



# European Construction Sector Observatory

Country profile **Austria**

November 2021



## In a nutshell

In 2020, Austria's GDP amounted to EUR 349.4 billion, exhibiting a 6.6% decline from the previous year. This also represents a 7.0% increase compared to the 2010 level (EUR 326.7 billion).

This decline was mainly due to the global COVID-19 pandemic, although the Austrian construction sector was only moderately affected by the crisis.

This is reflected in the **number of enterprises** in the broad construction sector. While it grew by 9.2% between 2010 and 2019, totalling 73,242, it slightly declined (-1.1%) in 2020 reaching 72,403 (representing a 7.9% growth from 2010). This growth was mainly driven by the increase in the number of enterprises in the narrow construction (+25.0%).

Number of enterprises in the narrow construction sub-sector between 2010 and 2020

↑ 25.0%

Similarly, the **volume index of production** in the broad construction sector recorded an increase of 17.8% during 2015-2020, mainly driven by a 19.1% increase in the construction of buildings and a 11.8% growth in the construction of civil engineering, over the same period. However, it decreased by 5.4 percentage points (pps) from 23.2% in 2019 to 17.8% in 2020, thus reflecting the impact of the COVID-19 pandemic.

Volume index of production in the construction of buildings between 2015 and 2020

↑ 19.1%

Reflecting the increased volume index of production, **turnover** in the broad construction sector marked a strong increase between 2010 and 2018 (+32.8%), reaching EUR 94.3 billion. It further increased to EUR 99.1 billion in 2020, marking a 39.5% rise since 2010. This overall increase was mainly driven by turnover growth in the narrow construction (+45.6%), real estate activities (+38.5%), architectural and engineering activities (+35.1%) and the manufacturing (+20.4%) sub-sectors over the 2010-2020 period.

Turnover in the narrow construction sub-sector between 2010 and 2020

↑ 45.6%

Similarly, the **gross operating rate** of the broad construction sector, which is used to assess the profitability of the sector, stood at 16.9% in 2018, 0.7 percentage points (pps) lower than in 2010 (17.7%). This is above the 2018 EU-27 average of 16.7%.

In terms of employment, there were 520,287 **persons employed** in the Austrian broad construction sector in 2020, registering a 20.1% increase over the 2010 level (433,225 persons). This was mainly driven by the growth registered in the number of persons employed in the narrow construction sub-sector (+26.7%), followed by the real estate activities (+20.5%) and architectural and engineering activities (+15.2%) sub-sectors over the 2010-2020 period.

Nevertheless, the Austrian construction sector also faces a few challenges, particularly related to labour and skills shortage. In fact, the **job vacancy rate** in the narrow construction sub-sector increased from 2.3% in 2010 to 4.7% in 2020. According to a survey conducted by the Austrian Federal Economic

Chamber (WKO) in September 2020, 47.7% of companies in the construction sector and building support trades sector are affected by a shortage of skilled workers.

Demand in the **housing market** is supported by declining interest rates on mortgage loans, rising household income and increasing numbers of households (+10.1% between 2010 and 2020). However, housing supply lags behind the demand, which translated in an increasing house price index (+36.3% between 2015 and 2020). Despite robust demand, construction activity is decreasing with the total number of dwellings approved for construction falling by 4.0% y-o-y (year-on-year) to 74,763 units in 2020. This may be partly explained by the COVID-19 impact on the sector.

In August 2020, the EIB and Erste Bank (*Erste Bank der oesterreichischen Sparkassen AG*) entered into an agreement to provide EUR 300.0 million for social housing in Austria over the next three years. The agreement supports the construction of new subsidised or non-profit rental units.

In June 2021, the European Commission approved Austria's Recovery and Resilience Plan (RRP) making

EUR 3.5 billion in grants available. The plan focuses on combining reforms with large investments into the green and digital transitions, and addresses challenges brought about by the COVID-19 pandemic. Austria's plan dedicates 59.0% the total allocation to measures that support climate objectives. Moreover, around EUR 209.0 million has been allocated for the renovation of buildings.

Investment in the green transition is expected to contribute positively to the economic recovery with a GDP growth estimated to be about 1.5% in 2021 and to 4.7% in 2022. This economic recovery is expected to benefit the construction sector by providing further opportunities both in terms of business and technological developments.

To summarise, the Austrian construction sector has a positive outlook in the medium and long term. Excess demand for housing is expected to support investment in the construction sector, and investment in infrastructure projects are also likely to boost growth. Notably, infrastructure investments will mainly focus on railroad construction rather than roads, consistently with the climate protection stance took by the Austrian government.

# Table of Contents

|  |           |
|--|-----------|
| <b>In a nutshell</b> .....   | <b>2</b>  |
| <b>1 Key figures</b> .....   | <b>5</b>  |
| Construction market.....   | 5         |
| Productivity.....  | 6         |
| Turnover and profitability.....  | 6         |
| Employment.....  | 7         |
| <b>2 Macroeconomic indicators</b> .....  | <b>9</b>  |
| Economic development.....  | 9         |
| Demography and employment.....   | 9         |
| Public finance.....  | 9         |
| Entrepreneurship and access to finance.....  | 10        |
| <b>3 Key economic drivers of the construction sector</b> .....                             | <b>12</b> |
| Business confidence.....   | 12        |
| Domestic sales.....  | 12        |
| Export of construction-related products and services.....                                  | 13        |
| Access to finance in the construction sector.....  | 13        |
| Access to housing.....   | 14        |
| Infrastructure.....  | 16        |
| <b>4 Key issues and barriers in the construction sector</b> .....                          | <b>17</b> |
| Company failure.....   | 17        |
| Trade credit.....  | 17        |
| Late payment.....  | 18        |
| Time and cost of obtaining building permits and licenses.....                              | 19        |
| Skills shortage.....   | 19        |
| Sector and sub-sector specific issues.....   | 20        |
| <b>5 Innovation in the construction sector</b> .....                                       | <b>21</b> |
| Innovation performance.....  | 21        |
| Eco-innovation and digitalisation.....   | 22        |
| <b>6 National and regional regulatory framework</b> .....                                  | <b>24</b> |
| Policy schemes.....  | 24        |
| Building regulations.....  | 25        |
| Insurance and liability related regulations.....   | 26        |
| <b>7 Current status and national strategies to meet Construction 2020 objectives</b> ..... | <b>27</b> |
| TO 1 – Investment conditions and volumes.....  | 27        |
| TO 2 – Skills.....   | 29        |
| TO 3 – Resource efficiency / Sustainable construction.....                                 | 29        |
| TO 4 – Single Market.....  | 31        |
| TO 5 – International competitiveness.....  | 32        |
| <b>8 Outlook</b> .....   | <b>34</b> |

## 1

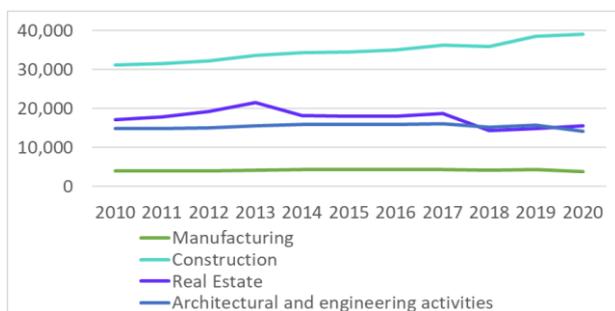
## Key figures

## Construction market

The **number of enterprises** in the Austrian broad construction sector totalled 72,403<sup>1</sup> in 2020, representing an increase of 7.9% since 2010 (Figure 1). This growth was mainly driven by the increase in the number of enterprises in the narrow construction sub-sector (+25.0%). Conversely, the real estate activities (-9.9%), manufacturing (-4.7%) and architectural and engineering activities (-4.1%) sub-sectors experienced a decline in the number of enterprises between 2010 and 2020. In line with previous years, the narrow construction sub-sector accounted for 53.9% of all enterprises in the broad construction sector in 2020.

Number of enterprises in the broad sector between 2010 and 2020  **7.9%**

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



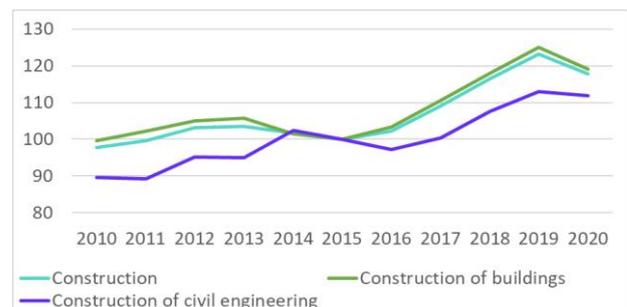
Source: Eurostat, 2021.

The **volume index of production** in the broad construction sector has been growing since 2015, increasing by 17.8% over the 2015-2020 period.

Similarly, the volume index of production in the construction of buildings and construction of civil engineering rose by 19.1% and 11.8% respectively over the same period (Figure 2).

Volume index of production in the construction of buildings between 2015 and 2020  **19.1%**

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

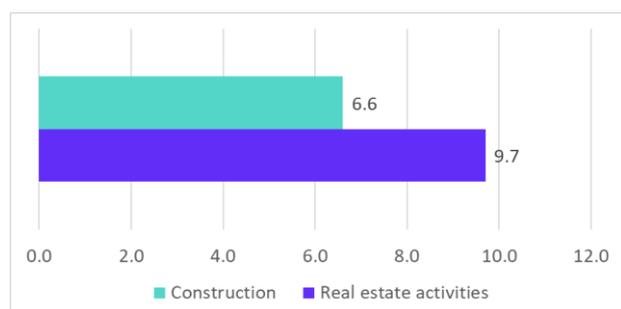


Source: Eurostat, 2021.

