



# European Construction Sector Observatory

Country profile **France**

January 2020




## In a nutshell


Over the 2010-2018 period, the French GDP increased by 10.7%, amounting to EUR 2,312.0 billion in 2018.

The overall business confidence in French economy has also improved driven by stable domestic housing demand amidst falling interest rates and government tax incentives.

The **volume index of production** in the narrow construction sector increased marginally, by 2.3% over the 2015-2018 period. The production in building construction increased slightly by 1.1%, while civil engineering construction experienced a higher growth of 6.1% over the same period.


Volume index of production in the construction between 2015 and 2018  **2.3%**

Similarly, the **total turnover** in the broad construction sector increased moderately by 9.9% from EUR 419.9 billion in 2010 to EUR 461.6 billion in 2018. This growth was primarily driven by an increase in turnover in the narrow construction (+15.5%) and manufacturing (+11.5%) sub-sectors over the 2010-2018 period.

Turnover in the broad construction sector between 2010 and 2018  **9.9%**

During the 2010-2017 period, the **apparent labour productivity** of the broad construction sector also increased by 10.5%. This growth is reflected in all the construction sub-sectors between 2010 and 2018, particularly in the manufacturing sub-sector

(+19.9%), followed by narrow construction sub-sector (+14.6%) for the same period. This increase in labour productivity also supported the marginal increase in profitability of the broad construction sector. Indeed, the **gross operating surplus** of the broad construction sector also slightly by 1.1% for the 2010-2018 period. However, for companies operating in the residential sector, profitability has been rather stagnating, even though the production volume and turnover have kept on increasing. This is evident from the fact that the **total gross operating rate** of the broad construction sector declined by 6.2% between 2010 and 2017<sup>1</sup>.

Total gross operating rate in the broad construction sector between 2010 and 2017  **6.2%**

The **total employment** in the broad construction sector declined by 2.2% in 2018 compared to the 2010 levels. This was mainly driven by a decrease of 4.3% and 7.0% in number of employees in the narrow construction and manufacturing sub-sectors, respectively for the same time period. This deterioration was partially offset by positive improvements of 4.7% in the real estate activities and 6.5% in architectural and engineering activities sub-sectors.

Since 2015, **housing prices** have started picking up for existing and new dwelling, reflecting a housing demand increasing faster than the supply. In fact, the issuance of building permits for residential buildings has declined by 4.1% in 2018 compared to 2010. In addition to domestic demand, foreign demand is also contributing to the housing supply

shortage, especially in popular tourist locations such as Paris.

House price index for total dwellings over the 2015-2018 period

 7.2%

In accordance with the Construction Revival Plan, several schemes promoting home-ownership have been introduced (such as the Zero-interest Loan, Social Access loan) and were recently amended to promote to the acquisition of new housing, especially by young people. In September 2017, the new government presented its Investment Plan (*Grand Plan d'Investissement*) over the following five years. Of the EUR 57.1 billion investment

planned, EUR 20.0 billion will be dedicated to the construction sector.

Despite the above favourable developments, the French economy is expected to slow down, which may impact the development of the construction sector. In addition, some key issues, such as labour and skills shortage and the relatively low profitability of the sector, will need to be addressed to ensure the sustainable development of the sector

**Overall, the growth of the broad construction sector is expected to further slowdown in the coming years, due to a weakening economic environment. The sector may even contract post 2021, especially if some of its structural issues are not addressed<sup>2</sup>.**

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## 1

## Key figures

## Construction market

The **number of enterprises** in the broad construction sector in France totalled 804,420 in 2018<sup>3</sup> (Figure 1). Companies in the narrow construction sub-sector accounted for 58.5% of the total, followed by the real estate (29.5%), architectural and engineering activities (10.0%) and manufacturing (1.9%) sub-sectors. The overall number of enterprises in the broad construction sector grew by 15.2% between 2010 and 2018, driven by a 58.6% increase in the number of companies in the real estate sub-sector and a 9.1% growth in the number of enterprises in architectural and engineering activities sub-sector.

Number of enterprises in the real estate sub-sector between 2010 and 2018

↑ 58.6%

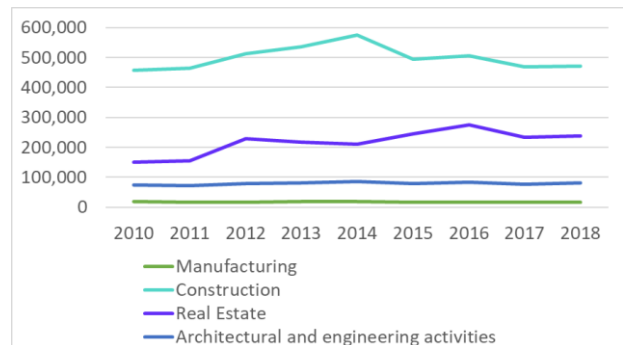
The volume index of production in narrow construction sub-sector increased by 2.3% over 2015-2018. In the same period, the volume index of production of construction of buildings increased by 1.1%, while production in civil engineering construction experienced a higher growth of 6.1% over the same period (Figure 2).

This reflects the observation of the French Building Federation (*Fédération Française du Bâtiment* - FFB), which highlighted that the volume of production of residential buildings was sustained, while it was originally predicted to slow down or even contract in 2018.

Production of narrow construction sub-sector between 2015 and 2018

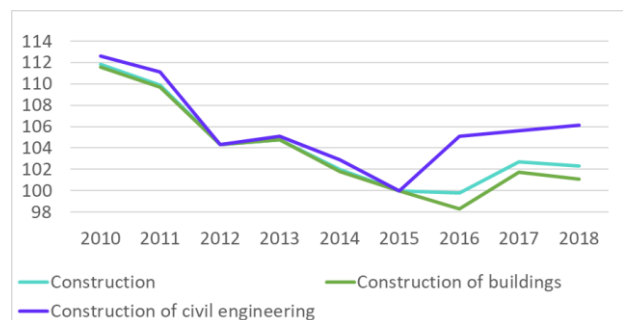
↑ 2.3%

Figure 1: Number of enterprises in the broad French construction sector between 2010 and 2018



Source: Eurostat, 2019.

Figure 2: Volume index of production in the French construction sector between 2010 and 2018 (2015=100)



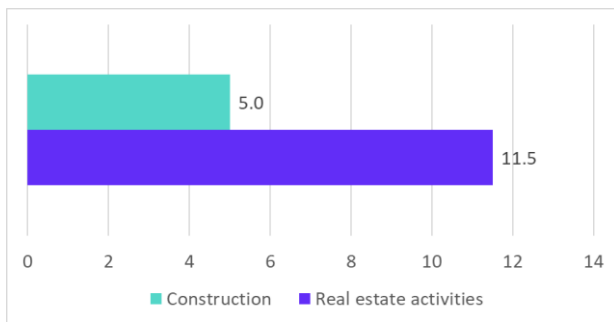
Source: Eurostat, 2019.

In 2018<sup>4</sup>, the **total value added** of the broad construction sector stood at EUR 165.1 billion, with the narrow construction sub-sector having the largest share (56.8%), followed by real estate (22.6%), architectural and engineering activities (13.4%) and manufacturing sub-sectors (7.2%).

The **share of gross value added** of the broad construction sector in the GDP<sup>5</sup> reached 18.5% in 2017 (Figure 3). The share of gross value added in the GDP has increased marginally since 2016 (18.3%), above the EU-28<sup>6</sup> average of 16.9%. In 2018<sup>7</sup>, the share of gross value added of the narrow construction and real estate activities<sup>8</sup> sub-sectors in the GDP stood at 5.0% and 11.5%, respectively (Figure 3).



Figure 3: Gross value added as a share of GDP in the French broad construction sector in 2018 (%)



Source: Eurostat, 2019.

The gross value added of the narrow construction sub-sector and the real estate activities was unequally spread over the French territory in 2018.

In 2016<sup>9</sup>, out of the 13 regions of mainland France, Île-de-France, Rhône-Alpes and Provence-Alpes-Côte d’Azur accounted for more than 40% of the gross value added of the narrow construction and real estate activities sub-sectors.

### Productivity

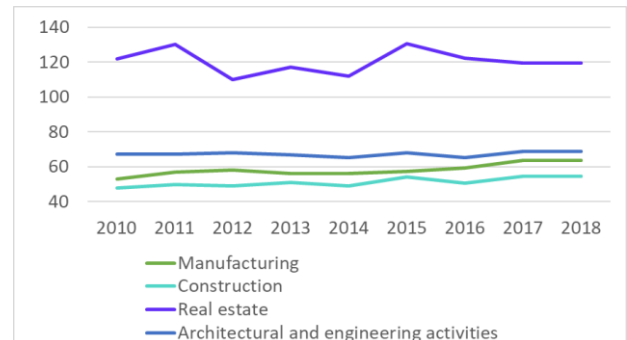
The **apparent labour productivity**<sup>10</sup> in the broad construction sector in France has experienced a positive trend since 2010, despite some fluctuations. In fact, over the 2010-2017 period<sup>11</sup>, it increased by 10.5% from EUR 58,887 to EUR 65,088.

Labour productivity in the broad construction sector between 2010 and 2017 **↑ 10.5%**

This growth in apparent labour productivity is reflected in most of the broad construction sub-sectors between 2010 and 2018, though it tended to stagnate between 2017 and 2018. The manufacturing sub-sector experienced the highest growth this period<sup>12</sup>, increasing by 19.9% from EUR 52,936 to EUR 63,483. The increase in the narrow construction sub-sector was 14.6%, going from EUR 47,700 to EUR 54,654. The apparent labour productivity in the architectural and engineering activities sub-sector witnessed a marginal increase of 2.6%, from EUR 67,000 in 2010 to EUR 68,731 in 2018. Conversely, the real estate sub-sector experienced a 2.0% decline, amounting to EUR 119,288 in 2018, even though it exhibits the highest labour productivity among all the construction sub-sectors.

Syntec-Ingénierie explains the limited productivity gains by the limited introduction of innovative technologies. In the residential building sector especially, the low level of digitalisation may be linked to the limited profit margins, which may impede companies to invest in more productive processes.

Figure 4: Labour productivity in the broad construction sector in France between 2010 and 2018 (EUR k)



Source: Eurostat, 2019.

### Turnover and profitability

The **turnover** of the broad construction sector amounted to EUR 452.3 billion in 2017, and was expected to reach 461.6 billion in 2018<sup>13</sup>. This represents a 9.9% increase over the 2010-2018 period. The narrow construction sub-sector accounted for 64.3% of the total turnover, followed by real estate activities (16.7%), architectural and engineering activities (10.1%) and the manufacturing (8.9%) sub-sectors. While the turnover of the manufacturing, narrow construction and real estate activities sub-sectors experienced an increase between 2010 and 2018 (11.5%, 15.5% and 0.2% respectively), the turnover of the architectural and engineering activities sub-sector decreased by 5.1%. This reflects a margin issue, which may be due to an insufficient consolidation of the sector.

Turnover of the broad construction sector between 2010 and 2018 **↑ 9.9%**

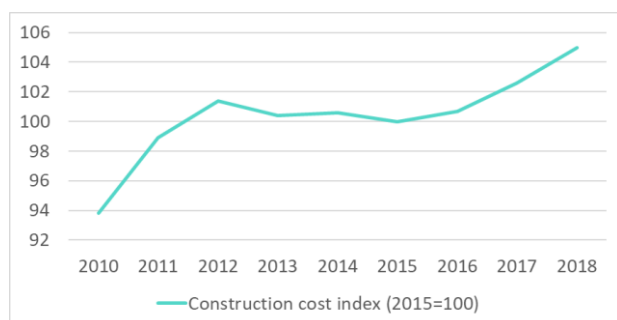
The **gross operating surplus** experienced a marginal increase of 1.1%, amounting to EUR 48.4 billion in 2017 (in comparison to EUR 47.9 billion in 2010). In fact, the gross operating surplus of the architectural and engineering and the real estate activities

sub-sectors decrease by 1.1% and 2.3% respectively in the same period.

The **gross operating rate** of the broad construction sector<sup>14</sup>, which gives an indication of the sector's profitability, follows a similar pattern. While it has been increasing since 2015, reaching 10.7% in 2017, it is still below the 2010 level of 11.4%. The gross operating rate of all construction sub-sectors experienced a decline over the 2010-2017 period, except the architectural and engineering sub-sector, which grew by 0.3 percentage point.

This decrease reflects the increasing construction costs for residential buildings. The **construction cost index** rose by 5.0% between 2015 and 2018, driven by increasing labour costs (Figure 5). Construction companies face difficulties in passing on those construction costs increase, due to fierce competition, and, in the case of residential buildings, to lower household purchasing power<sup>15</sup>.

Figure 5: Construction cost index between 2010 and 2018 (2015=100)



Source: Eurostat, 2019.

