 days late on average is only 0.9% of the total (-0.3% vs. previous year)⁵². Payment terms allowed by businesses to their customers (B2C) reached 22 days, 27 days for B2B and 29 for PA2B in 2017, which is the same payment terms as it was in 2016 with exception for B2C, where terms were shorter of 21 days. Similarly, the average time taken by customers to pay improved between 2016 and 2017, with 20 days for B2C transactions (21 in 2016), 32 days for B2B, which remained the same since 2016, and 38 days for PA2B (39 in 2016)⁵³. European Payment Risk Index shows that the situation also improved and the index stood at 0.09 in 2017 compared to -0.06 in 2016. The main causes of late payments were, inter alia, debtors in financial difficulties, administrative inefficiency and intentional late payment behaviour⁵⁴.

Specifically, the construction sector generates a high proportion of overdue invoices, mainly due to liquidity constraints, and outstanding invoices are often used as an equity management strategy⁵⁵. Thus, 41%

of construction companies experience issues of late payments by their clients. Moreover, over a fifth of construction SMEs working as sub-contractors are not paid at all by the main contractor⁵⁶. However, since mid-2017, agreements on a longer term of payment exceeding 60 days have been prohibited as a new law has been implemented, which aims to improve the conduct of major contractors⁵⁷.

Time and cost of obtaining building permits and licenses

The Netherlands ranked 76th in 2018 with respect to “Dealing with construction permits”, according to the World Bank Doing Business, better than the previous year (87th in 2017)⁵⁸.

In fact, 13 procedures are required to build a warehouse, higher than the OECD high-income average (12.5), taking 161 days, above the OECD high-income average (154.6) (Table 3). Moreover, the cost of building a warehouse represents 3.7% of the value of the warehouse, above the OECD high-income average of 1.6%.

Table 3: Construction procedures timing and costs in the Netherlands

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 63,835
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 connection	6 day	no charge
Receive inspection for water services	1 days	no charge
Pay and obtain water connection	21 days	EUR 370

Source: Doing Business overview for Netherlands, Word Bank, 2017.

Skills shortage

The number of **job vacancies** in the construction sub-sector experienced a 9.4% drop since 2010, from 5,775 to 5,230 in 2015⁵⁹, reaching a bottom low in 2013 (3,150). The number of job vacancies in real estate activities increased by 5.6% over the same period, from 1,100 to 1,162 in 2015, following a bottom low of 525 in 2013. The situation has been improving since 2013. The number of job vacancies in construction has doubled over 2016-2017 and 17,000 jobs will be added in the Netherlands⁶⁰. In parallel, **adult participation in education and training** in the construction sub-sector slightly declined by 2.2% from 17.7% in 2010 to 17.5% in 2015. On contrary, in real estate activities, this rate has increased by 3.4%, from 26.3% to 27.2% over the same period. The number of tertiary students in engineering, manufacturing and construction, specifically in architecture and building, increased by 21.4% between 2010 and 2012, from 4,176 to 5,068⁶¹.

Number of job vacancies in the
construction sub-sector
2010-2015

↓ 9.4%

The Dutch construction sector risks a shortage of skilled workers and an inappropriate vocational education training (VET). According to the Building and Infrastructure Contractor Federation (AFNL) and the Dutch Business Association of Finishing Companies (Nederlandse Ondernemersvereniging voor Afbouwbedrijven – NOA), VET is too general and theoretical, as opposed to being more practical and hands-on, lacking the connection to specific jobs. This fact is reinforcing the issue of skill shortages, which is particularly evident for professions such as bricklayers, carpenters, installation controllers, roofers and plasterers as a consequence of the crisis. A lack of qualified employees in the construction sector is threatening factor to slow down economic growth, especially due to rapid growth of the sector⁶². The number of students enrolled in VET for these professions has declined. This drop is also partially due to the lower salaries paid by SMEs to apprentices, and to the fact that SMEs are more reluctant to hire permanent workers, due to the high social costs involved⁶³. Furthermore, the construction sector is confronted with the ageing of its current workforce. The share of workers over 55 increased from 16% to 20% over 2008-2015, whereas the share of those under 24 declined from 15% to 9%. The increasing number of workers that will retire implies a loss of knowledge and skills, as well as labour shortages in the future⁶⁴.

Sector & sub-sector specific issues

Material efficiency and waste management

In 2012⁶⁵, the Netherlands reported a total amount of 81.4 million tonnes of **construction and demolition (C&D) waste**, a 4.2% increase compared to 2010 (78.1 million tonnes) and 38.2% above the 2008 level (58.9 million tonnes).

Of these, 78.8 million tonnes (i.e. 96.9%) were non-hazardous, with the remaining 2.6 million being hazardous⁶⁶. According to Waste Processor Renewi, which is major European player in waste management and recycling, there is a significant increase of over 11% in the amount of C&D waste on the Dutch market, driven by the recovery of the housing market in 2017⁶⁷.