The **total added value<sup>2</sup> at factor cost** of the broad construction sector amounted to EUR 39.5 billion in 2020<sup>3</sup>, with the narrow construction sub-sector contributing 53.7%. This is followed by the real estate activities (25.1%), manufacturing (11.1%) and architectural and engineering activities (10.1%) sub-sectors.

The **share of gross value added (GVA) of the broad construction sector** stood at 17.3% in 2018<sup>4</sup>, above the EU-27 average of 16.5%. In 2020, the share of GVA of the narrow construction and real estate activities sub-sectors stood at 6.6% (EU-27 average 5.1%) and 9.7% (EU-27 average 10.3%) respectively (Figure 3).

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



Source: Eurostat, 2021.

Austria is statistically divided into nine regions (*Länder*) including Burgenland, Lower Austria (*Niederösterreich*), Vienna (*Wien*), Carinthia (*Kärnten*), Styria (*Steiermark*), Upper Austria (*Oberösterreich*), Salzburg, Tyrol (*Tirol*), and Vorarlberg. In 2018<sup>5</sup>, the three regions with the **biggest regional gross value** added in the narrow construction and real estate sub-sectors were the most populated ones, including Upper Austria (*Oberösterreich*), Lower Austria (*Niederösterreich*) and Vienna (*Wien*). They respectively accounted for 54.2% and 59.0% of the narrow construction and real estate sub-sectors' gross value added.

During the first three quarters of 2020, value added in the Austrian construction sector declined by 2.1% on a yearly basis as a result of the COVID-19 pandemic and subsequent lockdown measures<sup>6</sup>.

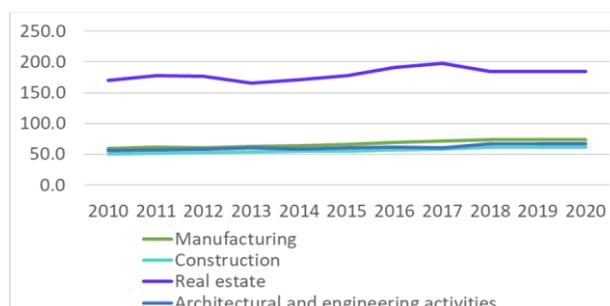
## Productivity

**Apparent labour productivity**<sup>7</sup> in the broad construction sector increased from EUR 64,718 in 2010 to EUR 75,692 in 2018<sup>8</sup>, representing a 17.0% increase over the period. This is well above the EU-27 average of EUR 51,960. The manufacturing sub-sector registered the highest increase (+24.5%) during the period, reaching EUR 73,760. This was followed by the architectural and engineering activities (+20.2%) and narrow construction (+20.1%) sub-sectors, which reached EUR 60,700 and EUR 60,900, respectively, in 2018. Similarly, the real estate activities sub-sector grew from EUR 169,400 in 2010 to EUR 184,700 in 2018 (+9.0%). Over the 2018-2020 period, the manufacturing and narrow construction sub-sectors remained relatively stable, increasing by 0.1% and 0.2% to reach EUR 73,761 and EUR 60,997 respectively. The architectural and

engineering activities and real estate activities sub-sectors reported declines of 0.03% and 0.01%, over the same period, totalling EUR 66,681 and EUR 184,681 in 2020 respectively (Figure 4).



Figure 4: Labour productivity in the broad construction sector in Austria over 2010-2020 (EUR k)



Source: Eurostat, 2021.

## Turnover and profitability

In 2018, the **total turnover** of the Austrian broad construction sector reached EUR 94.3 billion, a 32.8% increase compared to 2010. In 2020<sup>9</sup>, it increased to EUR 99.1 billion, representing a 5.0% increase over the 2018-2020 period and a 39.5% increase over the 2010-2020 period. Growth in the sector was mainly driven by the narrow construction and real estate activities sub-sectors which registered growth of 45.6% and 38.5%, respectively, between 2010 and 2020. Similarly, the architectural and engineering activities and manufacturing sub-sectors recorded an increase of 35.1% and 20.4%, respectively, in the same period. In 2020, the narrow construction sub-sector accounted for more than half of the total turnover (59.1%, i.e. EUR 58.6 billion), followed by the real estate activities (19.9%, i.e. EUR 19.8 billion), the manufacturing (13.2%, i.e. EUR 13.0 billion), and the architectural and engineering activities (7.8%, i.e. EUR 7.7 billion) sub-sectors.



Similarly, the **gross operating surplus** of the broad construction sector amounted to EUR 16.0 billion in 2018<sup>10</sup>, a 27.5% increase compared to the 2010 level (EUR 12.5 billion). Within the sub-sectors, the highest increase was registered by the architectural and engineering activities sub-sector (+58.7%) during the 2010-2018 period, followed by the narrow construction (+33.1%), the manufacturing (+30.5%) and the real estate activities (+17.7%) sub-sectors.

The **gross operating rate**<sup>11</sup> of the broad construction sector, which is used to assess the profitability of the sector, stood at 16.9% in 2018<sup>12</sup>, 0.7 percentage points (pps) lower than in 2010 (17.7%). This is above the EU-27 average of 16.7%. The real estate activities sub-sector registered the largest profit margin on sales (40.6% in 2018), followed by the architectural and engineering activities sub-sector (22.2% in 2018). The manufacturing and narrow construction sub-sectors had the lowest gross operating rate, standing at 10.5% and 9.8% in 2018 respectively.

In parallel, **construction costs** have been increasing steadily, with the construction cost index rising by 9.2% between 2015 and 2020 (Figure 5). This growth was mainly driven by a rise in input prices for materials (+8.5%) and labour costs (10.0%) in the same period.

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



Source: Eurostat, 2021.

## Employment

In 2020<sup>13</sup>, there were 520,287 **persons employed** in the Austrian broad construction sector, registering a 20.1% increase over the 2010 level (433,225 persons). The narrow construction sub-sector accounted for 66.8% of the total persons employed in the broad sector in 2020 (347,396 persons) and experienced the largest increase of 26.7% since 2010 (Figure 6). The real

estate activities sub-sector reported an increase (+20.5%) in the number of persons employed over the 2010-2020 period, employing 53,685 persons. It was followed by the architectural and engineering activities sub-sector (+15.2%) which employed 60,026 persons in 2020. However, the manufacturing sub-sector reported a decline (-5.0%) employing 59,180 persons during the same period.

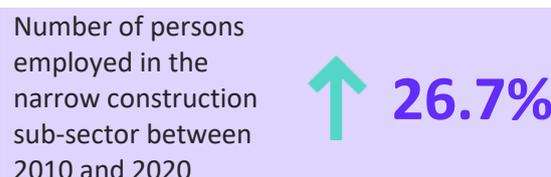
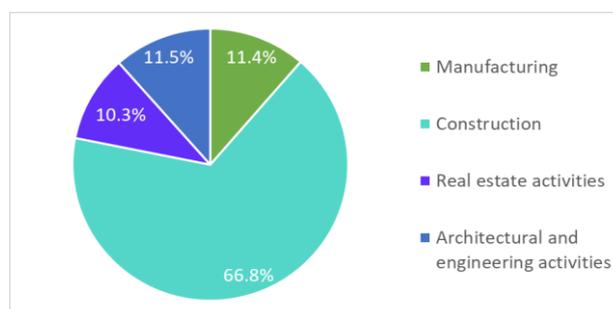


Figure 6: Percentage of people employed by the broad construction sub-sectors in Austria in 2020



Source: Eurostat, 2021.

As for **employment by specific occupation**, the manufacturing and narrow construction sub-sectors experienced significant increases of 167.2% and 86.8% respectively for professionals between 2010 and 2020. Among all the sub-sectors, the largest decrease (-60.3%) was experienced in the narrow construction sub-sector for managers during the same period. Similarly, the manufacturing sub-sector experienced a 28.6% decline for elementary occupations during 2010-2020. However, the demand for technicians and associate professionals in the narrow construction, the real estate activities and the manufacturing sub-sectors grew by 70.8%, 35.7% and 10.3% respectively over the same reference period.



In addition, the number of **self-employed workers** in the narrow construction sub-sector accounted for 7.2% of total self-employed persons in the general economy in 2020. This is considerably lower than the EU-27 average of 11.7% and slightly above the 2010 level (7.0%). In the real estate activities sub-sector, the share of self-employed workers was about 1.8% in 2020, above the 2010 level (1.3%) and slightly below the EU-27 average of 1.6%.

In parallel, **full-time employment** in the narrow construction sub-sector increased by 4.0% between 2010 and 2020. While **part-time employment** in the narrow construction sub-sector grew by 5.8% in the same period.

Part-time employment  
in the narrow  
construction sub-sector  
between 2010 and 2020



5.8%

Examining the trends by region (*Länder*) reveals that the narrow construction sub-sector in *Burgenland* recorded the highest increase of 18.2% in the number of persons employed over the 2010-2018<sup>14</sup> period. This was followed by *Wien* (+14.5%) and *Niederösterreich* (+12.6%) over the same reference period. These three regions accounted for 40.7% of the country's employment in the narrow construction sub-sector in 2018. With regards to the real estate activities sub-sector, the largest increase was registered in *Vorarlberg* (+21.1%), followed by *Niederösterreich* (+18.8%) and *Salzburg* (+10.0%) over the 2010-2018 period.