## Employment

In 2018<sup>16</sup>, the broad construction sector **employed** 2,537,628 people, exhibiting a decline of 2.2% compared to 2010 (2,594,613). In particular, the narrow construction sub-sector employed most of the workforce accounting for 67.7% (1,716,758) of the total in 2018. This is followed by the architectural and engineering activities (12.6%, 320,653), real estate activities (12.3%, 313,337), and manufacturing (7.4%, 186,879) sub-sectors (Figure 6). Following the high 2010 employment level, the broad construction sector (and its sub-sectors) experienced a decline, reaching bottom-low levels in 2015. From 2016 onwards, the number of persons employed in the broad construction sector continuously increased again.

Number of persons employed in the broad construction sector between 2010 and 2018 ↓ 2.2%

The manufacturing sub-sector experienced a 7.0% decline in its workforce between 2010 and 2018, while the decrease in the narrow construction sub-sector amounted to 4.3%. Conversely, the real estate activities as well as architectural and engineering activities sub-sectors saw a 4.7% and 6.5% increases respectively, in the number of workers over the same period.

Number of persons employed in manufacturing sub-sector between 2010 and 2018 ↓ 7.0%

Number of persons employed in real estate activities sub-sector between 2010 and 2018 ↑ 4.7%

**Employment in the narrow construction sub-sector is concentrated in the top three regions (Île-de-France, Rhône-Alpes, Provence-Alpes-Côte d'Azur), which accounted for 37.0% of the total of people employed in the sub-sector in 2016.**

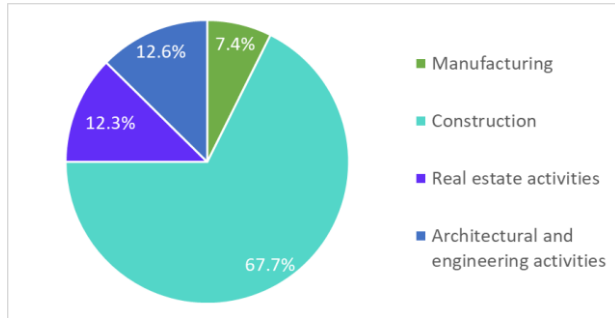
The picture is even more pronounced in the real estate activities sub-sector, with the same regions accounting for 51.4% of the total number of real estate activities' workers for the same period.

As for **employment by specific occupation**, the number of managers and elementary occupations in the real estate activities sub-sector experienced the largest decline between 2010 and 2018 (-69.2% and -61.1% respectively). These are followed by service and sales workers and plant and machine operators and assemblers in the narrow construction sub-sector, which declined by 36.0% and 28.2%, respectively over the same period. Similarly, the plant and machine operators and assemblers and clerical support workers in the manufacturing sub-sector also observed a decrease of 32.1% and 31.1%, respectively.

Conversely, the number of professionals and services and sales workers in the real estate

activities sub-sector experienced the highest increase (150.5% and 700.0% respectively). These are followed by a 136.4% growth in the number of technicians and associate professionals in the narrow construction sub-sector.

Figure 6: Percentage of persons employed per construction sub-sectors in France in 2018



Source: Eurostat, 2019.

The number of **self-employed workers** in the narrow construction sub-sector experienced a 5.0%

decrease between 2010 and 2018, from 397,100 to 377,200. Their share in the total number of self-employed persons in the general economy hence stood at 12.8% in 2018, 1.7 percentage point lower than in 2010. On the contrary, self-employment in the real estate activities sub-sector reported an increasing trend, growing by 21.9%, from 42,500 people in 2010 to 51,800 in 2018 and accounted for 1.8% of the self-employed professionals in the general economy. Finally, SMEs play an important role in terms of employment, since they employed 74.2% of the total workforce of the broad construction industry in 2017. This is however slightly lower than the 2010 level (81.1%).

Number of self-employed workers in the real estate activities sub-sector between 2010 and 2018  **21.9%**



## 2

# Macroeconomic indicators

## Economic development

In 2018, the GDP of France amounted to EUR 2,312.0 billion, a moderate growth of 1.7% compared to 2017.

This growth was mainly driven by strong public investment and favourable fiscal measures partially offset by stagnated private consumption, social unrest in the French economy and slowdown in housing investment<sup>17</sup>. The same year, the **potential GDP** amounted to EUR 2,299.8 billion, resulting in a slight positive **output gap** of 0.5%. After decreasing from 2010 to 2015, from 1.7% to 0.1%, the **inflation rate** picked up again in 2016 and finally reached 2.1% in 2018.

GDP growth between  
2010 and 2018

↑ 10.7%

## Demography and employment

In 2018, the **total population** in France amounted to EUR 66.9 million people. It is projected to keep increasing until 2050, reaching 71.6 million people (+7.0%). However, **positive net migration** turned negative, from 37,580 in 2010 to -42,590 people in 2018.

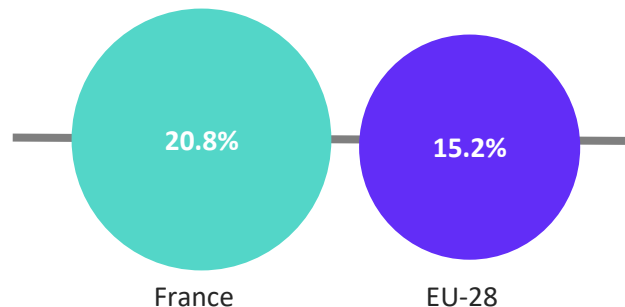
In 2018, the **working age population** accounted for 62.2% of the total population, and will decrease in the years to come, reaching 56.7% in 2050. Moreover, the share of population who is 65 years old or older is expected to increase from 13.7% in 2018 to 15.6% in 2050. In turn, this may generate an increased demand for hospitals and elderly care infrastructure<sup>18</sup>. Indeed, the number of residences for senior citizens is expected to grow from about 500 in 2016 to 900 by 2020<sup>19</sup>.

Population in France  
between 2010 and 2018

↑ 3.5%

The **unemployment rate** in France stood at 7.9% in 2018, above both the EU-28 average of 6.1% and the country's 2010 level (7.3%). Youth (<25 years old) unemployment was at 20.8% in 2018, well above the EU-28 average of 15.2%, but slightly below the 2010 level (22.5%). According to European Semester Country Report 2019, labour market conditions for younger, lower-skilled workers, people with a migrant background and from poor urban areas remain challenging. The employment rate for non-EU born people in France is one of the lowest in the entire EU region, standing at 55.6% in 2017<sup>20</sup>.

Youth unemployment rate in 2018



## Public finance

In 2018, general **government expenditure** as a share of GDP in France stood at 56.0%.

The general government deficit as a share of GDP amounted to -2.5% in 2018, a significant improvement compared to the 2010 (-6.9%).

Furthermore, general **government gross debt** amounted to 98.4% in 2018, considerably higher than both its 2010 level (85.3%) and the EU-28 average of 80.0%<sup>21</sup>. This represents a substantial source of vulnerability for the national economy, and efforts to adjust government spending is proving to be difficult<sup>22</sup>. INSEE also stated that the

rise in public sector debt mainly relates to overspending by central government<sup>23</sup>.

## Entrepreneurship and access to finance

France ranked 37<sup>th</sup> out of 190 countries in terms of ease of starting a business in 2019, according to the World Bank Doing Business 2020 report, seven positions behind its 2018 rank (30<sup>th</sup>)<sup>24</sup>.

Registering a firm requires five procedures, in line with the OECD high-income average (4.9) and 4.0 days, well below the OECD high-income average of 9.2 days. Furthermore, the cost of starting a business represents 0.7% of income per capita, as compared to the 3.0% OECD high-income average and the paid-in minimum capital required is close to zero, compared to the OECD high income average (7.6% of income per capita).

France performs broadly in line with the EU-28 average in terms of entrepreneurship, according to the 2019 Small Business Act (SBA) Fact Sheet<sup>25</sup>. It has performed well in terms of opportunity-driven entrepreneurial activity, entrepreneurial intentions, entrepreneurship education at post-secondary level and high job creation expectation rate. Conversely, areas requiring more efforts includes established business ownership rate, entrepreneurship education at basic school level, share of high growth enterprises and early stage entrepreneurial activity<sup>26</sup>.

Further, access to finance is the most important concern for 7.7% of French SMEs, in line with the EU-28 average of 7.2%<sup>27</sup>. Only 19.7 % of French SMEs did not manage to get the full bank loan they applied for in 2019 in comparison to EU-28 average of 28.9%. **Loans to non-financial corporations** show

an increasing trend since 2010, up from EUR 840.4 billion to reach EUR 989.6 billion in 2016<sup>28</sup>. Moreover, **outstanding loans to SMEs** experienced a 15.8% increment, from EUR 355.9 billion in 2012<sup>29</sup> to EUR 412.2 billion in 2018.



France ranks 14<sup>th</sup> out of 141 countries in terms of financial system, according to the 2019 World Economic Forum Global Competitiveness Report<sup>30</sup>, an improvement of three positions in comparison to the previous year<sup>31</sup>.

In particular, it ranks 19<sup>th</sup> for venture capital availability, 30<sup>th</sup> with regard to domestic credit to private sector, 38<sup>th</sup> for financing of SMEs and 39<sup>th</sup> in terms of the soundness of banks. On the contrary, it performs comparatively poorly in terms of non-performing loans, ranking 57<sup>th</sup>.

The **European Investment Bank (EIB)**, through the European Fund for Strategic Investments (EFSI), supports the French Investment Plan 2018-2022. By the end-2019, the EIF has signed 40 agreements with intermediary banks, with EFSI backing, financing a total amount of EUR 2.2 billion with further commitments set to trigger a total investment of EUR 14.7 billion in France, supporting 234,919 SMEs and mid-cap companies<sup>32</sup>. The EIB has also financed around 120 infrastructures and innovation projects with EFSI backing. For instance, under the Adestia energy-efficient social housing project, the EIB agreed to finance a loan of EUR 200.0 million for modernisation and energy efficiency refurbishment work in over 25,000 social housing units. The EIB has also financed a loan of EUR 30.0 million, to enable EcoTitanium build and operate Europe's first recycling plant for aviation grade titanium<sup>33</sup>. Moreover, the EIB total lending to French SMEs amounted to EUR 2.3 billion in 2018<sup>34</sup>.

## 3

## Key economic drivers of the construction sector

### Business confidence

Over the 2010-2018 period, the **consumer confidence index** has been showing signs of improvement reaching -9.7 in 2018, in comparison to the 2010 levels of -11.9. However, the consumer confidence index is lower than the 2017 values of -6.7 and the EU-28 average of -4.7. Likewise, the **industry confidence** increased from -8.3 in 2010 to 2.3 in 2018. This is nevertheless lower than the EU average of 6.0. Last, the **construction confidence** experienced an increase over the 2010-2018 period, going from -29.1 to 6.5 in 2018. This is even higher than the EU-28 average of 4.1.

Reflecting these positive trends, the **investment ratio** slightly increased from 22.1% in 2010 to 22.6% in 2018. **Investment per worker** increased moderately, from EUR 103,200 to EUR 111,018 between 2010 and 2017 (+7.6%).

### Domestic sales

Between 2010 and 2018, the ranking of the top five **most domestically sold construction products** by value has remained largely constant in France, except with the addition of 'Other structures and parts of structures, plates, etc.'. Amongst this top 5, 'Doors, windows and their frames, etc.' increased the most by 39.1%, from EUR 3.0 billion to EUR 4.2 billion. In parallel, 'Portland cement, aluminous cement, etc.' experienced the lowest growth over the same period, from EUR 2.1 billion in 2010 to EUR 2.4 billion in 2018 (+14.5%). Table 1 presents the top five most domestically sold construction products, both in France and the EU-28, which made up 53.5% of all domestic construction product sales in 2018.

Table 1: Five most domestically sold construction products in France and in the EU in 2018

France				EU-28
	Product	Value (EUR m)	Share in construction product domestic sales (%)	Product
1	Other structures and parts of structures, plates, etc. (group 251123)	4,691.2	14.1%	Other structures and parts of structures, plates, etc. (group 251123)
2	Ready-mixed concrete (group 236310)	4,226.1	12.7%	Doors, windows and their frames and thresholds for doors, of metal (group 251210)
3	Doors, windows and their frames and thresholds for doors, of metal (group 251210)	4,194.9	12.6%	Ready-mixed concrete (group 236310)
4	Portland cement, aluminous cement, etc. (group 235112)	2,404.3	7.2%	Prefabricated buildings of metal (group 251110)
5	Prefabricated buildings of metal (group 251110)	2,330.1	7.0%	Prefabricated structural components for building, etc. (group 236112)

Source: PRODCOM, 2019.