The main piece of legislation encompassing all national environmental legislation is the Environmental Management Act (Wet Milieubeheer – Wm), which sets out an integrated approach to environmental management in the Netherlands and defines the roles of the national, regional, and municipal government⁶⁸. Specifically, waste is addressed under Chapter 10 of the Wm. Moreover, waste policy is described under the second National Waste Plan (LAP-2), which includes waste management plans for each sector as well as targets. For C&D waste, the target is to maintain the 95% recovery rate until 2021⁶⁹.

Recently a new platform called “**Madaster Foundation**” was initiated by architect Thomas Rau in 2017 which improves the construction waste management. This foundation develops a ‘material passport’ for the purpose of registering how much it is possible to re-use construction material based on the value, quality and the life span of a building or pieces of a construction object. In this way, the platform provides opportunities to save costs, increase reuse percentages and ultimately eliminate waste. The development of material passports in the construction and real estate sectors will result in smarter building designs⁷⁰.

Climate and energy

Emissions of greenhouse gases (carbon monoxide and dioxide, methane and nitrous oxides) from activities related to construction and real estate in the Netherlands amounted to a total of 3,344,295 and 339,311 tonnes in 2015, respectively. Emissions in the construction sub-sector have decreased by 9.0% and the real estate sub-sector experienced a 33.2% drop during the period 2010-2015, demonstrating that emissions have been decreasing compared to 1990 levels.

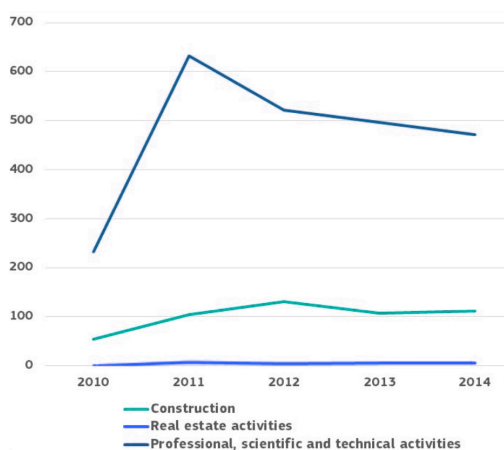
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Innovation in the construction sector

The Netherlands has moved up the ranking in the European Innovation Scoreboard 2017, being classified as an **Innovation Leader**, with its performance increased by 10.4% relative to that of the EU in 2010.

Netherlands' main strengths lie in Attractive research systems, Human resources, and Linkages, where there are shortfalls of Firm investments, Sales impacts and Intellectual assets⁷¹. **Business enterprise R&D expenditure (BERD)** in the broad construction sector displayed a positive trend across all sub-sectors. BERD in the construction sub-sector increased by 107.2% from EUR 54 million in 2010 to EUR 112 million in 2014⁷². Similarly, BERD in the professional, scientific and technical activities sub-sector experienced a rapid 103.1% growth between 2010 and 2014, from EUR 232 million to EUR 471.1 million, and in real estate activities rose less remarkably by 6% over the same period. In parallel, the **total R&D personnel** (full-time equivalents – FTE) in the construction sub-sector substantially increased by 134.3% from 492 in 2010 to 1,153 in 2014. Similarly, the FTE in real estate activities grew by 100%, from 0 in 2010 to 81 in 2014. As for the professional, scientific and technical activities sub-sector, it reported the highest R&D personnel, which increased by 158.7%, from 3,003 in 2010 to 7,769 in 2014. Regarding progress in reaching the national targets under the Europe 2020 Strategy the Netherlands still needs to take more effort on R&D investment and renewable energy in order to improve long-term growth potential because public R&D intensity (0.9 % of GDP) remains lower than in most innovative EU economies. Direct public support for R&D is foreseen to decrease between 2016 and 2020⁷³.

Figure 10: Business enterprise R&D expenditure (BERD) per construction sub-sector in the Netherlands 2010-2014 (EUR m)



Source: Eurostat, 2017.

In line with the positive developments in BERD and FTE, the average number of **construction-related patent applications** increased by 40.8% from 98 in 2010 to 138 in 2016, recoding the highest number of patent applications in 2016. However, only one Dutch Construction & Materials firm ranks within the top 1,000 EU companies by R&D (industrial sector ICB-3D), according to the 2016 EU R&D Scoreboard⁷⁴.

In order to boost innovation in the construction sector and bring about the scaling-up of innovations from the company level to the market, several initiatives have been launched. The **Building Campus (Bouw-campus)** provides a space (co-creation lab) and network that brings together a variety of stakeholders and actors in the construction sector, encouraging and facilitating open innovation to address issues in residential construction, infrastructure, commercial buildings and public spaces. It is a public-private initiative between bodies such as Rijkswaterstaat (part of the Dutch Ministry of Infrastructure and the Environment responsible for the design, construction and management of infrastructure facilities), the Central Government Real Estate Agency (Rijkswastgoedbedrijf), Bouwend Nederland, municipalities, engineering firms and contractors⁷⁵. Similarly, in 2017 a new knowledge and innovation center **BuildingG** (Home of the Future) was opened for earthquake and future-proof construction projects to be tested and developed involving entrepreneurs, researchers and government officials in North Groningen and beyond⁷⁶. Moreover, ORGA construction, being the first modern green builder of the Netherlands, launched an **ECO+BOUW initiative** in 2017, which aims at supporting ecological building constructions without concessions in terms of health, comfort and energy saving and providing advice, design and realization to ensure more sustainable housing constructions⁷⁷.