## 2

# Macroeconomic indicators

## Economic development

In 2020, Austria's **GDP** reached EUR 349.4 billion, marking a 6.6% decline on the previous year. This also represents a 7.0% increase compared to the 2010 level (EUR 326.7 billion). This was primarily because of the COVID-19 pandemic and the significant restrictions imposed by the authorities to contain the virus<sup>15</sup>. **Potential GDP** stood at EUR 369.6 billion in 2020, resulting in a negative **output gap** of 5.5%. The **inflation rate** for 2020 stood at 1.4%, marking a 0.7 percentage points (pps) reduction over the 2019 level (1.5%).

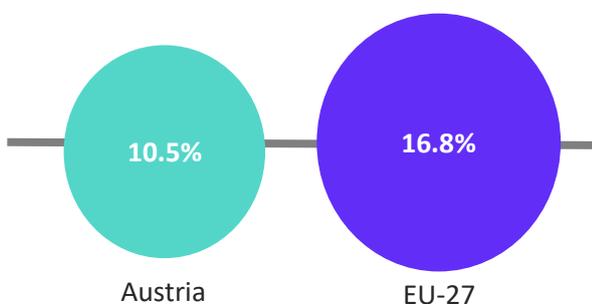
## Demography and employment



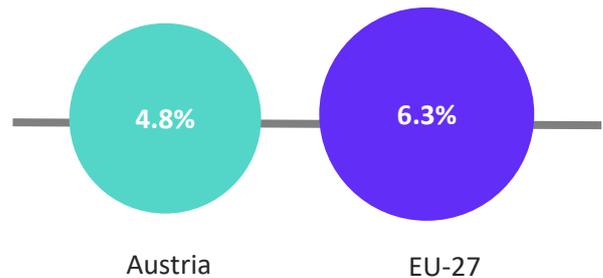
In 2020, the average unemployment rate (between 25-64 years) in Austria reached 4.8%, below the EU-27 average of 6.3%.

In 2020, the unemployment rate slightly worsened compared to the 4.2% rate in 2010. It was also 0.5 pp above the 2018 level. Similarly, **youth unemployment rate** (below age of 25) increased to 10.5% in 2020 against 8.5% in 2019, and 9.5% in 2010. This is well below the EU-27 average of 16.8%.

Youth unemployment rate in 2020



Unemployment rate in 2020



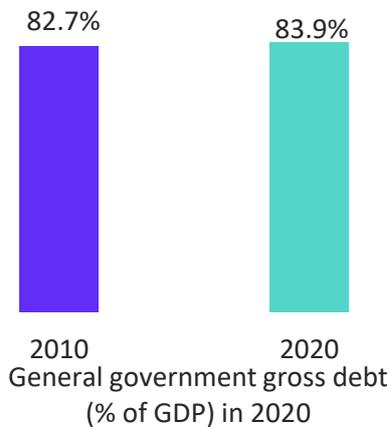
The **total population** of Austria stood at 8.9 million people in 2020, representing a 6.6% growth since 2010. It is expected to increase by 2.7% by 2030, and by 5.0% by 2050, reaching 9.3 million. Migration is the main driver of population growth in Austria<sup>16</sup>. In fact, **net migration** increased to 39,596 in 2020, after a continuous decline between 2016 and 2018. This represents a significant rise of 80.2% over 2010 and a 2.8% decrease over 2019.

The **working age population** made up 66.6% of Austria's total population in 2020, above the EU-27 average of 64.3%. By 2050, this share is expected to reduce by 7.7 pps to 58.8%. In contrast, the proportion of people over 65 years old is expected to increase from 19.0% of the population in 2020 to 27.7% by 2050. This may generate further demand for elderly persons' infrastructures (hospitals, care homes, access infrastructure), and hence will create further opportunities for the Austrian construction sector.

## Public finance

In 2020, **general government expenditure** represented 57.9% of GDP, above the 2010 level (52.8%) and higher than the EU-27 average of 53.4%. The **general government deficit** reached 8.9% in 2020, higher than the EU-27 average deficit of 6.9%. This is due to the surge in government spending to ease the impact of the COVID-19 crisis on economic activity<sup>17</sup>. In addition, general

**government gross debt** stood at 83.9% of the country's GDP in 2020, higher than 2010 (82.7%). This is also below the EU-27 average of 90.7%.



## Entrepreneurship and access to finance



According to the World Bank Doing Business 2020 Report, Austria ranked 127<sup>th</sup> out of 190 countries in ease of starting a business in 2019. This is a decline in comparison with previous year's ranking (118<sup>th</sup>)<sup>18,19</sup>.

As per the report, starting a business in Austria requires 8 procedures, taking 21 days and costing 4.7% of per capita income<sup>20</sup>. In terms of entrepreneurship, 31.2% of the Austrian adult population perceive that there are good opportunities for starting a firm in the country, and 4.1% of the adult population, currently not involved in entrepreneurial activities, intended to start a business in the coming three years<sup>21</sup>.

The Austrian government has taken several initiatives to encourage entrepreneurship and start-ups. In October 2020, the Federal Ministry of Digital and Economic Affairs and Education, Science and Research introduced the "Mapping and Action Plan Entrepreneurship Education Initiatives" together with 65 entrepreneurship education stakeholders. This initiative has the objective of reducing barriers for companies to artificial intelligence (AI) technologies and kick-starting companies to use, implement and apply appropriate AI solutions<sup>22</sup>.

In terms of start-up environment, according to the Austrian Startup Monitor 2019, more than 2,200 start-ups were founded between 2008 and 2019. The annual growth in the number of start-ups (+15.0% in 2019) was significantly higher than the growth of traditional companies (+3.0% annually). However, the Austrian start-up scene saw less money invested in 2019 compared to 2018 – EUR 218.0 million against EUR 237.6 million<sup>23</sup>.

In 2020, Austrian small and medium-sized enterprises (SMEs) were severely affected by the COVID-19 pandemic, with the government taking numerous policy measures to support the economy<sup>24</sup>.

The Austrian government has taken several measures to prevent corporate insolvency and to revive the economy, introducing a comprehensive package of measures worth EUR 50.0 billion, with many of them aimed at supporting SMEs. The measures aim to not only provide rapid support to companies in difficulty and to reduce the impact of the crisis, but also to launch a green and digital transformation of the economy<sup>25</sup>.

According to the World Bank Doing Business 2020 report, in terms of access to finance, Austria ranked 94<sup>th</sup> out of 190 countries for the ease of getting credit<sup>26</sup>.

The Austrian government has taken several measures to improve the conditions of access to finance for SMEs in the country, such as:<sup>27</sup>

- In March 2020, the Federal Economic Chamber on behalf of the Federal Government introduced a Hardship Fund (*Härtefallfonds*) that provides a grant to help affected companies through the crisis quickly and unbureaucratically. It helps companies which have suffered economically significant losses due to COVID-19 (no longer able to cover running costs, have an officially ordered ban on entering the premises or a drop in sales of at least 50% compared to the same month of the previous year). The total value of the fund amounts to 2.0 billion, out of which 697.0 million had been paid out by 15<sup>th</sup> November 2020.

- The Loss Carry Back initiative implemented in October 2020 by the Federal Ministry for Digital and Economic Affairs to strengthen the liquidity of SMEs. The policy allows for the carry back of operating losses from 2020 to 2019 within a maximum amount of EUR 5.0 million.
- In May 2020, a COVID start-up fund (EUR 100.0 million) and a venture capital fund (EUR 50.0 million) have been set up in order to avoid liquidity and financing bottlenecks of start-ups. The funds double private equity investments in start-ups and also provides a bridge guarantee offered by the promotional bank of the Austrian government<sup>28</sup>.

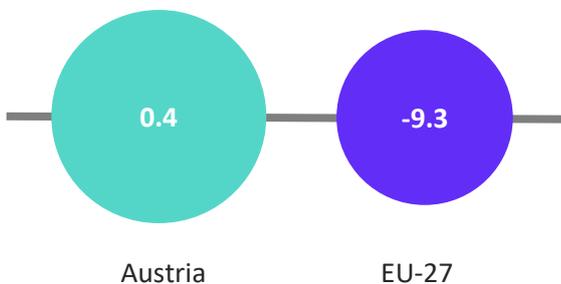
## 3

## Key economic drivers of the construction sector

### Business confidence

The **consumer confidence** indicator declined from -4.5 in 2010 to -10.1 in 2020. This is above the EU-27 average of -14.6 and below the 2019 level of -2.7. Similarly, the **industry confidence** indicator stood at -16.1 in 2020, well below the 2010 levels of -5.6 and the EU-27 average (-14.4), remaining considerably below the 2019 levels (-5.3). The **construction confidence index** reached 0.4 in 2020, well above the 2010 level (-14.7) and the EU-27 average of -9.3. However, this is below the 2019 level of 11.7.

Construction confidence indicator in 2020



The Austrian **investment ratio** has followed a similar trend, gradually increasing from 21.5% in 2010 to 25.0% in 2020. Conversely, **investment per worker** in the broad construction sector decreased by 12.8%, from EUR 73,229.7 in 2010 to EUR 63,892.3 in 2018<sup>29</sup>. In terms of sub-sectors, investment per worker in the architectural and engineering activities and narrow construction sub-sectors registered an increase (+169.2% and +21.2%) from EUR 3,900 and EUR 3,300 in 2010 to EUR 10,500 and EUR 4,000 in 2018<sup>30</sup>, respectively.