### Export of construction-related products and services

The ranking of the **most exported construction products** has changed drastically since 2010. Except for 'Barrels and coopers' products of wood', all the other construction products have been replaced in 2018 (Table 2). The export value of 'Barrels and

coopers' product of wood' has increased the most, by 58.1% between 2010 and 2018. The top five most exported construction products from France and the EU-28 are summarised in Table 2. Together, these made up 44.7% of all construction product exports in 2018.

Table 2: Five most exported construction products in France and in the EU in 2018

Country				EU-28
	Product	Value (EUR m)	Share in construction product export sales (%)	Product
1	Barrels and coopers' products of wood (group 162412)	431.9	14.4%	Ceramic tiles and flags (group 233110)
2	Fibreboard of wood or other ligneous materials (group 162115)	289.1	9.6%	Other structures and parts, etc. (group 251123)
3	Other structures and parts, etc. (group 251123)	278.7	9.3%	Fibreboard of wood or other ligneous materials (group 162115)
4	Particle board (group 162112)	237.9	7.9%	Marble, travertine, alabaster, etc. (group 237011)
5	Other board of wood or other ligneous materials (group 162114)	101.4	3.4%	Prefabricated buildings of metal (group 251110)

Source: PRODCOM, 2019.

In terms of cross-border provision of construction services<sup>35</sup>, France exported EUR 3.0 billion worldwide in 2018, 9.7% above the 2011<sup>36</sup> value, which amounted to EUR 2.8 billion.

Specifically, 23.4% of exports (EUR 709 million) were made to the EU-28, i.e. 177.0% above the 2011 level (EUR 256 million). Accounting for 76.6% of exports, the value of exports to countries outside the EU-28 experienced a 7.4% decrease, from EUR 2.5 billion in 2011 to EUR 2.3 billion in 2018. In parallel, France imported a total of EUR 2.4 billion in construction services in 2018, a 30.1% increase since 2011 when it stood at EUR 1.8 billion. In total, EUR 1.1 billion were imported from EU-28 countries (i.e. 44.3% of imports). This represents a 40.6%

increase since 2011. Overall, France achieved a **trade surplus** of EUR 0.7 billion in 2018, 30.2% lower than in 2011.

Exports of construction services to EU-28 countries between 2011 and 2018

↑ 177.0%

## Access to finance in the construction sector

According to the FFB, credit conditions for construction companies have improved in 2018, supported by a more conducive economic context and improved business confidence. Nevertheless, to take full advantage of the momentum, it is essential for banks, credit institutions and insurers to accept taking more risks to support the sector<sup>37</sup>. This was to some extent witnessed, with banks requiring less collaterals from construction SMEs than in 2017.

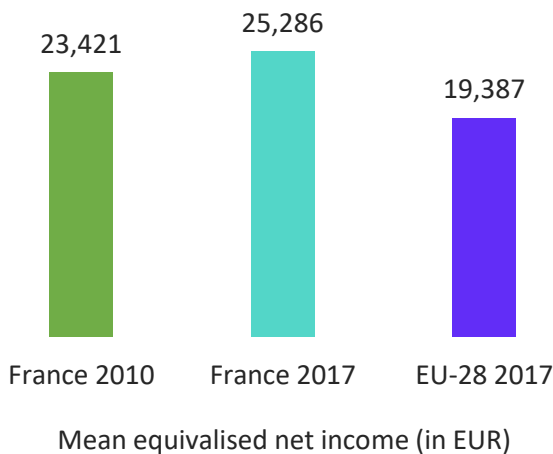
A recent survey of construction companies done by the EIB shows that around 10.0% of firms in the manufacturing sector are **finance constrained** and about 2.0% in the narrow construction sub-sector. Moreover, about 20.0% of firms in the manufacturing sub-sector report investing too little, while this number stands at about 15% for the narrow construction sub-sector<sup>38</sup>. According to the French Building Federation, a significant issue linked to the financing of SMEs in the broad construction sector lies in the lack of proximity between financial services advisors and construction companies in smaller cities, due to high rotation rates in retail banks.

However, the FFB also underlines that there may be some negative changes in 2019 and 2020, following the recommendation of the national authority regulating financial markets (*Autorité des marchés financiers*). Published in 2019, this recommendation aimed to decrease the share of residential loans in the banking system. In addition, Bâle III regulations may also deteriorate the access to finance to construction companies, and especially SMEs, by demanding e.g. higher levels of collaterals.

## Access to housing

The **number of households** increased by 7.1% between 2010 and 2018, reaching 29.9 million. In fact, the percentage of population living in **densely-populated area** stayed relatively constant, increasing by 0.9 percentage points between 2010 and 2018, from 46.7% to 47.6%. Conversely, the share of population living in **intermediate urbanised area** dropped significantly from 35.1% to 19.3% over the same period.

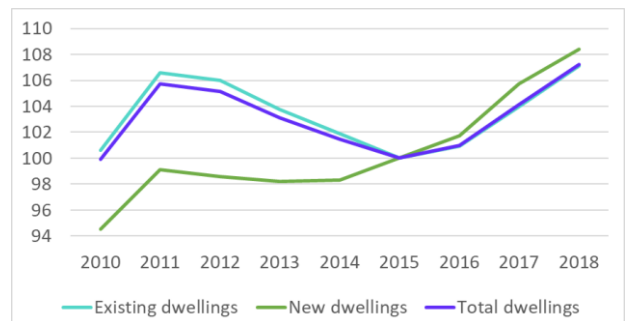
Since 2010, **mean equivalised net income** in France has increased by 8.4% growing from EUR 23,421 to reach EUR 25,379 in 2018. This represents a 0.4% increase from 2017, amounting to EUR 25,286, well above the 2017 EU-28 average of EUR 19,387.



The rising income was matched by rising real estate, energy prices, and an increase in the social charges (contribution sociale généralisée - CSG) social charge tax<sup>39</sup>. Hence, such rise in income has modestly impacted **housing demand**. At the same time, foreign demand for housing (especially in Paris) accounted for 6% of the total demand in 2018 (against 5.5% in 2017)<sup>40</sup>. Their number has been increasing following the Brexit, which incentivised French non-resident to come back to France. The demand is also composed of UK, Italian, American and Chinese citizens<sup>41</sup>. This translated in modest **house price** increase (7.3% between 2010 and 2018). This is driven by an increase of 14.6% in the prices for new dwellings, while the prices for existing dwellings have only increased by 6.5% (Figure 7). The rise of house price for existing homes was particularly felt in Paris (+6.5% year-on-year to Q1 2019), in Île-de-France (4.5% year-on-year to Q1 2019), in Petite Couronne (4.4% year-on-year to Q1

2019) and in Hauts-de-Seine (4.3% year-on-year to Q1 2019)<sup>42</sup>. As a result, housing affordability is a growing issue in France, though it varies highly between regions and rural and urban areas. In practice, while there is a supply of social housing amounting to almost 5.0 million units, 2.1 million households are on the waiting list to access social housing and about 4.0 million are not decently accommodated (*“mal logé”*)<sup>43</sup>. In addition, overcrowding for more modest households is also increasing due to the lack of accommodation<sup>44</sup>.

Figure 7: House price index in France between 2010 and 2018 (2015=100)

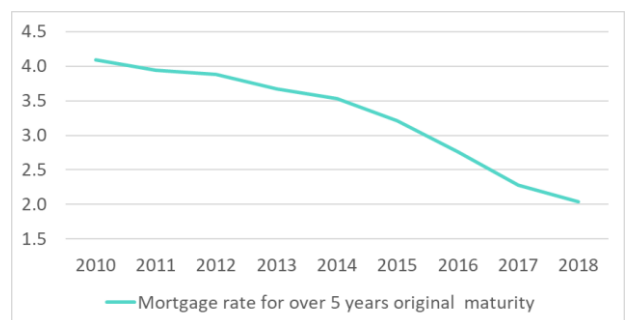


Source: Eurostat, 2019.

At the same time, **interest rates** on mortgages have been decreasing continuously, from 4.1% in 2010 to 2.0% in 2018, the lowest recorded rate (Figure 8). This, coupled with the increase in disposable incomes, made access to residential loans easier. Indeed, **total outstanding residential loans** to households saw a continuous increase, from EUR 795.2 billion in 2010 to EUR 1,009.6 billion in 2018 (+27.0%), the highest value.



Figure 8: Mortgage rates for loans for over 5 years original maturity (%) between 2010 and 2018



Source: ECB MFI Interest Rate Statistics, 2019.



The number of sale transactions reaching 1,020,000 at the end of July 2019, up from 984,000 in March 2018<sup>45,46</sup>. However, the residential construction market experienced an overall slowdown in 2018, as compared to 2017, primarily due to a weaker economic environment and lower household purchasing power. This was further accompanied with lower public spending for new housing in 2018 along with a similar decline in tax exemptions for both first-time buyers and investors<sup>47</sup>.

The number of building permits declined by 6.6% in 2018 as compared to 2017. Residential building permits declined by 4.1% in 2018 in comparison to 2010 levels. Further decline is expected in the coming years for both single family and multi-family housing. New housing permits and new housing starts are forecast to decline by 8.0% and 5.0% respectively in 2019.

According to the FFB, restrictive institutional and regulatory restrictive context, as well as distorted incentives limit housing investments. Furthermore, housing policy objectives are defined at the national level, whereas their implementations are delegated to the lowest administrative level (communes), which are responsible for issuing building permits and granting the decisions to build. Recently, this decision has been moved to the higher level of administration (inter-municipality), which has a better picture of the ongoing projects and future local needs for housing. This was expected to have a positive impact on housing shortage, which will also become clearer further down the line.

**At the same time, there is also an issue of vacant housing in France, particularly affecting the rural areas and small towns (increase of 1 million vacant housing in the last ten years)<sup>48</sup>.**

**Homeownership** in France is low compared with other EU countries, standing at 65.1% in 2018. Almost 31.8% of the home owners have taken a mortgage or loan. At the same time, homeownership falls to only 30.4% for the population earning less than 60.0% of the median equivalised income. While homeownership for the

total population has slightly improved (1.1%) as compared to 2017, it has declined by 3.5% for the population earning less than 60.0% of the median equivalised income in comparison to 2017. In France, the **housing cost overburden rate**<sup>49</sup> reached 4.7% in 2018, well below the EU-28 average of 10.4% and marginally lower than the 2010 level (5.1%)<sup>50</sup>. In terms of housing quality, the **overcrowding rate**<sup>51</sup> in 2018 stood at 8.2%, well below the EU-28 average of 15.5% and slightly lower than compared to 2010 (9.2%)<sup>52</sup>. Similarly, the **severe housing deprivation rate**<sup>53</sup> reached 2.7% in 2018, below the EU-28 average of 4.0%<sup>54</sup>. Even though the social housing offer is important in France (one out of six residential housing is a social housing), 1.9 million people in France are on social housing waiting lists, highlighting the pressing needs for affordable dwellings<sup>55</sup>.

## Infrastructure



**France ranks 9<sup>th</sup> out of 141 countries in terms of its infrastructure, according to the 2019 Global Competitiveness report<sup>56</sup>.**

Specifically, it ranks 6<sup>th</sup> for road connectivity, 13<sup>th</sup> with respect to airport connectivity, 15<sup>th</sup> relating to efficiency of train services, 18<sup>th</sup> with regard to the quality of road infrastructure and 24<sup>th</sup> with respect to efficiency of air transport services. In order to maintain its position as one of the world leader in infrastructure, the country is expected to increase its investments in infrastructure from EUR 2.0 billion a year in 2017 to EUR 3.5 billion in 2018 to reach EUR 4.0 billion in 2020<sup>57</sup>. In this respect, public funds alone will be insufficient, and the Movement of French Enterprises (*Mouvement des Entreprises de France* – MEDEF) calls for the development of Public-Private Partnerships (PPPs) to respond to this need. Moreover, the government is also involved in preparing an investment plan over the next ten years in order to improve transport infrastructure in France, including rail and road infrastructure<sup>58</sup>.



## 4

# Key issues and barriers in the construction sector

## Company failure

Over the 2010-2017 period, the business demography in the broad construction sector witnessed a gradual decrease both in the number of company births and deaths, despite some discrepancies across sub-sectors.

**Company births** in the narrow construction sub-sector decreased by 23.8%, from 70,439 in 2010 to 53,687 in 2017. In parallel, the number of deaths decreased by 30.6%, from 40,625 to 28,180 over the same period. Conversely, company births increased by 19.0% in the real estate activities sub-sector while company deaths decreased slightly by 0.2%, reaching 8,342 in 2017. Lastly, company births in the architectural and engineering activities sub-sector experienced a rise of 7.8%, while company deaths increased notably by 17.3% over the 2010-2017 period.