In addition, in order to foster innovation from construction start-ups, the **Dutch Construction Hackathon** was organised as part of Startup Fest Europe, a European festival of more than 30 independent events that helps start-ups grow faster. The hackathon aimed to attract start-ups, municipalities and financial institutions to find innovative solutions to construction-related issues. Indeed, innovative start-ups often do not and cannot go through the procurement process, since tenders require proven technologies rather than new, as well as imposing strict financial capacity requirements⁷⁸.

The Netherlands is also at the forefront of the implementation of **Building Information Modelling (BIM)** in the construction sector, with the Dutch Building Information Council (BIR) being a main actor in this respect.

In particular, BIR is active in the development, promotion and implementation of Open BIM Standards⁷⁹, which allow to classify the large amount of data generated during a construction project and exchange information, thus increasing cooperation between construction parties and fostering healthy competition on the market. To this end, a **BIM Gateway** (BIM Locket) is being created, which intends to be a national portal for information and management of open BIM standards in the Netherlands, thus stimulating their use. By bringing together open BIM standards into one coherent system, the BIM Locket allows stakeholders to reduce their maintenance costs. The project is funded by BIR, the central and local governments as well as private corporations, and has a budget of EUR 790,000 for 2016 and EUR 810,000 for 2017⁸⁰.

6

National & Regional Policy & Regulatory Framework

Policy schemes

Housing policy in Netherlands is implemented by the **Ministry of the Interior and Kingdom Relations (BZK)**⁸¹, which is in charge of setting a legal framework capable ensure an adequate environment for the development of construction activities⁸².

One of the main particularities of the Dutch regulatory framework is the structuring of their **social housing scheme**, which is often presented as a model example for other European countries characterised by a high stock of social housing⁸³. Until the beginning of the decade of 1990, Dutch social housing system was characterised by a large number of national intervention policies. However, a process of decentralisation and self-sufficiency was conducted at the beginning of that decade, shifting competencies from the national level to regional and local administrations and not-for-profit housing associations⁸⁴.

This has led increasing the number of social dwellings, and today social house renting represents around one third of total dwellings⁸⁵ (2.5 million of social dwellings out of 7.2 million of total dwellings in the country).

Housing associations have played a key role on this, and around 75% of the rental homes in the Netherlands belong to these associations⁸⁷. The renting conditions of these social dwellings are established by the government, and the current rent limit is fixed at EUR 710.68 per month. In addition, these associations must let 80% of their dwellings to low income tenants (with an annual income up to EUR 35,739), and 10% to people with an annual income of between EUR 35,739 and EUR 39,874. The remaining 10% can be allocated to people with higher incomes⁸⁸. According to TU Delft experts on housing, the housing policy of the newly elected Dutch government is pushing into a crisis, with the middle class bearing the worst part of the situation. The housing market still faces a shortage of housing, i.e. a lack of rental houses and affordable houses for sale⁸⁹. In addition, according to the Planning Agency for the Living Environment (het Planbureau voor de Leefomgeving), in 2017, the deficit is estimated to reach 178,000 rented houses, which will rise up to 200,000 homes in 2018, reaching a peak. The construction of new homes and the privatization of social

housing is insufficient to solve the shortage of rental housing. It is necessary to look at the temporary lease of social housing without income limits and constructions whereby investors get a share in a subsidiary of corporations⁹⁰.

Housing associations contribute to the **removal of accessibility barriers**, improving the accessibility to quality housing to elderly people, people with a disability and those needing assisted housing. In addition, these associations are also in charge of maintaining the neighbourhoods and surroundings, including alleyways and parking spaces⁹¹.

The **Social Housing Guarantee (WSW)** is an active actor by providing securitisations and guarantees to lenders. The WSW obtains capital for the provision of guarantees through the capital market, and grants loans to housing associations for social housing projects or the construction of buildings of public interest⁹².

Following the **National Reform Programme** of 2017⁹³, low income earners and people on benefits will be compensated for rent increases through the housing benefit, through a number of loans backed by government guarantees and aiming to reduce the current high mortgage debt of Dutch households. The maximum rate of the home mortgage interest tax deduction will be gradually decreased from 52% to 38% in order to stabilise housing market with lower levels of debt by 2018⁹⁴.

Insurance and liability related regulations

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**⁹⁵ 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. Further to the provision of the Civil Code, the general conditions, and in particular the uniform general conditions with regard to building contracts (UAV), are also widely used. The UAV contracts establish a period of liability of 5 years following the completion of the works, and a statutory warranty period

of ten years is generally applied defined for building defects⁹⁶.