Similarly, investment per worker in the real estate activities sub-sector decreased by 21.8% from EUR 191,600 in 2010 to EUR 149,800 in 2018<sup>31</sup>.

### Domestic sales

The top five **most domestically sold** construction products in Austria have remained the same since 2010. Also, the ranking of the top three most domestically sold construction products has not changed since 2014 except for the years 2017 and 2018. The top five most domestically sold construction products are presented in Table 1 including a comparison with the most sold in the EU-27. These represented 50.5% of total domestic construction product sales in 2020.

Table 1: Five most domestically sold construction products in Austria and in the EU in 2020

|   | Austria   |               |  | EU-27   |
|---|---|---------------|--|---|
|   | Product   | Value (EUR m) | Share in construction product domestic sales (%) | Product   |
| 1 | Ready-mixed concrete (group 236310)                     | 1,083.8       | 14.0%  | Other structures (group 251123)                 |
| 2 | Other structures (group 251123)                         | 1030.6        | 13.3%  | Ready-mixed concrete (group 236310)             |
| 3 | Windows, French windows and their frames (group 162311) | 729.7         | 9.4%   | Doors, windows and their frames (group 251210)  |
| 4 | Prefabricated wooden buildings (group 162320)           | 576.2         | 7.4%   | Prefabricated buildings of metal (group 251110) |

|   | Austria  |               |  | EU-27   |
|---|--|---------------|--|---|
|   | Product  | Value (EUR m) | Share in construction product domestic sales (%) | Product   |
| 5 | Doors, windows and their frames (group 251210) | 495.5         | 6.4%   | Prefabricated structural components for building (group 236112) |

Source: PRODCOM, 2021.

## Export of construction-related products and services

The ranking of top five **most exported** construction products in Austria has remained the same since 2016. Also, “Builders' joinery and carpentry etc.”, which accounted for the highest (20.4%) share of product exports in 2020, registered a growth 54.0% during 2010-2020, reaching EUR 884.3 million. The **top five most exported** construction products from Austria and the EU-27 are summarised in Table 2. Together, these made up 66.0% of all construction product exports in 2020.

Table 2: Five most exported construction products in Austria and in the EU in 2020

|   | Austria  |               |  | EU-27   |
|---|--|---------------|--|---|
|   | Product  | Value (EUR m) | Share in construction products exports (%) | Product   |
| 1 | Builders' joinery and carpentry (group 162319) | 884.3         | 20.4%                                      | Ceramic tiles and flags (group 233110)                        |
| 2 | Other structures (group 251123)                | 700.8         | 16.1%                                      | Other structures (group 251123)                               |
| 3 | Particle board (group 162112)                  | 695.6         | 16.0%                                      | Fibreboard of wood (group 162115)                             |
| 4 | Fibreboard of wood (group 162115)              | 353.0         | 8.1%                                       | Doors, windows and their frames (group 251210)                |
| 5 | Assembled parquet panels (group 162210)        | 232.0         | 5.3%                                       | Builders joinery and carpentry, of wood, n.e.c (group 162319) |

Source: PRODCOM, 2021.

In terms of the cross-border provision of construction services<sup>32</sup>, Austria exported services worth EUR 885.0 million worldwide in 2020. This represents a 51.5% increase over the 2012<sup>33</sup> level (EUR 584.0 million) and a 0.2% decrease compared with 2019 (EUR 887.0 million).

In 2020, 85.0% of the total exports of construction services were going to the EU-27 (i.e. EUR 752.0 million), representing a 72.1% increase since 2012<sup>34</sup> (EUR 437.0 million). In parallel, Austria imported EUR 657.0 million of construction services from around the world in 2020, 90.3% of which came from the EU-27. The country thus achieved a worldwide **trade surplus** of EUR 228.0 million in 2020.

## Access to finance in the construction sector

Access to finance is not a major concern for Austrian SMEs. According to the Survey on the Access to Finance of Enterprises (SAFE) Report 2020, 8.0% of SMEs in Austria express that access to finance continues to be their most important concern. This is below the EU-27 average of 9.9%<sup>35</sup>. As per the report, bank loans are still the main source of financing for 51.7% of SMEs in Austria, slightly above the EU-27 average of 47.6%. Between April and September 2020, 33.4% Austrian SMEs applied for a bank loan, while 2.1% did not apply due to fear of rejection. Out of those who applied for a bank loan, 3.8% saw their applications rejected, which is well below the EU-27 average of 6.3%<sup>36</sup>.

As per the EIB Investment Survey (EIBIS) 2020 report, Austrian firms in the infrastructure and construction sectors are more positive about their sectors' access to external finance than manufacturing and service sector firms. At the same time, firms in the construction sector report a higher share of internal finance usage in 2020 than manufacturing and infrastructure firms<sup>37</sup>.

Credit extended to the narrow construction sub-sector increased from EUR 10.0 billion in 2010 to EUR 13.3 billion in 2018<sup>38</sup>, representing a growth of 32.8%. This reflects the improvements in the access to finance in the Austrian construction sector.

Credit extended to the narrow construction sub-sector between 2010 and 2018

↑ 32.8%

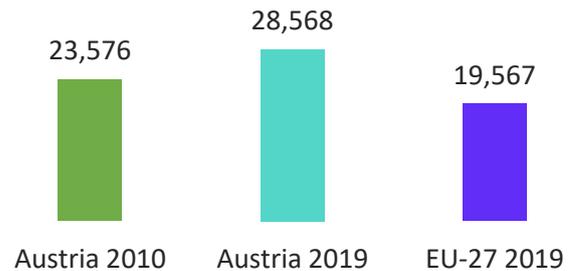
However, according to the report, approximately 30.0% of firms in the Austrian construction sector consider the availability of finance as a long-term impediment to investment. The highest levels of dissatisfaction among Austrian firms in the construction sector are with the cost of finance (6.0%) followed by collateral requirements (4.0%)<sup>39</sup>.

In March 2020, the European Commission approved Austrian guarantee schemes to support SMEs affected by the COVID-19 pandemic<sup>40</sup>. The schemes provide guarantees on working capital loans to support SMEs in covering their short-term liabilities, despite the current loss of revenues due to the pandemic. The schemes complement the EUR 15.0 billion Austrian liquidity scheme that the European Commission approved in April 2020.

## Access to housing

The **number of households** in Austria has been growing progressively, reaching 4.0 million in 2020. This represents a 10.1% increase in comparison to the 2010 levels (3.6 million). At the same time, the **share of the population living in intermediate urbanised areas** increased from 25.0% in 2010 to 31.0% in 2020. The ongoing rise in the number of households is one of the main drivers for the sustained demand for housing in Austria, which tends to focus on urban areas. This rising demand for housing is explained by the fact that people consider real estate as a hedge against economic uncertainties and risks<sup>41</sup>.

In parallel, the **mean equivalised net income** has gone up by 25.1% over the 2010-2020 period, reaching EUR 29,503. In 2019, it amounted to EUR 28,568, well above the EU-27 average of 19,567.



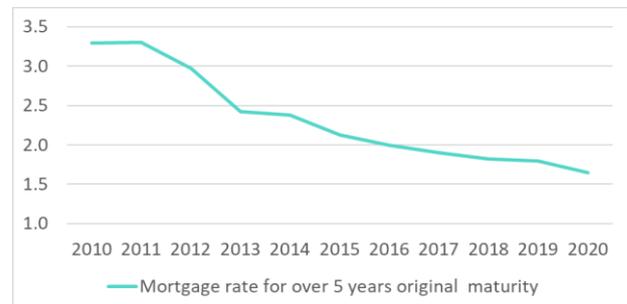
Mean equivalised net income in EUR

Moreover, housing loans to households picked up with total **outstanding residential loans** growing by 49.7%, from EUR 80.0 billion in 2010 to EUR 119.8 billion in 2019<sup>42</sup>. This increase in residential loans is partly supported by the declining **interest rates** on mortgages (over 5 years original maturity), reaching to 1.8% in 2019 compared to 3.3% in 2010. It is currently (2020) standing at its lowest rate of 1.6% (Figure 7).

Outstanding residential loans between 2010 and 2019

↑ 49.7%

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

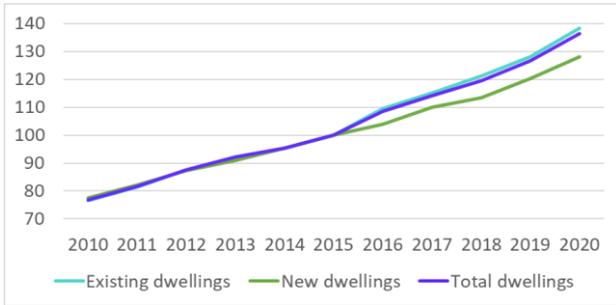


Source: ECB MFI Interest Rate Statistics, 2021.

According to the European Central Bank (ECB), total housing loans in April 2021 stood at EUR 127.7 billion, up by 7.5% from April 2020<sup>43</sup>.

In parallel, the **house price index** for total dwellings also increased by 36.3% over the 2015-2020 period, mostly driven by a 28.2% and 38.4% increase in new dwellings and existing dwellings over the same reference period, respectively (Figure 8).

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



Source: Eurostat, 2021.