According to the French Central Bank, by September-end 2019, the total number of corporate bankruptcies in France decreased by 1.7% annually, from 53,419 in September 2018 to 52,512 in September 2019. In line with the French economy, the number of bankruptcies also decreased in the broad construction sector. The number of bankruptcies in the narrow construction and real estate sub-sectors stood at of 11,376 and 1,666 respectively. While these represent 24.8% of the bankruptcies in the French economy, they have decreased in comparison to the previous year i.e. September 2018 (-3.3% for the narrow construction sector, and -1.9% for the real estate activities sub-sector)<sup>59</sup>. Nonetheless, construction insolvencies may further rise in the future due to an on-going deterioration in structural and secondary works<sup>60</sup>.

Number of bankruptcies in the narrow construction sub-sector between 2018 and 2019

↓ 3.3%

Number of bankruptcies in the real estate activities sub-sector between 2018 and 2019

↓ 1.9%

## Trade credit

France has one of the lowest percentage of recorded credit-based sales across all the Western European countries surveyed. In fact, only 44.6% of its **value of B2B sales** were transacted on **credit** in 2019, well above the last year value (31.6%) but below the Western Europe regional average (60.4%)<sup>61</sup>, highlighting the country's aversion to using trade credit. This is mainly explained by customer's poor payment behaviour, financial weakness of the customer, the lack of information on their customers' businesses and payment performances.

Two of the popular credit management techniques used by French suppliers include creditworthiness assessment and provision for bad debt. A recent survey shows that about 31.0% of companies assess customer's creditworthiness prior to making trade credit decisions (compared to 35.0% in Western Europe). Similarly, 31.0% of French suppliers created a bad debt fund to offset any future payment defaults, as compared to 24.0% in Western Europe<sup>62</sup>.

Almost 30.0% of the French respondents have requested their B2B customers to opt for cash payment for invoices or on terms other than trade credit over the last year, in comparison to 22.0% in the Western Europe. Further, 22.0% of respondents preferred self-insurance as compared to 16.0% at the Western European regional level<sup>63</sup>.

## Late payment

The French construction sector performs well in regards with payments performed by due date, with French suppliers needing on average 59 days to convert B2B invoices into cash in 2019, an improvement compared with the average of 62 days in 2018. This is lengthier than the Western Europe's regional average of 51 days. This progress was mostly due to an increased timely payment of overdue invoices by B2B customers (63.4% of invoices paid on time in 2019 compared to 55.9% in 2018).

In terms of payment punctuality, the broad construction sector performs relatively poorly with 58.2% of payments being received on time. Moreover, 35.2% of the payments in the broad construction sector are done up to 30 days late while 2.9% of the payments are made over 90 days late<sup>64</sup>.

On average, 32.3% of the total B2B invoice value issued by French suppliers, remained unpaid past their due date. This is above the Western Europe regional average of 29.0%. With regards to collection of overdue amount, the percentage of account write-offs by French suppliers increased to 1.9% in 2019, compared to 1.1% in 2018. This is still below the 2019 Western Europe regional average of 2.2%<sup>65</sup>.

## Time and cost of obtaining building permits and licenses

France ranked 52<sup>nd</sup> out of 190 in terms of 'dealing with construction permits', according to the World Bank's Doing Business 2020, a substantial setback compared to 2019 (19<sup>th</sup>)<sup>66</sup>. This is due to reforms being implemented to reduce the cost of obtaining building permits. Completing administrative formalities to build a warehouse<sup>67</sup> requires nine procedures, below the OECD high-income average (12.7 procedures), but takes 213 days (above the

OECD high-income average of 152.3) (Table 3). Furthermore, the cost of obtaining a permit to build a warehouse represents 3.9% of the value of the warehouse, more than double of the OECD high-income average of 1.5%.

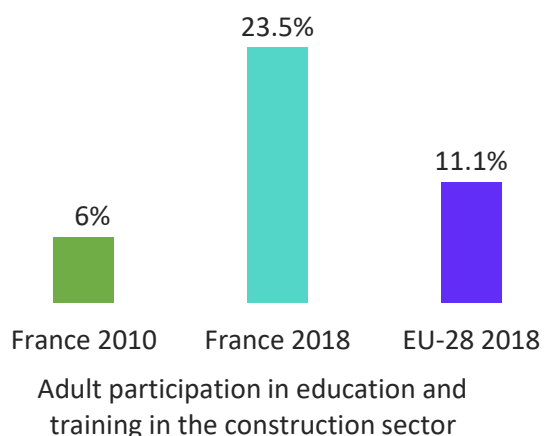
Table 3: Construction procedures timing and costs in France

Procedure	Time to complete	Associated costs
Obtain an urbanism certificate	60 days	no charge
Hire an external inspection company (Bureau de contrôle technique)	1 day	EUR 4,488
Obtain building permit	90 days	EUR 62,156
Apply for water connection	0.5 days	no charge
Receive site visit by Eaux de Paris to prepare a cost estimate (devis) for water connection	1 day	no charge
File a declaration of the worksite opening	1 day	no charge
Obtain water and sewage connections	60 days	EUR 3,761
Declare completion of construction	1 day	no charge
Receive visit by building inspectors and obtain compliance certificate	1 day	no charge

Source: Doing Business overview for France, World Bank, 2019.

## Skills shortage

The number of **tertiary students in engineering, manufacturing and construction** increased by 11.7% between 2010 and 2017<sup>68</sup>, growing from 103,397 to 115,474. Tertiary students in architecture and building experienced the highest growth, from 21,639 to 25,870, representing a 19.6% increase. Moreover, **adult participation in education and training** in the narrow construction sub-sector went from 6.3% in 2010 to a record high of 15.8% in 2014, subsequently declining to 15.4% in 2018. Similarly, adult participation in education and training in the real estate activities sub-sector experienced an increasing trend, growing from 6.0% in 2010 to 23.5% in 2018. This is above the EU-28 average of 11.1% in 2018.



However, there is a labour shortage for most professions in the broad construction sector, which has been increasing over the past three years, according to the FFB. This shortage of labour increases labour costs, because construction companies compete on wage to attract construction workers.

The structural shortages are noticeable also in skills. The French construction sector faces risks linked to the shortage of workers with digital and energy efficiency related skills<sup>69</sup>.

**According to estimates, France needs to train up to 80,000 workers in Building Information Modelling (BIM) by 2020, i.e. about 27,000 per year<sup>70</sup>. According to a recent study from the National Institute of Statistics and Economic Studies (INSEE), 50% of companies in the building sector cite skills mismatch as a barrier to hiring.**

According to the FFB, labour and skills shortages, if not addressed, may very well impede the development of the sector in the coming years. To help addressing it, the FFB has developed two types of initiatives to address this issue:

- National and local awareness-raising campaigns to attract youth, women and unemployed people in the construction sector. In 2019, the FFB contributed to attracting 15,000 workers in the sector, following their programme “15 000 Bâtisseurs” (“15 000 Builders”).
- Creation of a national platform on construction employment, whereby companies can post job offers and people can apply to them.

While more initiatives are needed to address this issue, multi-stakeholder collaboration is seen as a key component of any interventions tackling labour and skills shortage in the construction sector.

## Sector and sub-sector specific issues

### Material efficiency and waste management

In the European Union, construction and demolition (C&D) waste constitute one of the heaviest and most voluminous waste streams. C&D waste accounts for approximately 25% - 30% of all waste generated in the EU. C&D waste mainly consists of several materials, including concrete, bricks, gypsum, wood, glass, metals, plastic, solvents, asbestos and excavated soil, many of which can be recycled. In 2016<sup>71</sup>, France reported 224.4 million tonnes of waste, categorized as hazardous and non-hazardous, from the construction activities. This represents a decline of 1.4% and 13.9% in the waste generation compared to 2014 and 2010 levels respectively. This also constitutes around 24.3% of the EU-28 C&D average waste of 2016 amounting to 923.7 million tonnes<sup>72</sup>.

The Energy Transition Law (*Loi de transition énergétique*) sets a recycling target of 70% for C&D waste by 2020. Moreover, it stipulates that, as of January 2017, distributors of construction materials, products and equipment shall take back the waste arising from the same type of materials, products and equipment they sell. Nevertheless, companies are concerned that they lack the necessary competences to sort and recycle waste, especially given that the set-up of a waste disposal facility requires a capital investment of about EUR 200,000-300,000<sup>73</sup>.

### Climate and energy

**Emissions of greenhouse gases** (carbon monoxide and dioxide, methane, nitrous oxides and particulate matter) from activities in the narrow construction sub-sector amounted to 8.9 million tonnes in 2018, a 17.7% increase as compared to the 2010 level. Conversely, emissions from real estate activities sub-sector decline by 6.2%, reaching 448,035.9 tonnes over the 2010-2018 period<sup>74</sup>.

Despite performing well in regards with its climate mitigation policy in 2018, data indicates a widening

gap relative to the "carbon budget" objective. If further corrective measures are not undertaken, France would fall short of its 2030 objective of greenhouse gas emissions by almost 10 percentage points. As per I4CE, after considering the accumulated investment gap between 2016 and 2018, France would need to invest an amount

ranging between EUR 55.0 billion and EUR 85.0 billion per year between 2019 and 2023 to achieve its 2020 and 2030 commitments. In particular, the country should focus on accelerating the penetration of renewables in the heating and cooling sector, where a large untapped potential for further decarbonisation still exists<sup>75</sup>.

## 5

# Innovation in the construction sector

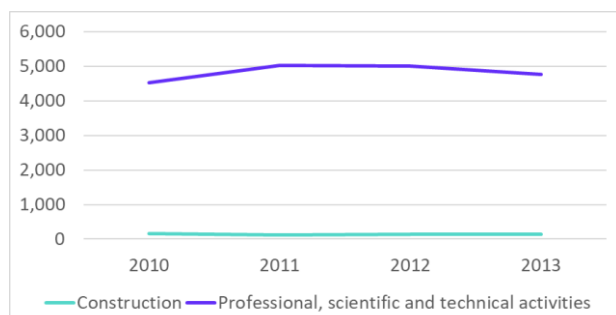
## Innovation performance

According to the European Innovation Scoreboard 2019, France is categorised as a Strong Innovator, with increased innovation performance in comparison to the EU-28 average<sup>76</sup>.

Its performance increased by 3.9% in comparison to the 2011 level<sup>77</sup>. The country's relative strengths lie in finance and support, human resources, innovators, foreign doctorate students, lifelong learning, and Venture capital expenditures. Conversely, its relative weaknesses lie in firm investments, intellectual assets and innovation-friendly environment<sup>78</sup>.

Overall, **business enterprise R&D expenditure (BERD)** in the broad construction sector has shown a positive trend, increasing by 4.7% between 2010 and 2013. Specifically, in professional, scientific and technical activities, BERD grew from EUR 4.5 billion to EUR 4.8 billion between 2010 and 2013<sup>79</sup>, representing a 5.3% increase. Conversely, there was a decline from 2010 to 2013 in the narrow construction sub-sector where BERD decreased from EUR 165 million to EUR 147 million, a 11.3% drop. Yet, these levels are still higher than in 2008.

Figure 9: Business enterprise R&D expenditure (BERD) per construction sub-sector<sup>80</sup> in France between 2010 and 2013<sup>81</sup> (EUR m)



Source: Eurostat, 2019.

In parallel, the total **R&D personnel** (full-time equivalents – FTE<sup>82</sup>) in the broad construction sector also experienced an increasing trend. In line with the positive evolution of the BERD, the professional, scientific and technical activities sub-sector reported the highest FTE, which grew from 41,604 in 2010 to 44,012 in 2013 (+5.8%). Conversely, the total FTE in the narrow construction sub-sector decreased by 37.6% during the same period, from 1,835 in 2010 to 1,145 in 2013.

In recent years, the number of **construction-related patent applications** has declined, after 381 patents in 2010. This number hence decreased by 6.8% to reach 355 patents filed in the European Patent Office (EPO) and United States Patent and Trademark Office (USPTO) in 2018. Nonetheless, this still represents a 4.4% increase in comparison to 2017 levels.

According to the 2019 EU Industrial R&D Investment Scoreboard, only three French construction-related firms rank among the top 1,000 EU companies by R&D (industrial sector ICB-3D)<sup>83</sup>.

These include Saint-Gobain, world leader in the habitat and construction markets, which was the highest-ranking French Construction and Materials (C&M) firm (74<sup>th</sup> position), with an R&D expenditure of EUR 460.0 million in 2018/2019<sup>84</sup>. It is followed by Bouygues (208<sup>th</sup>) and Tarkett (508<sup>th</sup>). The PACTE law (*plan d'action pour la croissance et la transformation des entreprises*) includes six measures that aim to incentivise companies to innovate and to facilitate collaboration between public research and private sector. These measures include notably the creation of a EUR 10 billion investment fund focusing on disruptive innovations, created in January 2018.

## Eco-innovation and digitalisation

According to the European Commission Digital Economy and Society Index (DESI) 2019, France ranks 15<sup>th</sup> out of the 28 EU Member States, an improvement compared to 2018 DESI rank of 16<sup>th</sup><sup>85</sup>.