Moreover, in Netherlands, as well as in the Scandinavian countries, the legal provisions of the contracts generally act as **standard clause acts**⁹⁷, 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 contracts⁹⁸.

In Netherlands, there is **no mandatory obligation to acquire an insurance for construction parties** as such.

However, it is often agreed in the contract that the contractor must insure the works to be conducted⁹⁹. Contractors' All Risks (CAR) is the most common insurance in the construction sector, covering all damages that may arise during the construction process.

Building regulations

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

The **New Housing Act**¹⁰⁰ (Nieuwe Woningwet), which entered into force after revision in 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.

The **Building Decree (Bouwbesluit)** records requirements and establishes minimum criteria for health, safety, usability, energy efficiency and the environment for the construction of buildings in Netherlands¹⁰¹. In addition, the Building Decree sets the regulatory framework regarding the refurbishment, construction, demolition and occupancy of any building in Netherlands.

The **Spatial Planning Act** (Wet op de Ruimtelijke Ordening) defines what may be built, 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 concerned¹⁰². The implementation of the Spatial planning policy is mainly drawn at municipal level due to their knowledge of the local environment, and their interest are presented on spatial visions, which are policy papers summarising the priorities for infrastructure and Spatial Planning¹⁰³.

In addition, due to 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.) as well as the dimensions (building height, volume, number of stories) of the buildings permitted and 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 region¹⁰⁴.

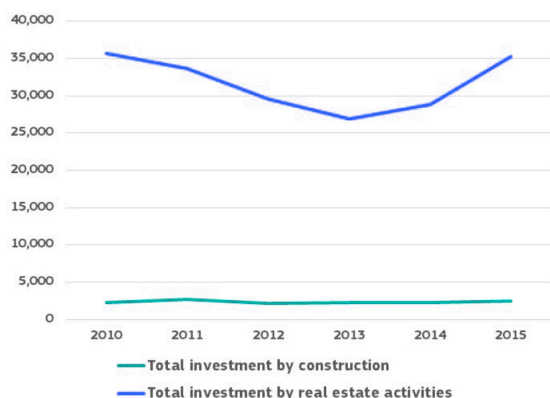
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Current Status & National Strategy to meet Construction 2020 Objectives

TO 1 - Investment conditions and volumes

Total **investment by the broad construction sector**¹⁰⁵ has generally slightly declined since 2010 (Figure 11) highlighting slow recovery faced by the industry in the aftermath of the economic crisis. Investment by real estate dropped by 1.4% over 2010-2015, going down from EUR 35.7 billion to EUR 35.2 billion. While investment by narrow construction dropped by 0.8% over 2010-2012, it slowly recovered and overall increased by 10.6% over 2010-2015, from EUR 2.2 billion to EUR 2.4 billion.

Figure 11: Investment by the Dutch broad construction industry between 2010-2015 (EUR m)

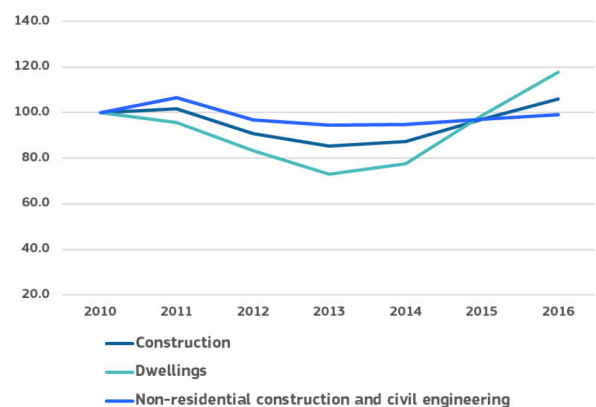


Source: Eurostat, 2017.

Total **investment in construction**¹⁰⁶ increased by 22.7% over 2010-2016 (Figure 12). Investment in dwellings experienced an increase by 17.7% over 2010-2016, whereas non-residential and civil engineering investment fared slightly worse, declining by 1.0%. In absolute terms, investment in the construction sector totalled EUR 61.3 billion in 2015, out of which EUR 25.1 billion were invested in dwellings and EUR 36.2 billion were devoted to non-residential and civil engineering¹⁰⁷.

Total investment in construction 2010-2016 ↑ **22.7%**

Figure 12: Investment in the Dutch construction sector between 2010-2016 (2010=100)



Source: AMECO, 2017.

Total **inland infrastructure investment** as a share of GDP has been constant at 0.6% over 2010-2014¹⁰⁸. The Netherlands moderately invested in railroads over 2010-2011¹⁰⁹, with a 3.6% increase in investment from EUR 1.10 billion to EUR 1.14 billion, while investment in road infrastructure dropped by 0.6% over the same period, from EUR 2.30 billion to EUR 2.29 billion.

In terms of **investment in infrastructure maintenance**, rail infrastructure maintenance increased by 6.4% over 2010-2013, from EUR 1.7 billion to EUR 1.8 million, whereas road infrastructure maintenance declined heavily (-73.3%), from EUR 1.2 billion to EUR 343 million.