The increase in high prices can be attributed to an excess in demand (i.e. higher housing demand than supply). According to the Austrian National Bank (*Oesterreichische Nationalbank - OeNB*), during the year 2020 to the first quarter of 2021, the residential property price index in Austria was up by a huge 12.3%, sharply up from the previous year's 3.4% growth and the biggest y-o-y rise since the second quarter of 2012. In Vienna, prices rose by 10.9% during the year 2020 to the first quarter of 2021, registering the highest growth over the last eight years<sup>44</sup>.

House price index for total dwellings between 2015 and 2020 **↑ 36.3%**

**Construction of dwellings is decreasing, despite the robust demand. According to Statistics Austria, during 2020, the total number of dwellings approved for construction in Austria fell by 4.0% y-o-y to 74,763 units, following an increase of 11.4% in 2019<sup>45</sup> - hence showing the impact of the COVID pandemic on the sector.**

The **number of new buildings approved for construction** throughout Austria stood at 29,100 in 2020, representing a 19.8% growth since the 2010 level (24,284). 74% of all new buildings approved in 2020 were residential buildings. In the first quarter of 2021, 8,300 new buildings were approved for construction, marking an annual increase of more than 28.0% despite the COVID-19 pandemic and the restrictions thereof<sup>46</sup>.

Number of new buildings construction approved between 2010 and 2020 **↑ 19.8%**

Similarly, the **number of dwellings completed increased** from 69,214 in 2018 to 77,699 in 2019<sup>47</sup>, exhibiting a 12.3% rise. Also, the number of buildings completed in 2019 reached to 27,681, representing a 11.6% increase over 2018 (24,797)<sup>48</sup>.

Number of dwelling completed between 2018 and 2019 **↑ 12.3%**

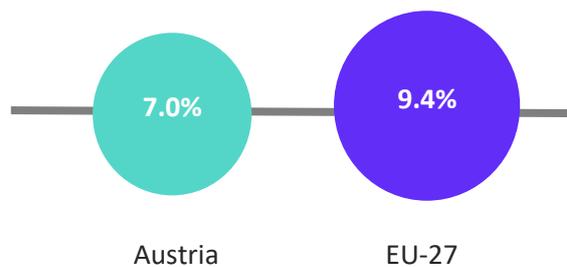
The number of **building permits index** for dwellings grew by 19.4% between 2015 and 2020. Similarly, for single-dwelling buildings and two-and-more-dwelling buildings, the building permits index rose by 16.6% and 20.5% respectively.

Building permits index for dwellings between 2015 and 2020 **↑ 19.4%**

The home ownership rate for the population earning **above 60% of the median equivalised income** in Austria decreased from 62.3% in 2010 to 59.6% in 2020. It stood at 59.3% in 2019, well below the EU-27 average of 73.6%. Similarly, for the **population earning below 60% of the median equivalised income**, the home ownership rate slightly increased from 29.2% in 2010 to 29.3% in 2020. This is also higher than the 2019 level of 28.9% (EU-27 average: 50.3%).

The **overcrowding rate**<sup>49</sup> stood at 15.1%<sup>50</sup> in 2019, below the EU-27 average of 17.1%. In 2020, Austria's overcrowding rate decreased to 14.1%. The **severe housing deprivation rate**<sup>51</sup> stood at 3.0% in 2019, below the EU-27 average of 4.0%. It remained the same at 3.0% in 2020. Lastly, the **housing cost overburden rate**<sup>52</sup> stood at 7.0% in 2019 compared to the EU-27 average of 9.4%. The housing cost overburden rate decreased to 6.3% in 2020.

Housing cost overburden rate in 2019



## Infrastructure



As per the Global Competitiveness Index 2019, Austria ranked 10<sup>th</sup> out of 141 countries in its overall infrastructure quality<sup>53</sup>.

As per the report, Austria is ranked 6<sup>th</sup> in the quality of road infrastructure and 10<sup>th</sup> in the efficiency of train services. It also performed well in the context of railroad density (15<sup>th</sup> worldwide). In airport connectivity and efficiency of air transport services, Austria is ranked 37<sup>th</sup> and 39<sup>th</sup> respectively. In road connectivity, it is ranked 49<sup>th</sup> worldwide<sup>54</sup>. The country's road density in 2019<sup>55</sup> remained the same as in 2010 at 21.0km/km<sup>2</sup>. Its railroad density dropped by 5.6% over the same period, totalling 67.0 km/km<sup>2</sup> in 2019<sup>56</sup>.

Currently, Austria invests heavily in its transport infrastructure network. It is ranked second among the European frontrunners in investments in its railway infrastructure, which amounted to EUR 218

per capita in 2019. These investments allowed strengthening its freight transport capabilities and its global importance as a central hub in Europe for intercontinental traffic flows, thanks to its geographical location. Currently, four out of the nine network corridors of the Trans-European Rail Network go through Austria, and three of them through Vienna<sup>57</sup>.

In February 2020, the infrastructure division of Austrian Federal Railways (*ÖBB-Infrastruktur*) outlined several priorities for 2020 with focus on the eastern part of Austria. The company plans to invest around EUR 670.0 million in infrastructure projects in Vienna, Lower Austria and Burgenland. One of the projects will be dedicated to the Pottendorfer Line between Vienna and Wiener Neustadt. The company plans to convert this vital route into a four-track railway by 2023. In addition, modernisation works on the north eastward line from Vienna-Süßenbrunn to Bernhardsthal<sup>58</sup> will be continued.

## 4

## Key issues and barriers in the construction sector

### Company failure

The number of **company births** in the narrow construction sub-sector dropped from 3,341 in 2010 to 2,810 in 2018<sup>59</sup>, representing a 15.9% decrease. The number of **company deaths** in the narrow construction sub-sector also decreased from 2,753 in 2010 to 1,888 in 2018<sup>60</sup> (-31.4%).

Company births in the narrow construction sub-sector between 2010 and 2018

↓ 15.9%

The architectural and engineering activities sub-sector experienced a 27.8% drop in company births (from 1,248 in 2010 to 901 in 2018) and a 33.9% decline in company deaths (from 1,009 to 667) during the same period. Company births in the real estate activities sub-sector also fell by 35.5%, from 1,018 to 657 between 2010 and 2018, while company deaths declined by 30.8% from 763 to 528 in the same reference period.

Company births in the real estate activities sub-sector between 2010 and 2018

↓ 35.5%

Insolvency law in Austria focuses on rescuing firms in order to increase the chances of recovering debts. A legal requirement was put in place where a firm may apply for reorganisation plans, provided it can pay a minimum quota of 20.0% of the debt within two years. However, it is not very common for unsecured creditors to recover after a reorganisation. In fact, often, bankruptcy proceedings are launched from the beginning<sup>61</sup>.

In 2020, the total number of insolvencies stood at 3,017, marking a 39.9% decline over the previous year and a 44.7% decline compared to the 2013<sup>62</sup> level (5,459). This is likely due to government

measures taken to mitigate the economic impact of the COVID-19 pandemic. The total number of insolvencies in the construction sector decreased to 337 in 2020 from 430 in 2019 registering a decline of 21.6%<sup>63</sup>.

According to Statistics Austria, in the first quarter of 2021, the total number of insolvent enterprises stood at 484, a 57.0% decline over the first quarter of 2020. This decline is partly explained by the suspension of the obligation to file for bankruptcy since March 2020, owing to the COVID-19 pandemic<sup>64</sup>.

The outbreak of COVID-19 and the subsequent lockdowns and restrictions are impacting the operations of Austrian construction companies. *Strabag*, one of Austria's largest construction companies, halted its regular construction operations in approximately 1,000 sites during the lockdown, due to the impossibility of maintaining the necessary safety measures to limit the spread of COVID-19<sup>65</sup>. However, the Austrian sites gradually started resuming their construction activity ten days after this decision<sup>66</sup>. *Porr AG*, another leading construction company in Austria, posted losses in the second quarter of 2020 due to the COVID-19 crisis<sup>67</sup>. This may affect to some extent the construction value chains.

### Trade credit

According to the Payment Practices Barometer Survey report 2020, the proportion of total B2B sales made on credit in Austria decreased to nearly 55.0% in 2020 (against 65.3% the previous year). This is in line with the average for Western Europe<sup>68</sup>.

As per the report, 47.0% of firms reported using B2B trade credit to seek competitive advantage. In addition, 26.0% of Austrian firms granted trade

credit as a source of short-term financing, above the Western Europe average of 19.0%<sup>69</sup>.

The construction materials sector strengthened their credit management practices by adjusting credit terms and resorting to factoring more frequently than before the pandemic. However, a large majority of the firms also began to practise self-insurance and reduced reliance on a single customer, and plan to continue doing so over the coming months<sup>70</sup>.

Regarding customer creditworthiness, 50.0% of the firms in the construction materials sector expect an improvement in 2021 while 14.0% expect it to deteriorate. 36.0% of the respondents expect no change compared the 32.0% Western Europe average<sup>71</sup>.

**According to the SAFE report 2020, trade credit does not constitute a relevant source of financing for 81.4% SMEs in Austria, compared to the EU-27 average of 68.7%<sup>72</sup>.**

As per the report, 10.9% of Austrian SMEs have used trade credit as a source of financing in the past six months, below the EU-27 average of 13.6%. 6.2% of SMEs have not used it recently, below the EU-27 average of 13.8%<sup>73</sup>. 16.0% of Austrian SMEs consider that trade credit availability improved in 2020 (compared to the EU-27 average of 13.3%)<sup>74</sup>.