The country improved its performance in four out of five dimensions. The largest improvement was observed in the Connectivity dimension (still continues to be the country's main weakness due to limited broadband coverage) followed by the Digital public services dimension, primarily driven by strong uptake of e-government services, availability of online business services and open data. France scored its highest rankings in the Human capital dimension (due to high shares of female ICT specialists and digital skills levels at par with the EU-28 average), and Integration of digital technology dimension (as a large proportion of French companies share and analyse information electronically)<sup>86</sup>.

Despite several reforms and the introduction of the 2015-2020 national strategy for ecological transition to sustainable development, France scored below EU-28 average, ranking 13<sup>th</sup> in the Eco-innovation composite index. While the country is in line with EU-28 averages when it comes to eco-innovation inputs, eco-innovation outputs, resource efficiency outcomes and socio-economic outcomes, it scores last in the innovation activities<sup>87</sup>.

The **Scientific and Technical Centre for Building** (*Centre Scientifique et Technique du Bâtiment - CSTB*) is in charge of delivering the authorisations to develop innovations on the market. It has improved the processes, giving more opportunities to SMEs to implement innovations in the construction market. Its technical evaluation costs EUR 10,000 and the process duration has been reduced from 18 to 9 months on average. The CSTB also set up a partnership with Bpifrance, a bank specialised in the support of innovative SMEs. This partnership aims to provide innovative construction SMEs with better financial and technical support. Indeed, innovation is a key aspect of the strategy of construction SMEs, with 34% of companies having already implemented some innovations over the past years, and 61% declaring their intention to do so in the near future<sup>88</sup>. The CSTB has also launched

in October 2017 an accelerator to support innovative start-ups in the construction sector. Its aim is to foster viable technological advances by providing specific scientific and strategic advices<sup>89</sup>.

For instance, Syntec-Ingénierie has launched an "Engineering Accelerator" which is an innovative initiative carried out by Bpifrance and ATLAS that supports 21 pioneering engineering companies in the industrial, construction, environmental and geotechnical sectors to stimulate the growth of engineering companies and fully develop their innovation potential, their competitiveness and their ability to project themselves internationally.

The government supports innovation in the construction industry through various programmes, under the framework of the Construction Revival Plan. The **Building Digital Transition Plan** (*Plan pour la Transition Numérique dans le Bâtiment - PTNB*) was launched in 2015 for a duration of three years, to support the adoption and deployment of digital technologies in the construction sector, with a particular focus on BIM. Funding of EUR 20 million was allocated for this initiative<sup>90</sup>. This transition plan is based on three pillars aiming to incentivise companies, to offer support in upskilling and to foster trust. In 2018, an annual survey reported that on average 35.0% of surveyed professionals have started using BIM in their projects. Specifically, 35.0% of the project owners, 45.0% of designers and 24.0% of contractors have adopted BIM in their projects. Still, more progress needs to be made. About 65.0% of the surveyed professional state that they do not have sufficient knowledge about BIM with 53.0% of the professionals stated they require a short-term training in BIM. Overall, under its digital transition plan for buildings, France is aiming to generalize adoption of BIM by 2022 through voluntary commitments of the stakeholders involved<sup>91</sup>.

With regards to incentivising companies, the PTNB launched the project '*Atelier BIM Virtuel*' (ABV), aiming to use BIM level 2 to perform a simulation of the construction of existing dwellings already built without using BIM, to compare the two approaches and derived good practices and lessons learnt<sup>92</sup>. Moreover, to support companies in upskilling their employees, the PTNB has developed pedagogical tools to facilitate the development of trainings. Finally, the PTNB defined and implemented a strategy to promote the standardisation of BIM



among construction actors. The latter aimed to create a level-playing field and common grounds on which the usage of BIM can take off<sup>93</sup>. Building on this, the government recently introduced a BIM plan 2022, “*Plan BIM 2022*”. This plan has been signed by the construction industry and aims to support the shift towards digital construction. The government granted EUR 10 million as part of it<sup>94</sup>.

**France published its first roadmap to becoming a circular economy in April 2018, with creating new employment opportunities through 300,000 new jobs. It is expected that this roadmap would reduce resource use and consumption by 30.0% by 2030 and curtail generation of non-hazardous waste by half by 2025, as compared to 2010. France also aims to be fully able to recycle its plastic waste by 2025<sup>95</sup>.**

Lastly, France is chairing the EU BIM Task Group since January 2019, which aims to support EU Member States to foster the implementation of BIM in the construction sector through public procurement, and beyond.

Moreover, seven professional organizations representing the construction sector (CINOV, CNOA, Syntec-Ingénierie, FSIF, EGF BTP, FEDENE and SBA) have come together to produce, in a two-year time, a framework reference called BIMFORVALUE to better define the different usages of BIM and its added value to the end-client.

Nearly fifty experts, from these seven organisations, have come together to build this open access tool available to all professionals with the objective of supporting them throughout the life cycle of their projects and for a better control and integration of BIM in France.

On the Infrastructure activity, the MINnD National Project, a collaborative research project, was launched in 2014 to promote the development of BIM for infrastructures by improving the structuring

of project data in order to share and exchange more efficient information. MINnD mobilises a large number of actors involved in design, construction and operation of infrastructures.

**Together with the private sector and the academia, the French government created the “Chaire Construction 4.0” group in 2018, with the objective to lead the digital transformation of the construction sector, and improve its productivity<sup>96</sup>.**

Overall, these efforts are particularly relevant, given that only 13% of respondents to a recent survey declared using BIM regularly in their operations. However, there are signs of improvements, as this number stood at 11% a year earlier<sup>97</sup>.

**The levels of adoption of digital technologies and e-commerce in France is well below EU-28 average. In fact, SMEs have a lower adoption level compared to their larger counterparts. For instance, only 15.0 % of SMEs sell online as compared to nearly 44.0 % of large enterprises<sup>98</sup>.**

Since 2018, France has launched various initiatives to address its digital-related challenges. These include measures announced under the plan to fight digital exclusion (*Plan National pour un Numérique Inclusif*), digital training related funding commitments under its investment plan (*Plan d’investissement dans les compétences*), a national initiative for the digital transformation of SMEs and micro-enterprises (*France Num*), a national artificial intelligence strategy and several other projects for the modernisation of public services through digitisation<sup>99</sup>. Initiated in October 2018, *France Num* aims to promote digital transformation among French businesses. It intends to provide finance loans, up to a total of EUR 1.0 billion, to SMEs and micro-enterprises through a EUR 30 million guarantee scheme financed by the French government, using EU funding<sup>100</sup>.

## 6

# National and regional regulatory framework

## Policy schemes

The **Zero-Interest Loan Programme** (*Prêt à Taux Zero – PTZ*) supports people who want to build or buy their first new dwelling, by granting them a zero-interest loan in the form of partial financing. The PTZ can also finance the purchase of an existing dwelling requiring major works, thus making it fiscally equivalent to a new build, as well as the conversion of a non-residential unit into a housing unit. It finances up to 40% of the cost of the transaction in question (which depends on the location of the dwelling and the number of people occupying it), and its amount can range between EUR 40,000 and EUR 138,000. The deferral period, during which the PTZ does not need to be repaid amounts to 15 years, depending on the income, and the repayment period varies between 10 and 15 years<sup>101</sup>. The budget allocated for the PTZ in 2018 amounts to a maximum of 1.42 billion with an expected 108,000 loans distributed. In comparison, in 2016, 114,943 loans were granted<sup>102</sup>.

The new law limits the amount of the PTZ co-financing to 20% for new dwellings. As a result, the number of PTZ given in 2018 was 30,000 less than in 2017.

**Contrary to what was initially announced by the government, the PTZ for existing dwellings will still be available for areas outside of urban areas. That said, the programme is planned to be abolished in 2021, under the new law<sup>103</sup>. This may impact negatively the construction sector.**

To boost investments in rental properties, the **Pinel law** was introduced in 2014. It offers a tax reduction for people investing in the purchase of a new property, provided that it is rented out for at least six years, up to a maximum of 12 years. Tax

reductions range from 12% of the amount of the investment in case the property is rented for six years. This goes up to 18% if the rental period is nine years and 21% for a 12-year rental commitment. The annual revenues of applicants should be between EUR 27,136 and EUR 115,851, depending on the location of the dwelling and the number of occupants, with the maximum value of the investment amounting to EUR 300,000 per year per person (and EUR 5,500 per m<sup>2</sup>)<sup>104</sup>.

**The Pinel scheme, initially applying to purchases until December 2016, was extended until 2021, under the new budget law. However, it will be only applicable for purchases in areas with a tight property market<sup>105</sup>.**

Furthermore, the **Social Access Loan** (*Prêt d'accession sociale – PAS*) aims to facilitate access to housing for low-income households by financing the construction or purchase of the primary dwelling. The PAS can also support renovation works on the dwelling with a minimum cost of EUR 4,000. Contrary to the PTZ, the PAS finances the entire cost of the transaction, without requiring beneficiaries to invest their own resources. It can be reimbursed over a period ranging from 5 to 25 years, with the possibility to extend it to 35 years<sup>106</sup>. The conditions of eligibility for the PAS have been harmonised with the PTZ to simplify their parallel use.

To increase the supply of new intermediate dwellings and social housing, the **Revival Plan for the Construction Sector** resulted in the introduction of various measures. Concerning intermediate dwellings, i.e. housing for households whose revenues are too high to benefit from social housing but too low to access properties on the private market, the government foresees the

construction of 35,000 such dwellings by 2019. The rents of intermediate dwellings are 15-20% below market price, with their purchase prices also being lower. The construction of 13,000 intermediate dwellings will be financed by a dedicated EUR 1 billion State Investment Fund. Another 10,000 will be financed through the Intermediate Housing Fund (*Fonds de logement intermédiaire* – FLI), with the remaining 12,000 being funded by the SNI group, the real estate subsidiary of the Caisse des Dépôts<sup>107</sup>. In 2015, a EUR 500 million loan was granted by the European Investment Bank (EIB) under the Investment Plan for Europe, complementing the EUR 900 million increase in the capital of the SNI group<sup>108</sup>.

Moreover, the **Solidarity and Urban Renewal Act** (*Loi SRU - Solidarité et de renouvellement urbain*) places the obligation on municipalities to achieve a 20-25% share of social dwellings in the housing stock by 2025. In case of non-compliance with these provisions, as of 2015, the penalties incurred by the municipalities have been increased. Furthermore, a new national fund (*Fonds national des aides à la pierre* – FNAP) was set up in 2016 to finance the construction of social housing units through a EUR 500 million allocation<sup>109</sup>.



Under the budget law 2018, the VAT on the construction of new social housing was increased from 5.5% to 10%, to be borne by the providers of social housing.

In fact, rental prices of social housing are expected to decrease in order to compensate the reduction of the **Personalised Housing Aid** (*Aide personnalisée au logement* - APL). The APL was previously granted in order to reduce rental payments or loan repayments for social housing, whether old or new. Under the new law, the amount of APL paid will be progressively reduced and its eligibility restricted to old properties in tight property markets, for the government to save EUR 800 million in 2018 and EUR 1.5 billion in 2020.

In addition, the **law on changes in housing, land management and digital technology** (ELAN) was voted in the Parliament in 2018. The law aims to simplify building standards, improve access to housing, especially for the most vulnerable, promote the renovation of buildings and support

communities in revitalizing their territories<sup>110</sup>. This law includes the implementation for several projects, including the Large Urban Planning Operation - GOU (*Grande Opération d'Urbanisme*), the Land Management Partnership Project - PPA (*Projet Partenarial d'Aménagement*) or the Innovation Permit (*Permis d'Innover*), which is intended to facilitate the growth of the Greater Paris Region and the organisation of the Olympic and Paralympic Games in 2024<sup>111</sup>.

In addition, the ELAN law contributes to the consolidation of the various social housing construction organisations. It also aims to facilitate access to property for tenants. Its ambition is to increase the number of social housing sales from 8,000 to 40,000 per year.

The idea is that the sale of social housing would finance the construction and renovation of other housing<sup>112</sup>. The law also includes punitive measures to fight against 'slum landlords' extensively developed. The monitoring of abusive claims against urban planning, as well as the definition of decent housing have also been revised. According to the French Building Federation, the ELAN reform may on the long term (from 2020 onwards) boost the construction of social housing.



In April 2019, the French government passed an important law - the 'Action Plan for Companies' Growth and Investment' (*PACTE – Plan d'Action pour la Croissance et la Transformation des Entreprises*)<sup>113</sup>.

Among other things, *PACTE* law will facilitate in registration of companies and replacement of multiple physical counters with one online platform. '*Bpifrance Creation*' will take over specific responsibilities of the Agency for Entrepreneurs and the French Public Bank CDC (*Caisse des Dépôts*) relating to supporting and keeping future entrepreneurs informed<sup>114</sup>. The *PACTE* law will also reduce the costs and delays of judicial liquidation for all companies, with less than five employees, with turnover less than EUR 750,000. It is also forecasted that judicial liquidation for firms, with no employees holding less than EUR 5,000 in assets, may also be abolished. Several other measures were also initiated by the French government.