Investment in rail infrastructure 2010-2013 ↑ **6,4%**

Investment road infrastructure maintenance 2010-2013 ↓ **73,3%**

Investment in infrastructure and transport is guided by the **National Policy Strategy for Infrastructure and Spatial Planning**, which develops on the Dutch strategic vision for a competitive, accessible, liveable and safe country up to 2040¹¹⁰. Furthermore, by 2030, the Netherlands has the ambition of becoming a ‘**hub of excellent connections**’ including air, road, rail, water and internet. To this end, the Ministry of Infrastructure and Environment will upgrade eight railway stations to multi-modal public transport terminals, with Arnhem station being one of the first renewed¹¹¹. The government is also investing EUR 70 million in **smart mobility solutions** by 2017¹¹². In addition, the Netherlands received EUR 97 million grant for 2017 infrastructure projects that comes from the **Trans-European Transport Network (TEN-T) programme**, which aims to create a single cross-border network for land, water and air transport. This will be used for new cross-border projects implementing innovative traffic techniques to drive traffic flow across the highways¹¹³. An important instrument for the implementation of infrastructure policy is the **Multi-year Programme for Infrastructure and Transport**, which brings together the central government and local authorities to define a regional agenda as well as specific projects, which the central government supports financially¹¹⁴.

Moreover, 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 2030, but is automatically renewed every year. For 2017, the budget of the Fund amounts to EUR 5.9 billion, of which EUR 2.4 billion will be devoted to major road projects and EUR 2.2 billion to railways. The bulk of the budget (EUR 2.3 billion) is allocated to maintenance and operation of infrastructure, whereas almost EUR 2 billion will fund the construction of new infrastructures¹¹⁵. Moreover, the Ministry grants EUR 30 million for **green transport initiatives** and supports enterprises, which develop innovations to achieve greener transportation, such as a trash truck running on hydrogen, parcel delivery driven by electric vans and algae biofuels. In addition, EUR 6 million are allocated to run all new buses in the Netherlands without harmful emissions from 2025 onwards¹¹⁶.

The European Investment Bank (EIB) is also a main actor in supporting infrastructure investment in the Netherlands

In particular, it contributed to improving the A9 Gaasperdammerweg motorway by reducing congestion and increasing road safety¹¹⁷. Furthermore, out of the EUR 2.6 billion EIB funding for the Netherlands in 2016, 30% supported transport projects¹¹⁸.

The **Connecting Europe Facility (CEF)**, too, supplies funding for Dutch transport infrastructure. Indeed, EUR 157 million from the CEF budget have been earmarked for transport projects in the Netherlands¹¹⁹.

Total **household renovation spending** stood at EUR 1.4 billion in 2015 in absolute terms, and at 0.4% of total household disposable income, below the EU-28 average of 0.8%. Since 2010, renovation spending as a share of household disposable income decreased by 13.0%.

TO 2 – Skills

The Netherlands has a well-developed system for vocational education and training (VET).

Participation in VET stood at 66.4% in 2014, compared to 48.0% in the EU. **Adult participation in lifelong learning** further increased to 18.9% in 2015, whilst the EU average stood at 10.7%. In addition, the employment rate of recent upper secondary graduates is also above the EU average: 85.8% in 2015, compared to 74.1%¹²⁰.

A number of reforms aim at further improving the match between the skill needs of regional labour markets. An important initiative focuses on strengthening the quality of the education of VET institutions. To this end, EUR 400 million are available for VET schools as part of the so-called quality agreements, a recently introduced type of performance-based funding rewarding individual schools for good performance. Furthermore, an independent advisory committee on education and labour market will assess the mismatch between skills and labour markets¹²¹.

A new adult education programme called “**Count on Skills**” (Tel mee met Taal) was launched to follow up the Literacy Action Plan, which aims to improve language skills and social and employment participation involving at least 45,000 Dutch residents. In this way, it seeks to tackle illiteracy and boost the quality and accessibility of local and regional language education programmes.

Another initiative aimed at aligning education with industry needs is the **Technology Pact** (Techniekpact), which consists in specific agreements between industry, education providers and the government. In light of the expected retirement of the 70,000 construction workers, installers, electricians, engineers and other technical professions by 2020, the Netherlands needs to keep delivering technical skills needed to maintain its competitive edge in key industries¹²². The main lines of action of the Technology Pact are: first, encouraging students to choose a technological field of study; second, strengthening the learning in technology jobs; third, retaining technology workers including finding alternative job options for professions that are under threat. The initiative was initially launched in 2013 and updated in 2016¹²³.

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 career in construction, providing them information and advice on the training offer in the construction sector¹²⁴.

Furthermore, the **Dutch Green Building Council (DGBC)** is launching for the second time the DGBC Future Leaders Programme, aimed at connecting young ambitious professionals active in the field of sustainability of the built environment. The programme allows knowledge-sharing, coaching and networking with leaders and peers, thus shaping tomorrow’s sustainability leaders¹²⁵.