## Late payment



**According to CRIBIS Dun & Bradstreet (D&B) Payment Study 2020, 55.4% of firms in the Austrian construction sector made their payments by the due date in 2019, while 0.4% firms took more than 90 days<sup>75</sup>.**

As per the report, in 2019, 38.9% of the total Austrian firms paid their suppliers on time, compared to the EU-28<sup>76</sup> average of 44.3%. The percentage of Austrian firms paying over 90 days late stood at 0.7%, well below the EU-28<sup>77</sup> average of 3.9%<sup>78</sup>.

According to the Payment Practices Barometer 2020, 71.0% of the Austrian businesses surveyed reported setting payment terms of up to 30 days on average, 16.0% set payment terms from 31 to 60 days, 6.0% set terms from 61 to 90 days and the

remaining 7.0% 90 days and above. However, 42.0% of respondents reported granting longer payment terms after the onset of the pandemic, most often up to 20 days longer. This share is lower than the Western Europe average of 47.0%<sup>79</sup>.

After the onset of the COVID-19 pandemic, the total value of the invoices reported as overdue increased to 33.0%, a 19.0% year-on-year increase from 2019. This increase could lead to increased financing and administrative costs associated with carrying trade debts. However, the proportion of Austria's late payments debt is far below the 47.0% of total value of overdue invoices for Western Europe<sup>80</sup>.

The increase in late payments is also reflected in the lengthening of Days Sales Outstanding (DSO). Compared to pre-pandemic, 61.0% of the businesses surveyed (against the Western Europe average 57.0%) reported DSO increases of up to 10.0%, while 34.0% (against the Western Europe average of 37.0%) reported increases of more than 10.0%<sup>81</sup>.

**In 2020, late payments in the Austrian construction materials sector affected 32.0% of the total value of B2B invoices, compared to 16.0% in 2019, according to the Payment Practices Barometer 2020<sup>82</sup>.**

Furthermore, 11.0% of respondents reported having to wait longer, up to 20 days on average, to cash the overdue invoices. Average DSO rose to 10.0%, as reported by 82.0% of construction materials firms, while 14.0% of businesses reported increases in DSO above 10.0%. 50.0% of the firms in the sector suspended deliveries until payment of overdue invoices. This is significantly higher than the Western Europe average of 15.0%<sup>83</sup>.

In the coming months, 33.0% of the firms surveyed intend to offer longer payment terms, mainly to encourage domestic sales compared to the Western Europe average of 24.0%<sup>84</sup>.

64.0% of respondents in Austria are concerned about their debtors' ability to pay on time, according to the European Payment Report 2021<sup>85</sup>. This is above the EU-28<sup>86</sup> average of 62.0%. At the same time, 42.0% of respondents believe the widening gap between payment terms and duration of payment is a real risk to the sustainable growth of business, at par with the EU-28<sup>87</sup> average of 41.0%. Lastly, 60.0% of Austrian SMEs prefer the introduction of new legislation to solve the problem

of late payments, above the EU-28<sup>88</sup> average of 59.0%<sup>89</sup>.

The Late Payment Directive, which became effective on 1 March 2013, transposed the Recast Directive on Late Payment 2011/7/EU which states that payments in the EU must be made within 60 days. This has introduced an Eighth Chapter on Money Transfers (*Achter Abschnitt Zahlungsverzug*) into the Fourth Book of the Austrian Commercial Code<sup>90</sup>.

## Time and cost of obtaining building permits and licenses



As per the World Bank Doing Business 2020, Austria ranked 49<sup>th</sup> in “Dealing with construction permits” in 2019<sup>91,92</sup>.

As per the report, completing the formalities to build a warehouse<sup>93</sup> requires 11 administrative procedures, still lower than the OECD high-income average (12.1), but the time needed to complete the procedures stood at 222 days, considerably above the OECD high-income average (152.3) (Table 3). The cost of completing the formalities to build a warehouse represented 1.1% of the value of the warehouse, below the OECD high-income average of 1.5%. Obtaining the building permit takes 80 days and costs EUR 300<sup>94</sup>.

Table 3: Construction procedures timing and costs in Austria

| Procedure  | Time to complete | Associated costs |
|--|------------------|------------------|
| Obtain industrial operating permit   | 80 days          | EUR 300          |
| Obtain approval of heat and noise insulation                                 | 30 days          | EUR 5,000        |
| Obtain expert opinion on structural engineering                              | 11 days          | EUR 5,000        |
| Obtain energy pass ( <i>Energieausweis</i> )                                 | 10 days          | EUR 700          |
| Receive on-site inspection prior to issuance of building permit              | 1 day            | EUR 46           |
| Obtain proof of land ownership   | 0.5 day          | EUR 14           |
| Hire a licensed engineer for construction supervision                        | 1 day            | EUR 4,800        |
| Obtain building permit <sup>95</sup>   | 80 days          | EUR 300          |
| Request and receive on-site inspection prior to commencement of construction | 1 day            | no charge        |
| Request and obtain water and sewage connection                               | 60 days          | EUR 8,478        |

| Procedure   | Time to complete | Associated costs |
|---|------------------|------------------|
| Notify the municipal authority about completion of construction works | 1 day            | EUR 22           |

Source: Doing Business 2020, Economy Profile Austria<sup>96</sup>

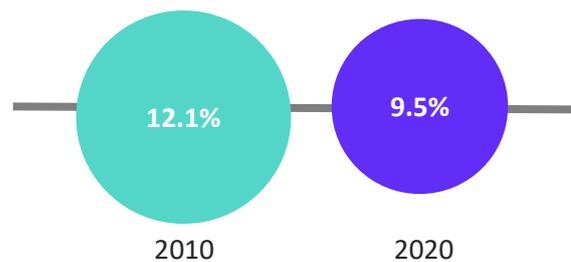
## Skills shortage

In Austria, the **job vacancy rate** in the narrow construction sub-sector increased from 2.3% in 2010 to 4.7% in 2020. Similarly, the real estate activities sub-sector saw the job vacancy rate increasing to 3.3% in 2020 from 2.4% in 2010.

During 2010-2020, **adult participation in education and training** in the broad construction sector decreased. In the narrow construction sub-sector, adult participation rate also decreased from 12.1% in 2010 to 9.5% in 2020. Similarly, the adult participation rate in the real estate activities sub-sector deteriorated from 21.7% in 2010 to 13.3% in 2020.

In contrast, the **number of tertiary students** enrolled in engineering, manufacturing and construction significantly grew by 60.0%, from 11,112 in 2010 to 17,774 in 2019<sup>97</sup>. Similarly, the number of tertiary students enrolled in architecture and building stood at 4,314 in 2019<sup>98</sup>, marking an increase of 55.5% as compared to the 2010 level of 2,775 students.

Adult participation in education and training in the narrow construction sub-sector



The Austrian government has recognised this shortage of construction-related professions. In 2021, construction related occupations experiencing particular shortages were joiners and plumbers<sup>99</sup>.

Unemployment among low-skilled workers has doubled in Austria since 2008, to over 20.0%. Approximately 14.7% of adults have less than an upper secondary qualification, whereas the number of jobs that only require elementary

skills is limited and expected to decrease. The Adult Education Initiative (*Initiative Erwachsenenbildung*) offers free access to education for socio-economically disadvantaged adults who do not possess basic skills or never graduated from lower secondary education<sup>100</sup>.

According to the Economic Chamber of Commerce in Austria (*Wirtschaftskammer Österreich*), the country lacks high-skilled labour and faces difficulties in attracting young people to work in the construction sector, mostly due to the poor image of the sector<sup>101</sup>.

According to the EIB Investment Survey 2020 report, around 86.0% of construction firms in Austria cited availability of skilled staff as a long-term barrier to investment<sup>102</sup>.

According to the survey conducted by the Austrian Federal Economic Chamber (WKO) in September 2020, companies in the construction industry and building support trades sector were most affected by the shortage of skilled workers (47.7%)<sup>103</sup>.

According to 81.0% of the companies surveyed, the Austrian economy has been severely impacted by the shortage of skilled workers. This shortage is being most strongly felt in construction, the manufacture of wood products, tourism, artisanal/technical fields, intermediate qualifications (apprenticeship) and medium-sized companies<sup>104</sup>.

## Sector and sub-sector specific issues

### Material efficiency and waste management

Over the 2010-2018<sup>105</sup> period, mineral waste from construction and demolition activities in Austria grew by 307.4%, reaching 11.0 million tonnes in 2018 (2.7 million tonnes in 2010)<sup>106</sup>.

Austria is a leader among European countries in terms of the management of Construction & Demolition Waste (CDW). It recovers and reuses 92.0% of its CDW<sup>107</sup>. In 2016, Austria introduced the

Recycled Construction Materials Regulation supporting the re-use of CDW components. The regulations introduced requirements for construction and demolition procedures that promote the re-use and recycling of CDW materials such as recovery-oriented demolition and obligatory selective dismantling of re-usable components prior to demolition. They also provide clarity to the end-of-waste criteria of CDW materials<sup>108</sup>.

A law on the Remediation of Contaminated Sites (*Altlastensanierungsgesetz*) in Austria states that a charge of EUR 9.2 will be levied on every ton of CDW not recovered in a proper and structurally engineered way<sup>109</sup>.

### Climate and energy

**Emissions of greenhouse** (GHG - carbon monoxide and dioxide, methane and nitrous oxides) in the narrow construction sub-sector of Austria stood at 1.1 million tonnes in 2019<sup>110</sup>, representing a decline of 25.2% over the 2010 level (1.5 million tonnes). Similarly, in the real estate sub-sector, the emissions of greenhouse gases reduced by 23.9%, from 45,595 tonnes in 2010 to 34,707 tonnes in 2019<sup>111</sup>.