Companies were encouraged to invest in innovation through tax incentives wherein companies can depreciate a total of 140.0% of the amount used for productive investment on an approved list and deduct the same from their taxes<sup>115</sup>.

## Building regulations

The main piece of legislation governing construction activities in France is the **Construction and Housing Code** (*Code de la construction et de l'habitation*). It sets out general provisions related to the construction and renovation of buildings; energy and environmental performance; fire protection; heating, water supply and building repairs; real estate development, leases and sale transactions; housing policy and social housing<sup>116</sup>.

The French construction sector is heavily regulated across all activities (planning, construction products, building, etc.), with the regulatory environment consisting of around 4,000 different standards in 2014<sup>117</sup>. In this context, one of the main priority areas of the Construction Revival Plan is the simplification of construction and urbanism regulations, so as to decrease construction costs and accelerate the construction of new dwellings whilst maintaining the requirements for high-quality constructions. 50 simplification measures have been enforced across areas such as fire safety, wellness, seismic and technological risks, power and communication networks, termite fighting, thermal performance, building access and elevators<sup>118,119</sup>. Moreover, the modernisation of urbanism regulations under the Plan will reduce the time required to process appeals from 3 years to 18 months and cut by a third all procedural delays<sup>120</sup>. Additionally, the new government has also made the commitment not to increase the number of norms and regulations in the construction sector in the five coming years<sup>121</sup>.

The ELAN law adopted in November 2018 also brought several changes in terms of standards in the construction sector. These include i.e.:

- Focus on housing access for disabled people: while buildings do not have to be 100% accessible for disabled people anymore, 20% of housing must integrate accessibility standards, while the other buildings must be able to evolve (“evolutif”), i.e. they should be able to be

transformed easily to favour access for disabled people.

- Focus on prefabricated construction material: the government now provides a definition of prefabricated materials, to foster their integration in the construction industry.
- Focus on building permits: The ELAN Law makes the appeal periods shorter. In addition, the supervision of appeal procedures is now more pronounced. The purpose of these measures is to combat the immobilization of constructions affected by abusive remedies (see Decree No. 2018-617 of 17 July 2018 amending the Code of Administrative Justice and the Urban Planning Code.)

In addition, the ELAN law favours the dematerialisation of administrative procedures through the creation of the digital lease, making procedures simpler for the tenant. The latter has more information easily accessible, and sees his steps simplified.

## Insurance and liability related regulations

There are two types of liability regimes in France, namely the general civil liability regime and specific liability regime. The latter includes three main liability types.

The perfect completion warranty (*garantie de parfait achèvement*) covers all defects of any kind within the year following the delivery of the construction, and only building contractors are subject to it. Under the warranty of good running (*garantie de bon fonctionnement* or *garantie biennale*), claims can be made within two years from the day of acceptance of the works, with regard to damage to plant and machinery, obliging the builder to replace any non-working equipment. The structural warranty, also known as decennial liability (*responsabilité décennale*), makes the builder responsible for all structural damages that can affect the solidity of the building or make the use of the building impossible for its initial purpose. Under this liability, claims can be brought forward within a ten-year period following the date of acceptance<sup>122</sup>.

Two compulsory categories of insurance are in place, covering professional construction activities (such as civil liability insurance for contractors and professional insurance for architects, experts and engineers) in case of construction defects (*dommages-ouvrage*) and the decennial liability

insurance, taken out by contractors to cover the protection of certain goods<sup>123</sup>. Moreover, widespread complementary insurances are also taken out, such as Contractor's All Risk and professional indemnity insurance<sup>124</sup>.

## 7

# Current status and national strategies to meet Construction 2020 objectives

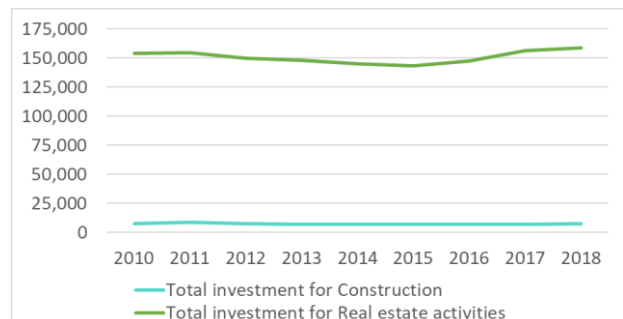
## TO 1 – Investment conditions and volumes



Total investments by the broad construction sector<sup>125</sup> increased by 2.4% between 2010 and 2018.

Specifically, **investments by the narrow construction sub-sector** increased by 2.4% between 2010 and 2018, from EUR 7.3 billion to 7.5 billion. Similarly, **investments by real estate activities sub-sector** experienced a slight growth of 3.0% over the 2010-2018 period. In terms of investments in intangible assets, the narrow construction sub-sector invested EUR 1.2 billion in **intellectual property products** in 2018, while the real estate activities sub-sector invested EUR 444.2 million, the highest values since 2000. At the same time, **investments in machineries and equipment** increased by 13.0%, from EUR 2.4 billion in 2010 to EUR 2.8 billion in 2018 in the narrow construction sub-sector. Conversely, it declined substantially in the real estate activities sub-sector – by 51.5%, going from EUR 1.4 billion to EUR 660.8 million over the same period.

Figure 10: Investments by the French broad construction industry between 2010 and 2018 (EUR m)



Source: Eurostat, 2019.

Total **investment in construction**<sup>126</sup> experienced an increase since 2010, with a strong growth from 2015 onwards (Figure 11). Specifically, investments in dwellings experienced a 6.8% growth over the 2010-2018 period. Likewise, investments in non-residential constructions and civil engineering have slightly increased, by 2.2% respectively over the same period. In absolute terms, investments in the broad construction sector totalled EUR 287.5 billion in 2018 (+15.7% since 2010), out of which EUR 150.6 billion was invested in dwellings (+19.7% since 2010) and EUR 137.0 billion was devoted to non-residential sub-sector and civil engineering<sup>127</sup> (+11.7% since 2010).

Total investments in the broad construction sector between 2010 and 2018 (in EUR billion)

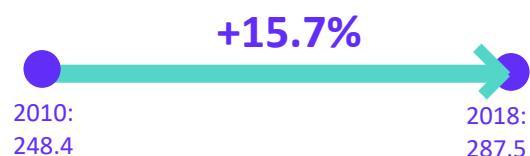
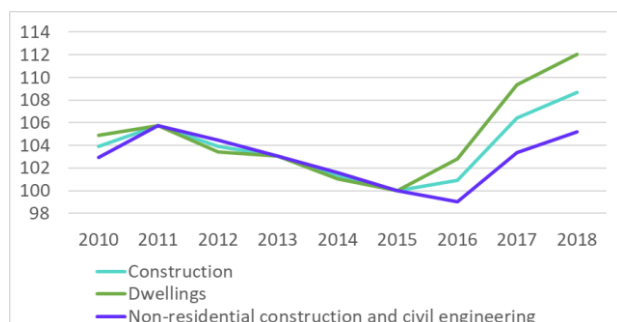




Figure 11: Investment index in the French construction sector between 2010 and 2018 (2015=100)



Source: AMECO, 2019.

**Total inland infrastructure investments<sup>128</sup> as a share of GDP marginally decreased between 2010 and 2017, from 1.0% to 0.8%. As a result, both infrastructure investments and maintenance investments decreased by 4.8% and 4.5% respectively over the same period.**

Infrastructure investment increased in the air, rail, inland waterways and sea infrastructure by 5.6%, 77.2%, 18.1% and 66.0% respectively over the 2010-2017 period. Investments in the road infrastructure, which represent 47.0% of the total investments in 2017, decreased by 35.7% (from EUR 14.5 billion in 2010 to EUR 9.3 billion in 2017)<sup>129</sup>. In parallel, investments in infrastructure maintenance remain at a level close to the 2010's. They decreased in the rail and road sectors, by 6.0% and 2.5% respectively between 2010 and 2017<sup>130</sup>.

Total investment in the rail infrastructure between 2010 and 2017

↑ 77.2%

Total investment in infrastructure maintenance between 2010 and 2017

↓ 4.5%

**Household renovation spending** has seen an increasing trend since 2010. Indeed, it reached EUR 19.8 billion in 2018, 20.8% above the EUR 16.4 billion registered in 2010. Renovation spending continues to account for 1.3% of households' disposable incomes, significantly higher than the EU-28 average which stood at 0.8%. This could be linked to the many renovation incentives provided by the French government. The latter identified the

energy renovation of buildings as one of the national priorities.

Households' renovations spending between 2010 and 2018

↑ 20.8%

With regards to the railway network, France is currently implementing an ambitious reform 'Law for a New Railway Pact'. Launched in 2018, the law aims to improve the governance and viability of France's national railway company (*Société nationale des chemins de fer français, SNCF*) by opening it up to external competition. The legal monopoly of *SNCF* on rail passenger transport is forecasted to end for high-speed trains and for regional transport by December 2020 and 2023, respectively. Railway stations are also scheduled to be transferred from the railway undertaking '*SNCF Mobilités*' to the infrastructure manager '*SNCF Réseau*' to facilitate the implementation process<sup>131</sup>.

**To improve transport and mobility infrastructure, France is planning to invest EUR 13.7 billion until 2023. This represents a 40.0% increase compared to the previous five-year period<sup>132</sup>.**

The priority investment areas as highlighted by the country in its investment plan includes the maintenance and modernisation of road, rail and river networks; the desaturation of large railway nodes; the opening up of medium-sized towns and rural areas; the development of clean and shared mobility solutions for daily usage and finally, the modal shift in freight<sup>133</sup>. The European Semester Country Report further highlights that "developing further the rail connectivity with Spain could help ensure the circulation of trains through the Trans-European Network for Transport (TEN-T) Atlantic and Mediterranean corridors"<sup>134</sup>.

Several other projects are also being undertaken simultaneously to develop the French transport infrastructure. Recently, Alstom has won a EUR 430.0 million contract for the renewal and automation of *Marseille* metro. The project will be financed by *Métropole Aix-Marseille-Provence* with new trains expected to start running in early 2024. The Turin-Lyon high-speed railway project also saw some advancement in its implementation after the Italian prime minister reaffirmed his support for the project. The EUR 26.0 billion project aims to align

French national network with Trans-European Transport Network's Mediterranean corridor<sup>135</sup>.

The One consortium, including *Egis, Ingérop and ISL*, also secured a contract for two main sectors of the EUR 5.1 billion Seine-Nord Europe Canal project in France. Further, since April 2019, *SNCF* Network has been engaged in completing major works on Phase 1 of the EUR 320.0 million Paris-Troyes railway line electrification project in France. The entire project is due to be completed by September 2021<sup>136</sup>.

**France has also undertaken a 'Grand Paris Express' programme to expand the country's infrastructure landscape. The EUR 35.0 billion expansion plan is designed to expand Paris' existing metro network, double the current track length and alleviate congestion in the city centre while providing enhanced transport connections in preparation for the 2024 Olympic Games<sup>137</sup>.**

In September 2017, the new government presented its Investment Plan (*Grand Plan d'Investissement*), which will be implemented over the 2018-2022 period. Of the EUR 57.1 billion investments planned, EUR 20.0 billion will be dedicated to the construction sector. In fact, EUR 9.0 billion is allocated to the thermal renovation of buildings, EUR 4.1 billion to the renovation of infrastructure and sustainable transportation, while EUR 7.0 billion will go to the development of renewable energies. France also benefits from substantial EU investments. It was allocated EUR 806.1 million from the European Regional Development Fund (ERDF) for 2014-2020 for Network Infrastructure in Transport and Energy<sup>138</sup>, as well as EUR 6.0 billion and EUR 2 billion for energy and transport projects, respectively, following the first rounds of calls under the Connecting Europe Facility<sup>139</sup>.



**Since 1959, the EIB Group has financed 1,205 projects in France, involving an investment of EUR 145.3 billion<sup>140</sup>. France is also one of the top beneficiaries of the Investment Plan for Europe, with the EIB Group financing for EUR 7.2 billion of new investments in 2018 alone<sup>141</sup>.**

Of this financing, EUR 1.0 billion is dedicated to supporting the modernisation and energy-efficient

rehabilitation of 25,000 social housing<sup>142</sup>. In particular, the EIB, under the Investment Plan for Europe, made a loan of EUR 500.0 million to Solinter Actifs 1, a company financing affordable housing. This is expected to finance 13,000 affordable housing units to be built by 2019 with rents 15-20% below market prices. Moreover, this would lead to the creation of 16,900 jobs in the construction and public works sector<sup>143</sup>. More recently, the EIB committed a EUR 37.5 million to foster energy renovation in buildings both for businesses and private consumers<sup>144</sup>.