Finally, the Netherlands is exploring the possibility of introducing sectorial ID cards in the construction sector. Such an ID card would have numerous benefits, allowing to keep better track of working

conditions (e.g. working hours), health and safety, as well as administrative matters, such as social security and tax information. Importantly, the ID card would contain information on the professional qualifications of the worker, thus allowing to determine on-site whether he/she is qualified to perform a certain job¹²⁶.

TO 3 - Resource efficiency / Sustainable construction

Energy saving policy is mainly defined by the **Energy Agreement for Sustainable Growth (Energieakkoord)**, a voluntary agreement launched by the Social and Economic Council of the Netherlands (SER) and signed in 2013 by almost 50 organisations

The Agreement is structured around 12 pillars, each with its own specified objectives, targets and approach. The pillars include Energy saving in industry and agriculture, Transport sector, Scaling-up renewable energy production, as well as Energy saving in the built environment. To reach its goal of a sustainable energy supply by 2050, the agreement sets several overarching objectives common to all pillars, namely achieving an average energy efficiency saving of 1.5% per year (resulting in a reduction of 100 PJ by 2020); achieving a 14% share of renewable energy in the country's total energy consumption by 2020 (16% by 2023); and creating at least 15,000 new jobs by 2020¹²⁷.

For the building sector in particular, the Agreement stipulates that 300,000 existing residential buildings per year be renovated and move up at least two energy classes until 2020 (corresponding to an improvement in energy efficiency of 20-30%). Moreover, all new buildings must be nearly-zero energy by the end of 2020, and by 2018 for public buildings. Finally, rented buildings must have an average label B for social housing and a minimal label C for 80% of the private rental stock by 2020¹²⁸. In addition, in accordance with new legal regulations, all office buildings larger than 100 m² will be obliged to be more energy efficient and as minimum have an energy label C from 2023 onwards. In order to meet a requirement, the Dutch government will support with advice and grants¹²⁹.

In order to make financing for energy efficiency investments in the existing building stock affordable and readily available, the **National Energy Saving Fund** (Nationaal Energiebespaarfonds) was set up under the Agreement. With a budget of EUR 600 million, the Fund allows homeowners to take out low-interest loans to finance energy-saving measures¹³⁰. For instance, the programme **Energy Saving Loan** (Energiebespaarlening voor particulieren) provides individual homeowners with loans between EUR 2,500 and EUR 25,000 at a fixed interest rate for a broad range of energy-saving interventions, such as installation of solar panels, high-efficiency boilers, roof, wall and floor insulation¹³¹. In 2017 the Dutch government announced to spend EUR 10 million on implementing energy-saving measures into historic homes and monuments, under the scheme called the **National Restitution Fund** (het Nationaal Restauratiefonds).

Owners who have properties with a status of a national monument can also receive grants for implementing energy saving measures into buildings¹³².

Moreover, under the programme **Subsidie energiebesparing eigen huis**, homeowners and associations of owners can obtain energy saving subsidies 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.). Additional funding can be received for additional energy saving interventions, such as insulation of doors and frames. Homeowners choosing to have their entire dwelling equipped with an energy efficient package of measures receive a bonus of EUR 4,000 in addition to the grant¹³³. The programme has a budget of EUR 20.5 million for 2016/2017¹³⁴.

Within the context of the Energy Agreement, to achieve the energy saving targets for social housing the government is also investing EUR 400 million for the insulation of rental homes¹³⁵. Furthermore, the **Energiesprong** (Energy Leap), a non-profit market development team, introduced the **Zero Energy Homes at Zero Upfront Cost (Stroomversnelling) scheme**, an initiative involving several social housing associations, construction companies and financial institutions and supported by the government. The scheme aims to renovate 111,000 homes to net zero energy levels between 2013 and 2020 and deliver fully integrated refurbishment packages for tenants, including external wall insulation, roofing and renewable energy solutions, with a 30-year guarantee of "net zero energy" usage and no prepayment¹³⁶. The unique success factors of the programme include no upfront cost to the tenants and short interventions taking a maximum of 10 days to complete, owing to the use of parts and components prefabricated off-site. The scheme benefits from a total budget of EUR 6.6 billion over its lifetime¹³⁷. Since the beginning of the programme, 1,000 family homes have been renovated to net zero standards, and an additional 15,000 are in the planning stage. Moreover, average renovation costs in the Netherlands have been reduced from about EUR 140,000 per home to EUR 65-70,000¹³⁸. Based on the successful Dutch example, the European Commission announced a EUR 3.6 million of Horizon 2020 grant funding for the next three years to roll out the **Energiesprong** initiative in the UK and France¹³⁹.