Greenhouse gas emissions in the narrow construction sub sector between 2010 and 2019

↓ 25.2%

The building sector is the main emitter in Austria, and therefore has important potential for emissions reduction. Austria has a quantitative target for further emission reductions in the building sector (3 Mt CO<sub>2</sub>eq between 2016 and 2030). The more efficient use of building materials in construction and renovation (circular economy) would contribute to a further reduction in GHG emissions and benefit environmental targets<sup>112</sup>.

The Recovery and Resilience Plan of Austria aims to introduce tax reforms to incentivise green technologies and preferential tax rates for low or zero-emission products combined with tax relief for companies and households in need<sup>113</sup>.

## 5

# Innovation in the construction sector

## Innovation performance



According to the European Innovation Scoreboard 2021, Austria is positioned in the “Strong Innovators” performance group<sup>114</sup>.

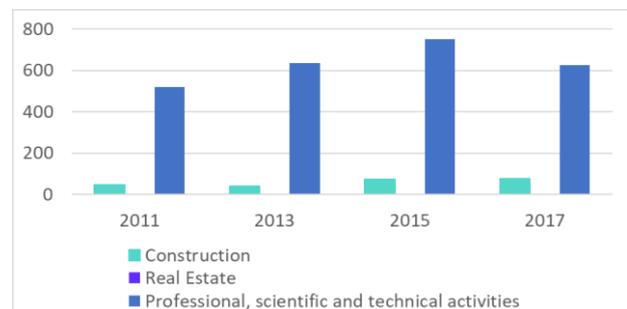
As per the report, Austria’s strongest innovation dimensions include intellectual assets, linkages and attractive research systems. The country scores particularly well on public-private co-publications, design applications and international scientific co-publications. In 2021, the country’s increased performance on job-to-job mobility of Human Resources in Science and Technology (HRST), sales of innovative products, and broadband penetration were offset by poorer performances on non-R&D innovation expenditures and innovative SMEs collaborating with others. Austria scores above average on some innovation indicators including in-house product innovators with market novelties, and average on the climate change related indicators<sup>115</sup>.

Austria’s strong performance in innovation is also reflected in the construction sector, where **business enterprise R&D expenditure (BERD)** is above the 2011 level (Figure 9). In 2017<sup>116</sup>, BERD in the narrow construction sub-sector has grown by 61.8% since 2011<sup>117</sup>, reaching EUR 76.8 million. Similarly, BERD in the real estate activities sub-sector increased to EUR 2.0 million in 2017<sup>118</sup>, registering a significant increase of 275.5% since the 2011<sup>119</sup> level of EUR 0.5 million. In the professional, scientific and technical activities sub-sector, BERD grew by 20.2% from EUR 519.8 million in 2010 to EUR 624.7 million in 2017.

In 2020, Austria’s R&D expenditure stood at 3.2% of GDP compared to 2019 (3.1%). This slight increase in the intensity was due to the COVID-19 pandemic-related economic downturn in which the GDP of

Austria falling more than the R&D expenditure, leading to considerable increase in the intensity<sup>120</sup>.

Figure 9: Business enterprise R&D expenditure (BERD) per construction sub-sector in Austria (EUR m)



Source: Eurostat, 2021.

**Total R&D personnel** (full-time equivalents – FTE)<sup>121</sup> increased in the narrow construction, real estate activities and professional, scientific and technical activities sub-sectors over the 2011-2017<sup>122</sup> period. In 2017, the number of FTE in the real estate activities sub-sector stood at 17, representing the highest increase (+88.9%) since 2011 among the sub-sectors. It was followed by the professional, scientific and technical activities sub-sector (+47.6%), which employed 4,743 FTE in 2017 compared to 3,213 FTEs in 2011. Similarly, the number of FTE in the narrow construction sub-sector grew from 316 in 2011 to 401 in 2017 (+26.9%).

The number of construction-related patent applications in Austria stood at 125 in 2020, compared to 103 patents in 2010, marking a growth of 21.4%.

However, only two Austrian construction and materials firms rank within the top 1,000 EU companies by R&D, according to the 2020 EU Industrial R&D Investment Scoreboard<sup>123</sup>.

## Eco-innovation and digitalisation

According to the EU Eco-Innovation Index 2019, Austria ranked 5<sup>th</sup> with a score of 130, above the EU-28<sup>124</sup> average score of 100<sup>125</sup>.

In addition to **eco-innovation inputs**, Austria scored above the EU-28<sup>126</sup> average on four out of five indicators including socio-economic outcomes, eco-innovation activities, eco-innovation outputs and resource efficiency outcomes<sup>127</sup>.

As per the Digital Economy and Society Index (DESI) 2020, with a score of 54.3, Austria is ranked 13<sup>th</sup> among the EU-28<sup>128</sup> countries (average score: 52.5). Compared to the previous year, Austria improved its score in connectivity, human capital, the use of internet services, integration of digital technology and digital public services<sup>129</sup>.

According to the EIB Group survey on investment and investment finance 2020, 34.0% of firms in the Austrian construction sector are the least likely to have implemented digital technologies, either fully or partially, within their business.

In terms of innovation activity, 22.0% of the construction firms are least likely to innovate<sup>130</sup>.

With regards to policies in the area of innovation, energy efficiency and the building sector, the Austria Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK formerly BMVIT) launched the R&D programmes **Building of Tomorrow** and **City of Tomorrow**, as part of open4innovation<sup>131</sup>. These programmes focus on developing new technologies and technological systems, as well as urban services for the city of the future. It builds on the results of previous research, notably the predecessors “House of the Future” and “Energy systems of the future”<sup>132</sup>. “**baubehoerde.at**” is a notable project which is ongoing under the City of Tomorrow programme. The objectives of this project are to evaluate the potential and limitations of digitalising the building approval processes and to establish a Vision 2030 strategy for a digital building authority<sup>133</sup>.

According to a survey conducted for the European Commission on digitalisation in the construction sector published in April 2021, Austria has the highest adoption rate of using drones among the EU member states<sup>134</sup>.

The **Austrian Society for Construction Technology**, which brings together construction companies, developers, engineering firms as well as academia, aims at developing state-of-the-art concrete and construction technology. Among other activities, it sets up working groups together with the **Austrian Research Promotion Agency (FFG)** to launch research projects around the themes of material technology, construction processes and building construction<sup>135</sup>. The Economic Chamber of Commerce in Austria (Wirtschaftskammer Österreich) launched a new research company called the **Competence Centre for Construction Research (Kompetenzzentrum Bauforschung)**, in order to carry out research on the current trends and topics related to innovation and sustainability in the construction sector<sup>136</sup>.

Austria is in the research phase regarding national **BIM** (Building Information Modelling) implementation. Austria implemented BIM standards in 2015, and over the years **ASI** (Austrian standards) have developed many standards for the execution of BIM. These standards include **ÖNORM A 6241-1 and A241-2**. Nevertheless, BIM is not being adopted in the country as expected. Few contractors are capable of working with BIM and there are not enough BIM coordinators available<sup>137</sup>. Currently, 20.0% of SMEs use the BIM method in Austria. The percentage remains low mainly due to a lack of adequate training, resulting in a shortage of qualified staff<sup>138</sup>. Since 2018, BIM has been mandatory for budget control in the construction of public buildings. In accordance with a recommendation by the European Commission, BIM has been mandatory in Austria for tenders and public works contracts since 2020<sup>139</sup>.

The Austrian Chapter of buildingSMART<sup>140</sup> represents the worldwide initiative for Open BIM in Austria. It operates in coordination with the chapters in Germany and Switzerland, as well as buildingSMART internationally<sup>141</sup>.

The objective of buildingSMART Austria is to improve the quality and efficiency of construction projects in the real estate industry and in infrastructure projects<sup>142</sup>.

In order to tackle the problem of heterogeneity and inadequate quality in BIM training, buildingSMART Austria introduced the **BIM-Zert project** for the 2019-2020 period. Its objective is to develop a modular training model for different BIM

application groups. Participants complete the course with a certification test at the end of the “Professional Certification Program” of buildingSMART International<sup>143</sup>.

**In 2020, the Digital Finds City (*Digital Findet Stadt*) is an innovation laboratory founded for the digitalisation of the construction sector in Austria<sup>144</sup>.**

It focuses on Open BIM and Smart Buildings, i.e. buildings whose technical installations are digitally networked to allow automated control. The goal of the platform is to increase productivity in the Austrian construction and property development sector. The prime objective is to enhance the competitiveness of the local SMEs that account for around 90% of Austria’s construction and property development sector. It is scheduled to run until

2025 and is a headline project of the strategy “Vienna 2030 – Economy and Innovation”, which ties in with the Smart City Wien Framework Strategy<sup>145</sup>.

**In July 2020, the European Investment Fund (EIF) and UniCredit Bank Austria extended their 2019 guarantee agreement to provide subsidised loans for innovative companies with up to 3000 employees to support the restart of the economy after the COVID-19 pandemic crisis<sup>146</sup>.**

The agreement focuses on innovations in products, processes and services, production or delivery methods, organisation and processes. Innovations in digitisation have also been included. The total funding is EUR 500.0 million with maximum EUR 7.5 million loans for each company<sup>147</sup>.