In 2018, the EIB Group invested EUR 528.8 million in infrastructure, EUR 2.3 billion in SMEs financing, EUR 1.7 billion in environment development and EUR 2.5 billion in innovation investment<sup>145</sup>. In parallel, France is also one of the largest beneficiaries of funding from the European Fund for Strategic Investments (EFSI)<sup>146</sup>. The total financing under EFSI amounted to EUR 15.0 billion in December 2019, aiming to trigger an additional investment of EUR 77.7 billion. Under the Infrastructure and Innovation Window, 138 projects have already approved, amounting to EUR 12.0 billion and are set to trigger EUR 57.3 billion in total investments. Under the SMEs Window, 63 agreements have been approved involving a total financing of EUR 3.0 billion and are set to trigger investments of EUR 20.5 billion. It is expected that this would provide improved access to finance to about 239,955 SMEs and mid-cap companies<sup>147</sup>.

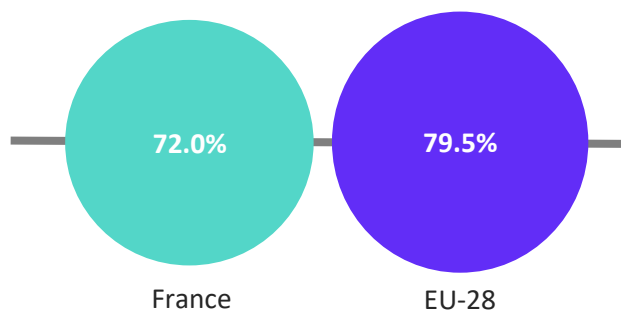
## TO 2 – Skills

The employment rate of vocational education and training (VET) graduates in France stood at 72.0% in 2018 (an increase from the 2017 level of 64.0%). This is nevertheless well below the 2018 EU-28 average of 79.5%. Participation of upper secondary students in VET was 39.9%, considerably below the EU-28 average of 47.8%<sup>148</sup>.

The French government introduced several initiatives to address the challenges faced in VET. One of the notable steps include increasing the financial incentives for apprenticeships<sup>149</sup>. The September 2018/771 Law restructured the system to support the supply and demand of apprenticeship. From 2020, apprenticeship centres will be eligible for funding based on number of signed contracts, with industry-defined cost coverage. Moreover, the age limit for

apprenticeship has been increased from 25 to 30 years. Apprentices below 20 years old will receive an increased salary, while those aged over 18 will get a monetary support of EUR 500 to pass their driver's license<sup>150</sup>.

Employment rate of vocational education and training (VET) graduates (in 2018)



**The 2018 VET reforms are being implemented in full speed, with *France Compétences*, the new National Skills Agency working on several fronts including modernisation of professional certifications. VET funding bodies have been restructured in 2019 into 11 Skills Operators (*Opérateurs de compétences*) responsible for funding apprenticeships, supporting employers to design certifications and anticipating skills needs while providing increased access to training<sup>151</sup>.**

There is also an increased emphasis on supporting career transition. From 2020, new professional development counselling providers will be selected in each region. Under *Pro-A* program, employees will be allowed to access a training program through an apprenticeship, while keeping their work contract and salary. Moreover, the skills investment plan is also financing innovative experimentation wherein increased support is provided for low-qualified jobseekers and NEETs (Not in Education, Employment or Training) at national and regional levels<sup>152</sup>.



**Upskilling and developing low qualified and unemployed people is an investment priority for the French government, in line with the 2016 CSR on upskilling pathways<sup>153</sup>.**

The implementation of Skills investment plan 2018-2022 (with an allocated budget of EUR 14.0 billion) also gained momentum in 2019. Launched in 2018,

the plan aims to provide new forms of online training to unemployed, uneducated and low-qualified people. Other flagship measures are also being implemented to develop IT skills. These include *Grande école du numérique*, involving an investment of EUR 77.0 million for trainings towards IT jobs through the label IT advanced school, testing of innovative approaches to offer tailored pathways to low-qualified unemployed youth and strengthening of the training component of subsidised contracts<sup>154</sup>.

The VET system in France still faces challenges linked to the effectiveness (in terms of access and labour market outcomes) and efficiency (in terms of financing and governance)<sup>155</sup>. These issues affect unequally all regions, highlighting regional quality divergences. Moreover, access to continuous VET is difficult for the unemployed and lower skilled, as well as for employees of small companies. To respond to these challenges, the French government adopted in 2018 VET reform to enable all individuals (and the most vulnerable) to upskill or reskill in order to build their professional career and protect it against labour market changes and unemployment risks<sup>156</sup>.

Regarding the construction sector, it is estimated that 1.3 million employees and craftsmen will require to be upskilled by 2020, in areas such as digital technologies or energy performances. Consequently, 12,000 trainers will need to be trained<sup>157</sup>. This includes managers and experts in specific areas (linked to the digitalisation of the sector)<sup>158</sup>. France has therefore put in place initiatives to support training on these aspects. Under the framework of the Construction Revival Plan, the Action Programme for Construction Quality and Energy Transition (*Programme d'Action pour la qualité de la Construction et la Transition Énergétique* - PACTE) was launched in 2015 by the Ministry of Housing with the aim of supporting innovation and training among construction companies. Namely, the PACTE seeks to foster the development of the energy efficiency skills of construction professionals so as to strengthen the overall quality of French constructions. With a total budget of EUR 30 million until 2018, the programme is structured around three main axes, namely supporting the development of skills, providing practical and modern tools adapted to the needs of professionals and strengthening cooperation

among regions regarding the actions and measures to build the skills of construction professionals<sup>159</sup>. The programme hence provides courses on energy performance, social housing.

Several other initiatives were also introduced to provide training on energy efficiency techniques. The **FEE Bat** initiative, set up through an agreement between various industry actors (*Électricité de France*, the Ministry of Housing, various trade associations, etc.) offers training courses on thermal renovation of existing buildings, covering both technical implementation aspects, as well as those related to the overall energy performance of buildings, so as to allow participants to provide relevant advice to customers in terms of energy savings. FEE Bat has trained over 162,000 professionals since 2008, and aims to train a further 170,000 between 2014-2017, through its allocated budget of EUR 50.0 million<sup>160</sup>. In line with the Renovation Plan announced by the government, the FEE Bat enlarged its target support teachers and trainers for the 2018-2020 period. Similarly, **Qualit'EnR** offers short training courses for construction professionals to provide them with the necessary skills for the installation of renewable energy systems (such as photovoltaic panels, solar-powered heating systems, biomass-powered heating systems, etc.)<sup>161</sup>.

**In order to stimulate the adoption of digital technologies in the construction sector, the Building Digital Transition (PTNB) initiative also seeks to improve the digital skill-base of construction professionals.**

To this end, the PTNB coordinates several actions. These include the assessment of the offer for BIM trainings and benchmarking of international initiatives, aiming to provide construction professionals with a comprehensive picture of all training opportunities available and thus guiding them in their digital transition, but also to provide training centres with the opportunity to further align their courses with the needs of the industry<sup>162</sup>.

Under the PTNB, other initiatives include the setup of a call for projects with a budget of EUR 1.0 million to finance regional initiatives. BIM'Form, one of the project funded under the call for project, aimed to train 150 BIM instructors and developed free online courses (MOOC) on BIM. Furthermore, to offer trainings on BIM that are adapted to the various

stakeholders, a competency dictionary was developed. The objective is to offer better-targeted and individualised courses on BIM by better understanding the competences and learning needs of the learners<sup>163</sup>.

Last, the French government, following recommendations developed by the OECD developed some initiatives targeting the upskilling of migrant workers. Through the call for 2019 national project ("*Appel à projet national 2019*"), migrants benefit from a programme facilitating their social and economic integration, notably by participating in language and vocational courses<sup>164</sup>. In addition, some regional authorities together with the construction sector also support the development of vocational training targeting migrants<sup>165</sup>. However, more needs to be done to facilitate the hiring process of migrant workers<sup>166</sup>.

### TO 3 – Resource efficiency / Sustainable construction

The building sector accounted for 44.9% of France's final energy consumption in 2015 and emitted over 123 million tonnes of CO<sub>2</sub> per year and is therefore a priority of the government when addressing energy efficiency<sup>167</sup>.

In this context, the **2012 Thermal Regulations** (*Réglementation Thermique 2012 - RT*) came into force in 2012 to promote the construction of low energy buildings, the reduction of the energy use of existing buildings by 38.0% by 2020 (by 40% in public buildings) and the energy efficient renovation of social housing. The RT 2012 limits the primary energy use to an average of maximum 50kWh/m<sup>2</sup>, and is expected to generate 1.68 Mtoe of energy savings by 2020<sup>168</sup>. In addition, the RT 2012 seeks to develop technological and industrial innovation in the global construction supply chain; improve the energy quality of buildings, regardless of the type of energy used; and find a technical and economical balance of technologies used for heating and hot water production<sup>169</sup>.

To further strengthen the RT 2012, two new energy labels were created, namely the **High Energy Performance (HPE)** and the **Very High Energy Performance (THPE)**. The HPE foresees a 10% reduction in the consumption of primary energy, whereas the THPE requires the building to achieve a 20% reduction. These pave the way towards



positive energy buildings (i.e. buildings which produce more energy than they consume) and are applicable to all building permits for new buildings<sup>170</sup>.



**The Energy Transition Initiative (Transition Énergétique) supports energy efficiency upgrades of the public building stock and private housing, among other objectives<sup>171</sup>.**

The Energy Transition also includes measures focusing on the citizens, such as a communication campaigns to inform about the options of sustainable dwelling renovations and the related financial gains<sup>172</sup>. The Energy Transition was financed through a EUR 14.0 billion budget for 2017 and aims to create 75,000 new jobs in the construction sector<sup>173</sup>. Following the newly amended EU Directive on Energy Efficiency, the French government will further transpose it in its legal framework in 2020. As part of this, a new regulation, the RE 2020 is expected to make buildings more energy efficient, by shifting the focus of the policy on limiting building energy consumption to limiting building Greenhouse Gas emissions.

The **Housing Energy Efficiency Renovation Plan** (*Plan de rénovation énergétique de l'habitat - PREH*), launched in 2013, aims to stimulate the renovation of the existing housing stock and enhance energy efficiency<sup>174</sup>. Another objective is to renovate all residential buildings by 2025 who have an energy consumption over 330 kWh/m<sup>2</sup> per year. It provides the framework for a variety of support instruments, such as loans and tax reductions, both for low-income households as well as accessible to all income classes. Overall, since the inception of the Plan and up until end-2017, 450,000 buildings were renovated, including 105,000 of social homes.

**Adopted in 2017, the plan for the retrofitting of buildings (*Plan de rénovation énergétique des bâtiments*) outlines annual retrofitting target of 500,000 housing units by 2020, inclusive of 120,000 social housing units and 380,000 in private housing units<sup>175</sup>.**

Looking ahead, the government is currently conducting a public consultation to develop a new

Plan. The overall objective is to achieve carbon neutrality in 2050<sup>176</sup>. To this end, the country has already invested EUR 41.0 billion in 2017 in climate-related policies including EUR 20.0 billion for energy efficiency, EUR 6.6 billion for renewable energies deployment and EUR 10.0 billion for the construction and updating of sustainable transport<sup>177</sup>.

The **Energy Transition Tax Reduction** (*Crédit d'impôt pour la transition énergétique – CITE*) entails a 30% tax credit, up to a maximum of EUR 8,000 (16,000 for couples), on the expenditures incurred for energy efficient renovation works over a five-year period. Initially meant to end at the end of 2016, it was renewed until December 31<sup>st</sup>, 2018 and can be combined with other financial measures, such as the Zero Interest Eco-loan<sup>178</sup>. However, its scope and tax credit rate have been reduced for the year to come for some types of expenditures. Indeed, only renovation that would be most efficient in reducing energy consumption fall within the scope of the *CITE*. From 2019 onwards, the tax credit will become an in-cash benefit, so that beneficiaries can recoup some of the renovation expenses as soon as the construction works are completed<sup>179</sup>. The scheme provides a zero-interest loan of up to EUR 30,000 to finance at least two energy efficiency interventions, which can include insulation of roof, outside walls, windows and doors; installation of renewable energy-based heating or hot water production systems, etc. The maximum repayment period has been set at 15 years<sup>180</sup>. The Eco-PTZ is expected to achieve energy savings amounting to 0.19 Mtoe by 2020<sup>181</sup>. Likewise, the **Social Housing Eco-loan** (*Eco-prêt logement social - éco-PLS*) provides loans between EUR 9,000 and EUR 16,000 per dwelling for the renovation of 800,000 social dwellings until 2020<sup>182</sup>.



**Owners and landlords can benefit from a reduced VAT rate of 5.5% on interventions to improve the energy performance of their residence (both primary and secondary), provided that is older than two years.**

Eligible interventions include roof insulation, wall insulation, replacement of heating systems, etc. Conversely, the VAT rate applied to purchase of materials and labour costs amounts to 10.0%<sup>183</sup>.