TO 4 - Single Market

The Netherlands boasts a relatively good performance with respect to the metrics of the EU Single Market Scoreboard, particularly in terms of trade integration in the single market for goods and services¹⁴⁰

However, overall performance in public procurement was average in 2016, despite excellent scores for the use of e-procurement and favouring competition among bidders. The number of tenders published according to EU rules continued to improve. While remaining relatively low in comparison with other Member States, the publication rate rose up to 10.4% of total public procurement expenditure in 2015 (2.0% of GDP), up from 8.8% (1.8 % of GDP) in 2014. However, despite

these improvements, the publication rate is particularly low for public procurement in certain sectors, especially in healthcare (at 0.5% of the total public expenditure)¹⁴¹. The Netherlands is positioned among the best countries in the EU in its ability to develop mechanisms to control corruption in public procurement. While procurement corruption does not hinder doing business in the country, risks of corruption are reportedly largest in the construction sector, in which previous cases have shown irregularities, collusion and cartel practices between local public officials and businesses¹⁴².

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. Moreover, the Netherlands is one of the few Member States, together with Finland and the UK, that offers an online centralised national system for the submission of building permit applications, allowing their complete electronic handling and therefore minimising the administrative burden linked to the process. This has been recognised as a good practice. Furthermore, the country only requires three categories of documents to be submitted as part of the building permit application process, and is the best performer in this respect. The number of categories of documents required is often an important source of administrative burden on service providers, especially cross-border¹⁴³.

In terms of international equivalence of voluntary certification schemes, the Netherlands signed a co-operation agreement with Germany, establishing the mutual recognition of the **Dutch VCA and the German SCC** (Safety Certificate Contractors) certificates. This provided clarity and legal certainty for cross-border service providers. Thus, under the agreement, the Dutch diplomas can be obtained via a German certification body, and vice versa. The German/Dutch SCC/VCA scheme is also recognised in Belgium and Austria, and is in line with the requirements for simplification and mutual recognition in the Services Directive¹⁴⁴.

With regard to regulated professions, the professions of civil engineer and electrician are not regulated in the Netherlands¹⁴⁵, which may facilitate the mobility of qualified professionals within the Single Market, as well as the provision of cross-border construction services, particularly given the fact that the shortage of young people is an issue for this type of technical professions¹⁴⁶.

Finally, in relation to the implementation of Euro-codes, all Parts are published as National Standards and almost all are compulsory for structural design (except for EN 1991-1-6 and EN 1998 series)

The same Decisions also enforce the use of the Parts in Public Procurement. No other National Standards are used in parallel with the Euro-codes. National Annexes are published on almost all Parts, except for 9, and are included in the national building regulations¹⁴⁷.

TO 5 - International competitiveness

The Netherlands ranks 4th out of 137 economies in the 2017-2018 Global Competitiveness Index

The Netherlands ranks 4th out of 137 economies in the 2017-2018 Global Competitiveness Index¹⁴⁸. It continues to perform well above the EU average in terms of internationalisation of its SMEs, with the time, cost and number of documents required to export and import being below the EU average. Namely, the cost of exporting was free of charge in 2016, compared to the EU average of USD 16.43 (EUR 13.87), taking 1 hour for documentary compliance against the EU average of 1.39¹⁴⁹. The internalisation of construction products in the Dutch construction sector has shown positive signs of growth since 2009. Indeed, the export values of all construction-related products increased by 10.3%, from EUR 1.96 billion in 2009 to EUR 2.2 billion in 2014, with their share in the total value of production growing from 21.5% to 38.0% in 2009-2014. Similarly, the value of exports of architectural services grew by 82.6% over the same period, although from a lower base, from EUR 1.4 million to EUR 2.6 million, and accounting for 0.2% of the turnover of the architectural services sub-sector in 2013, compared to 0.1% in 2009. These trends are in line with the growth in export activities in the general economy.

Support to the internationalisation of Dutch companies is ensured through several initiatives. The **Netherlands Enterprise Agency** (Rijksdienst voor Ondernemend Nederland) manages the **Dutch Trade and Investment Fund (DTIF)**, a facility offering loans, guarantees and export financing for Dutch companies seeking to invest or export to foreign markets. The DTIF has two components, namely Investment and Exports. It offers a maximum funding amount of EUR 15 million per project supported, and has a total budget of EUR 102 million¹⁵⁰. Moreover, in order to reduce the risks of exporting to foreign markets, the government introduced the **Export Credit Insurance (ECI)** facility. The scheme is particularly addressed to the export of capital goods or capital-intensive services to nonEU 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 exports¹⁵¹.

The Netherlands Enterprise Agency also implements the Starters International Business (SIB) programme, which provides different types of vouchers to SMEs and entrepreneurs seeking to expand to foreign markets. **Coaching vouchers** help beneficiaries get coaching on the risks and opportunities of exporting and information on foreign countries. For 2016, 1,000 vouchers are available for a total budget of EUR 2.4 million¹⁵². **Mission vouchers** allow SMEs to participate in trade fairs and exhibitions in foreign countries by reimbursing 50% of the participation fees, up to EUR 1,500. The budget for 2016 is EUR 1.4 million (950 mission vouchers)¹⁵³. **Knowledge vouchers** are also under development, offering SMEs the possibility to hire an expert to advise and assist them to position their business in foreign countries¹⁵⁴.

Finally, 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, business opportunities in foreign markets across all sectors (including construction and infrastructure) and support to internationalisation and exporting¹⁵⁵. An export app called **Netherlands Exports (NL exporteert)** is also available, providing information on upcoming events, do's and don'ts of doing business abroad, macroeconomic fundamentals and contact details of embassies and trading posts worldwide, as well as access to relevant export documents, laws and regulations, international network programmes and information about financing¹⁵⁶.

In January 2016 a public-private partnership called **“NL grows”** was launched to support the growth of SMEs and create a strong entrepreneurship ecosystem in the Netherlands. This platform is supported by the Ministry of Economic Affairs, NLevator, a foundation of entrepreneurs, and the Chamber of Commerce, which gathers 80 high profile personalities from various fields. In this way, “NL grows” aims at raising awareness among entrepreneurs about business opportunities, providing support of mentoring, training and coaching and offering their knowledge, network and services to entrepreneurs¹⁵⁷.

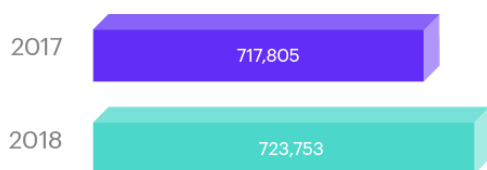
8

Outlook

The Dutch economy appears to have overcome the years of economic crisis, recession and stagnation. The economic outlook for the Netherlands is sound, with a forecast GDP growth rate of 2.1% for 2017 and slightly lower of 1.8% in 2018.

The Dutch economy appears to have overcome the years of economic crisis, recession and stagnation. The **economic outlook** for the Netherlands is sound, with a forecast GDP growth rate of 2.1% for 2017 and slightly lower of 1.8% in 2018. After a number of years of stagnation, the construction sector is expected to fare even better than the overall economy over the coming years. Growth is projected at 3.6% in 2016, 4.0% in 2017 and 4.1% in 2018¹⁵⁸.

In parallel, the **number of workers** employed in the broad construction sector is projected to increase by 0.8% in 2017, reaching 717,805 people, and by 1.6% in 2018 to 723,753 compared to the 2016 levels. Similarly, the **number of enterprises** operating in the broad construction sector is forecast to grow by 0.8% in 2017 relative to 2016, and to increase by 1.6% in 2018 compared to 2016 levels, reaching 250,817. The **value added** of the broad construction sector is expected to grow, with a forecast growth of 0.8% in 2017 compared to 2016, and of 1.5% in 2018 (from 2016 levels), amounting to EUR 55,523. These improvements will be accompanied by a similarly strong increase in **turnover**, projected to grow at 0.7% in 2017 compared to 2016, and at 1.3% in 2018, reaching EUR 146.3 billion.



Number of workers employed in the broad construction sector projection 2017 and 2018

The Dutch **housing market** boomed for 15 years before the crisis of 2008, and started to recover only in 2014¹⁵⁹. Rising purchasing power and consumer confidence are fuelling the recovery of the housing market, which is projected to grow at 3% in 2017. Construction of housing is expected to underpin overall construction activity. These developments are reflected in the forecast rise of the house price index by 5-7% by 2017¹⁶⁰. Similarly, transactions are expected to range between 190,000-210,000 in 2016, representing an increase

between 7% and 18% compared to 2015, and to reach 200,000-220,000 in 2017 (+5% compared to 2016)¹⁶¹.

Residential construction continued to grow in 2016 and is expected to increase further in 2017, although below 2008 pre-crisis levels. The prospects for the **non-residential construction** segment appear to be more modest, despite improvements since 2014. Indeed, persisting oversupply is undermining the construction of new non-residential buildings. Furthermore, structural trends are hampering demand for non-residential construction. For instance, the increasing development of online retail is expected to curb demand for retail space. Furthermore, tightening public budgets are leading to reductions in office space with the government announcing to disinvest in office property by 2020¹⁶². Nevertheless, the increase in production in the non-residential segment is forecast at 2.5% for 2016, underpinned by overall economic growth, as well as demand for renovated buildings¹⁶³.

Since the crisis, the **civil engineering segment** has been suffering from reduced public spending and is still dependant on the government as one of its main clients. Nevertheless, spill-overs from residential construction are expected to positively affect the demand for infrastructure, as residential growth requires investments in neighbourhood infrastructure such as roads, sewers, etc.¹⁶⁴. Overall, output in the civil engineering segment is projected to increase by 2% in 2016, after experiencing a 2.75% increment in the previous year¹⁶⁵.

In conclusion, the **outlook for the Dutch construction market** is strong, particularly due to high growth in the residential market and transport infrastructure. However, companies still face high levels of competition and pressure on margins, indicating that overcapacity may still be present and further consolidation can be expected¹⁶⁶. Nevertheless, the current Dutch government's focus is on the development of the infrastructure through the implementation of the **Operational Program 2014–2020** and the **National Reform Program (NRP) 2016** is projected to drive the industry's growth over 2017-2021, with construction output in real terms forecast to record a compound annual growth rate of 3.58%¹⁶⁷.

The outlook for the Dutch construction market is strong, particularly due to high growth in the residential market and transport infrastructure.

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