The **National Housing Agency** (*Agence Nationale de l'Habitat - ANAH*) also grants financial support to low-income property owners to renovate dwellings, enhance energy efficiency and adapt them to disabilities. Under the **Living Better** programme (*Habiter Mieux*), the *ANAH* provides advice and a financial aid of up to EUR 10,000 to support renovation. The amount of support depends on the income of the beneficiaries, covering 35.0% and 50.0% of the renovation costs for moderate-income and low-income households, respectively. Furthermore, if the renovation works result at least in a 25.0% reduction in energy consumption, an additional premium can be obtained from the **Thermal Renovation Support Fund** (*Fonds d'aide à la rénovation thermique – FART*), which covers 10.0% of the incurred costs and amounts to EUR 2,000 and EUR 1,600 for moderate-income and low-income households, respectively<sup>184</sup>.

For 2018, a new financial aid has been introduced to support three types of renovation works in houses, namely, change in boiler or heating method, improvement of insulation of inside or outside walls, as well as improvement of insulation of the attic space. Depending on household income, the financial aid goes up to EUR 10,000 or EUR 7,000<sup>185</sup>. The budget of *ANAH* for 2018 has been set at EUR 799.2 million (compared to EUR 823.1 million in 2017) with the aim to renovate 104,000 dwellings (of which 75,000 energy saving renovations)<sup>186</sup>. In 2017, 81,000 residential buildings were renovated.

In 2018, an **Energy voucher** (*Chèque énergie*), which had been previously tested in four French departments, will be introduced across France. Under this initiative, 4.0 million low-income households will automatically receive a EUR 150 voucher to, inter alia, finance the energy consumption of households and/or to a lesser extent undertake minor renovation works<sup>187</sup>.

## TO 4 – Single Market



France reports a low performance with respect to the metrics of the EU-28 Single Market Scoreboard 2019.

France scores improved in terms of transposition of law deficit (0.5% compared to 0.2% last year) and average delay for overdue directives (4.2 months

compared to 4.3 months last year). However, most of the other indicators deteriorated compared to last year. Regarding infringements, the number of pending cases (32) and average case duration (46.1 months) is comparatively higher than 2017 metrics (34 cases and 40.5 months, respectively) and EU-28 averages<sup>188</sup>.

The country also scored below EU-28 average when it comes to the Internal Market Information System, trade integration in the Single Market for goods and services. In case of Internal Market Information System, despite France addressing its backlog of pending requests, the country's performance remained poor with all indicators scoring below the EEA (European Economic Area) average.

It performed moderately in Public Procurement, reporting some issues in terms of the Cooperative procurement (i.e. the proportion of procurement procedures with more than one public buyer), Missing calls for bids and Missing seller as well as buyer registration numbers<sup>189,190</sup>.

The French construction sector is generally compliant with the Services Directive (2006/123/EC), which aims to remove obstacles to the cross-border provision of services within the Single Market. In fact, France has not established horizontal authorisation schemes for construction service providers, since building control procedures offer a sufficient level of control, thus removing any associated regulatory burdens<sup>191</sup>. Furthermore, France adopted performance-based standards that facilitate mutual recognition of technical rules between Member States, like countries such as Spain, the United Kingdom and Greece. However, regarding the overall level of restrictiveness of building permit schemes, France is more restrictive in terms of mutual recognition, particularly with regards to insurance and liability requirements. Indeed, many cross-border service providers face difficulties in obtaining the national insurance products required by law to enter the French construction market. Namely, under the Spinetta Law, a specific liability insurance product offered mainly by national insurance providers should be held by contractors. This is in contradiction with the Services Directive<sup>192</sup>.





According to a recent report on illegal labour in France, over 516,000 foreign workers are currently in France in 2017, corresponding to almost 2% of the French workforce.

This represents a 46.0% increase from 2016. However, such rise might be partly explained by the introduction of the **professional identification card** in early 2016, which states the worker's identity, employer, social security, photo, company and worker's status, hence making it easier to gather national data on posted workers<sup>193</sup>. At the end of July 2018, 1.3 million workers got their identification card, out of a total of 1.6 million, including 81,000 posted workers<sup>194</sup>.

In 2016, the construction sector account for 27.0% of declared postings. However, there is often a high level of fraud and unfair competition associated with such high numbers of posted workers. Indeed, according to the French Building Federation, postings often result in abnormally low-priced offers, resulting in the collapse of prices and profitability issues for French companies. In order to ensure a fair competition between local construction firm and foreign enterprises, the Ministry of Labour and main representatives of the French construction sector signed a **national agreement** in 2016 to fight against illegal work and frauds arising from posting of workers, with the aim of improving health and safety on construction sites, ensuring the quality of construction and preventing social dumping<sup>195</sup>.

**Regarding the implementation of Eurocodes, all Eurocode parts have been published as National Standards, with National Annexes being published on all but 8 Parts (2 on EN 1993, 1 on EN 1997 and 5 on EN 1999).**

Moreover, 22 Eurocode Parts are compulsory for seismic and fire-resistant design, but there is no framework enforcing their use in public procurement. No other national standards are used in parallel with Eurocodes<sup>196</sup>.

## TO 5 – International competitiveness



France ranks 15<sup>th</sup> out of 141 economies in the 2019 Global Competitiveness Index, two positions above the 2018 ranking<sup>197,198</sup>.

According to the 2019 Small Business Act for Europe (SBA) Fact Sheet, the country's performance in terms of the internationalisation of its SMEs is in line with EU-28 average – despite a slight decrease in comparison to the 2017 indicators. France scores below average in regards with the percentage of SMEs exporting and importing with extra-EU countries; and in terms of Border Agency Co-operation. It ranks well when it comes to advance rulings and information availability for SMEs<sup>199</sup>.

**A new strategy for international export support was announced by the government in 2018. It targets four key objectives: (i) make France's regions a launch-pad for internationalisation based on Team France Export; (ii) develop simpler, more efficient export support; (iii) ensure greater proximity on the ground for access to public financing abroad; (iv) and ensure companies have employees trained for international trade, given that the success and sustainability of exports depend largely on the level of skills of employees<sup>200</sup>.**

To strengthen the internationalisation of SMEs, an action plan led by the Strategic Committee for Export has been set up, with the objective of supporting an additional 3,000 SMEs in their expansion abroad<sup>201</sup>. The strategy identifies seven main priority areas for export, including renewable energies and sustainable cities. The latter includes urban planning, architecture, engineering, construction, energy efficiency, eco-industries and urban services. Vivapolis is the umbrella brand aiming to group all French actors (companies, investors, policy-makers, universities, etc.) active in the field of sustainable cities and promote French expertise and know-how abroad. It organises international forums, B2B meetings business missions and conferences across countries such as Malaysia, Singapore, Ivory Coast, Turkey, Morocco and Brazil, giving participant companies the opportunity to network and secure business partners and contracts<sup>202</sup>. Vivapolis and its

members are involved in an eco-city project in the Chinese city of Wuhan, as well as sustainable city project in the city of Campeche in Mexico<sup>203</sup>.

Vivapolis works in close cooperation with Business France, the major supporter of the internationalisation of French firms, created in 2015 from the merger of the French Agency for International Business development (*Ubifrance*) and the Invest in France Agency (AFII). It provides market information to companies wishing to expand abroad, as well as B2B networking events across all continents and advertising and marketing advice. Moreover, financial support is provided through *Bpifrance*, which offers loans and guarantees for exporting companies. After taking over responsibility for the public export guarantee from COFACE in 2016, *Bpifrance* has increased the operational efficiency by re-allocating resources to more productive uses. This is evident from improvement in SME exports in 2018 (+1.1%), in line with increase in exports from other companies (+1.2%)<sup>204</sup>. Under the *Bpifrance*, the Export Credit can be granted both to French firms and to their international clients, and covers up to 85.0% of the export value defined in the contract. Credits to foreign clients range between EUR 5.0 million and EUR 25.0 million, whereas credits granted to French exporters range between EUR 1.0 million and EUR 25.0 million. Repayable over a period of 3-10 years, export credits are also covered by insurance at 95.0%<sup>205</sup>.

The French government has launched various initiatives to help modernise France's existing industrial base and make them more competitive in the global market. Some of these include 'Industry for the Future' policy framework, the 'French Tech' programme for innovative companies, the 'French Fab' programme for industrial companies and the 'Living Heritage Industries' (*Industries du patrimoine vivant*) programme recognising companies with expert craftsmanship and industrial excellence<sup>206</sup>.

Despite government's several on-going efforts, the lack of fluency in foreign languages, high production costs and unfavourable foreign markets regulations continue to remain some of the major obstacles to France's internationalisation<sup>207</sup>.

The current government started the implementation of an Action plan (*Plan d'action pour la croissance et la transformation des entreprises – PACTE*) with the aim to increase the number SMEs exporting from 125,000 to 200,000 in the next five years by strengthening the public and private support mechanisms for the internationalisation of SMEs and offering individualised advice<sup>208</sup>.

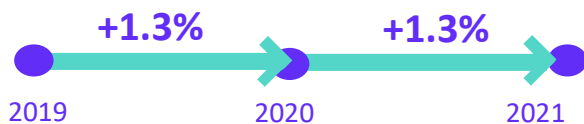
Following the launch of 'team France export' in 2018, most of the operators supporting SMEs have been merged at regional level, wherein the services have been updated and staff members specialised. The objective behind such consolidation is to increase the number of French exporting companies from 125,283 in 2018 to 200,000 by 2022 while taking advantage of economies of scale and better regional support<sup>209</sup>.

## 8

# Outlook

Following the improvement of the domestic demand, the country's **GDP** is forecasted to increase by 1.3% annually in 2019 and 2020, reaching EUR 2,371.8 billion.

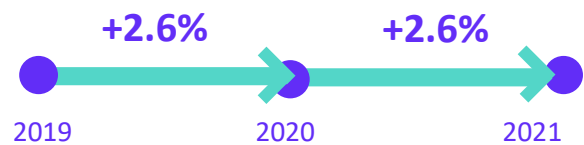
Expected GDP growth over 2019-2021



In line with the GDP growth, the broad construction sector is expected to grow, though at a moderate level. The volume index of **production** of construction, buildings and civil engineering will keep on progressing, increasing by 4.5, 2.2 and 7.3 percentage points between 2018 and 2020, respectively. While the production of residential buildings will slow down reaching an output of 0.5% in 2019, the production of non-residential buildings and civil engineering are expected to lead increase in production. As a result, the **turnover of the broad construction sector** is estimated to annually increase by 2.3% in 2019 and 2020, reaching EUR 483.1 billion.

The **total value added of the broad construction sector** to the economy is expected to increase by 2.6% both in 2019 and 2020, reaching EUR 173.7 billion. This will primarily be driven by increase in the value added by the real estate activities (+4.5% YoY for 2019 and 4.4% YoY for 2020) and the architectural and engineering activities sub-sectors (+4.2% YoY for 2019 and 4.3% YoY for 2020).

Expected total value added of the broad construction sector growth over 2019-2021



Consequently, the **number of persons employed** in the broad construction sector is also projected to reach 2,597,396 in 2019 (+2.4% YoY) and 2,659,044 in 2020 (+2.4% YoY). Most of this growth is predicted to come from two sub-sectors: real estate activities (+9.1%) and architectural and engineering activities (+8.7%) over the 2018-2020 period.

Number of persons employed in the narrow construction sub-sector over the 2018-2020 period

↑ 3.3%

Following the strong performance of **residential construction** in 2017, the residential construction market saw a slowdown in growth rate in 2018 due to a weaker economic environment, rising real estate and energy prices, lower public spending and declining tax exemptions.

Conversely, **non-residential construction** exhibited improvement in 2018 as evident by the increase in the construction of non-residential buildings. Looking forward, the growth rate of both residential and non-residential construction is expected to further decelerate due to prevailing uncertainty in the French economy and persistent unemployment rates<sup>210</sup>.

The **infrastructure sector** is expected to contribute significantly to the development of the construction market, fostered by the government's

EUR 57.3 billion Investment Plan. Transport infrastructure is set to be one of the main drivers, driven by the important projects like 'Grand Paris Express' expansion programme, liberalisation of SNCF along with other railway and metro projects, such as Turin-Lyon high-speed railway project, Paris-Troyes railway line.

The broad construction sector faces additional issues, which need to be carefully addressed in the years to come, to ensure its sustainable development. These include the labour and skill shortage; the construction costs which increase

faster than prices; and the downturn of the new residential market.

**Overall, the economic outlook for the broad French construction sector is moderately positive, supported by many EU financed investment projects. The current market trend suggests a slim growth in the housing market, partly mitigated by the better performance of non-residential buildings construction and civil engineering sub-sectors.**

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