## 6

# National and regional regulatory framework

## Policy schemes

In Austria, the Federal Republic is responsible for civil law regulation, including landlord and tenant law. It also addresses the level of rent within parts of the private market, condominium law and basic regulations on Limited Profit Housing Associations (LPHA). The nine *Länders* (provinces) of Austria are accountable for different forms of housing subsidy schemes, supervision of the LPHA, social welfare, regional planning and building codes. Their housing subsidy schemes include aid for individuals in terms of cash transfers (housing benefit; *Wohnbeihilfe*), subsidies for bricks and mortar (housebuilding subsidies; *Wohnbauförderung*) and subsidies for renovation and refurbishment<sup>148</sup>.

The social housing sector in Austria is formed by two segments of administratively allocated rental dwellings with market prices:

- the rental housing stock owned and managed by around 200 LPHAs (accounting for approximately 20.0% of the total housing stock)<sup>149</sup>
- the municipal rental housing stock (8.0% of all main residences, mainly concentrated in Vienna)<sup>150</sup>.

**The LPHAs build social housing (often with the financial support of housing subsidies) and subsequently rent under conditions defined under the Limited Profit Housing Act (*Wohnungsgemeinnützigkeitsgesetz*)<sup>151</sup>.**

The social housing sector in Austria is larger than in other countries and is directed towards lower and middle income households, especially in Vienna, where 62.0% of its citizens currently live in social housing. Almost one third of the 13,000 new apartments constructed in Vienna each year are

funded by the government and commissioned by housing associations<sup>152</sup>.

The **developers' competition** process, initiated in the 1990s, allows architects, lawyers and other housing experts sit on the panels that judge bids to build new social housing complexes. This ensures developers compete with each other to offer high-quality, energy-efficient homes in the social housing context<sup>153</sup>.

A savings scheme named *Bausparvertrag*, addresses housing policy for private persons and families. It provides a buildings society savings contract where households receive a state bonus worth 1.5% to 4% on the total amount to be saved (up to EUR 1,200 per year). This bonus is received within a pre-defined time period. The savings contract gives access to building society loans (*Bauspardarlehen*) at favourable conditions<sup>154</sup>.

Typically, housing subsidies are targeted at low and middle income groups, while specialised subsidies at the regional level address barrier-free housing for the elderly or disabled. For instance, in Vienna, elderly residents can apply for a grant of up to EUR 4,200 to serve for renovations, facilitating the accessibility of residential buildings<sup>155</sup>.

Vienna's housing council administers the **housing-ticket** (*Wohn-ticket*), designed to provide additional financing for the social housing stock. To be eligible, individual applicants must earn less than EUR 47,740 annual net income, or EUR 80,500 for a family of three in 2021<sup>156</sup>. The programme offers special assistance for young residents, below the age of 30, who have been living with their parents for over 10 years, as well as provisions for elderly people. The programme also includes a bonus for applicants who have been living in the city for over five years.

Despite the programmes in place, Austria does not have a national strategy to address homelessness and housing exclusion. This, to a large extent, is the responsibility of each of the nine federal provinces. In 2017, the total number of registered homeless people stood at 21,567, marking an increase of 21.0% since 2008. This included the 13,926 people who registered as homeless, and 8,688 who were living in institutions for the homeless<sup>157</sup>. In 2018, there was an increase of 5.4% in the total number of registered homeless people as compared to 2017 (22,741)<sup>158</sup>.

In December 2019, the European Investment Bank (EIB) and *Raiffeisenlandesbank Niederösterreich-Wien AG* (RLB NÖ-Wien), an Austria-based bank, announced the provision of EUR 300.0 million to finance affordable housing in Austria<sup>159</sup>. The proposed amount is to be channelled through RLB NÖ-Wien into the construction of social and non-profit housing over the next four years. The funds are earmarked for use in the provinces where demand for affordable housing is particularly high. The initiative will support the construction of around 1800 new housing units in greater Vienna and Lower Austria<sup>160</sup>.

**In August 2020, the EIB and Erste Bank (*Erste Bank der oesterreichischen Sparkassen AG*) entered into an agreement to provide EUR 300.0 million for social housing in Austria over the next three years. The agreement supports the construction of new subsidized or non-profit rental units. The money is primarily to be used in cities where the demand for affordable housing is particularly high<sup>161</sup>.**

## Building regulations

The **building regulations** in Austria fall under the responsibility of the nine Austrian regions, the *Länder*. Starting from different energy requirements in the respective building codes, the *Länder* and the federal state agreed on the development of a harmonised implementation of the energy performance of buildings in 2006. This process is managed by the Austrian Institute of Construction Engineering (OIB) and by a working group of representatives of the nine *Länder*, who agreed on common methods and requirements, fixed in OIB guidelines, which had to be implemented in each respective *Länder*<sup>162</sup>.

The building codes in Austria are set out by the governments of the nine Austrian regions. These codes are subsequently referred to the guidelines of the OIB<sup>163</sup>.

**The OIB guidelines serve as the basis for the harmonisation of building regulations and construction engineering regulations in Austria. They are issued by the OIB and adopted by the federal regions into their construction law<sup>164</sup>.**

The new Austrian government formed in 2020 proposed major changes to existing construction and real estate laws<sup>165</sup>. The proposed changes include:

- The federal government adopted the phasing out of oil-fired boilers in the building sector in a gradual manner. The plan started with phasing out the boilers for new buildings from 2020; then proceeding to replacement of boilers older than 25 years from 2025 and all boilers by 2035 at the latest.
- Regarding construction and renovation subsidies, the proposed law states that public subsidies for construction of residential buildings will only be granted if the project is built in an environmentally friendly way<sup>166</sup>.

These changes are expected to serve as incentives to promote investment in sustainable construction projects as well as the environmentally friendly refurbishment of existing objects. The changes would create a strong increase in the value of 'ecological' buildings<sup>167</sup>.

The Austrian **Recovery and Resilience Plan** includes measures relating to building renovation. These include:

- **Renewable Heating Law.** The law is built on an existing reform that banned heaters using fossil fuels in newly constructed buildings. The Renewable Heating Law regulates the phasing-out of outdated heating systems in existing buildings from 2025 onwards and encourages their replacement by renewable energy or district heating. It enters into force in the first quarter of 2022 in two installments.
- **Combating energy poverty.** The Climate Ministry (BMK) has adopted and published the RRP funding conditions and priorities in

the funding guidelines of the support scheme for thermal renovation in dwellings of low-income households. The funding guidelines ensure a minimum 30.0% average reduction in primary energy consumption of the buildings to be renovated.

- **Funding guidelines for the renovation of buildings in town centres** were adopted in the third quarter of 2021. Eligible projects include the thermal renovation of commercial and communal buildings, façade-greening projects, connection of buildings to high-efficiency district heating and recycling of brownfield land.
- **Development of a building culture programme-** The fourth building culture report was published in the third quarter of 2021. The reform is intended to set the basis for a change in building culture in Austria in the coming years and outlines concrete measures for a building culture programme. It will create better legal, financial and structural framework conditions for high-quality building.

### Insurance and liability related regulations

In Austria, professional indemnity insurance is mandatory by law for architects and consulting engineers. In general, parties from the construction sector are covered by insurance. The main insurance products available are third party liability

insurance for construction firms, Contractors' All Risk insurance, civil liability insurance of the building owner, combined insurance packages for property developers and insurance of damage to building machinery and equipment<sup>168</sup>.

Construction contractors in Austria are subject to the **Austrian Trade Act** (section 94, No. 5 for national contractors and article 373a for foreign contractors of the EU). Under these regulated terms, liability insurance is mandatory and must cover personal and material damage. As per the regulation (published in August 2013), it is also required to have insurance liability for financial losses. The insured amount of damage per insured event must be a minimum of EUR 1.0 million, but not limited to that amount, depending on the company's revenue. The annual insured amount (aggregate limit) needs to be between EUR 3.0 million and EUR 15.0 million. The insurer must comply with mandatory regulations in order to be officially allowed to provide liability insurance in Austria<sup>169</sup>.

The conditions for non-binding liability insurance are published by the Austrian Insurance Association. These policies cover the general conditions of insurance for the construction sector (**BW 2010**) and the general (**AHVB 2005**) and additional (**EHVB 2005**) conditions for liability insurance. These general conditions concerning the construction sector offer insurance coverage for the building contractor's supplies and actions, consisting of construction parts, materials and compounds limited to the sum insured at the insured's location<sup>170</sup>.

## 7

# Current status and national strategies to meet Construction 2020 objectives

## TO 1 – Investment conditions and volumes

Total **investment by the broad construction sector**<sup>171</sup> has been stable from 2010 to 2019 (Figure 10). Investment by the narrow construction sub-sector increased by 14.6% over the 2010-2019<sup>172</sup> period, reaching EUR 1.5 billion. Similarly, investment by the real estate activities sub-sector increased by 4.4%, from EUR 19.5 billion in 2010 to 20.3 billion in 2019<sup>173</sup>.

In parallel, **investment in intellectual property products** by the narrow construction sub-sector increased by 98.4%, from EUR 183.7 million in 2010 to EUR 364.4 million in 2019<sup>174</sup>. Similarly, investment by the real estate activities sub-sector for this category increased by 16.6%, reaching EUR 88.0 million in 2019<sup>175</sup> compared to EUR 75.5 million in 2010.

Figure 10: Investments by the Austrian broad construction industry between 2010 and 2020 (EUR million)



Source: Eurostat, 2021.

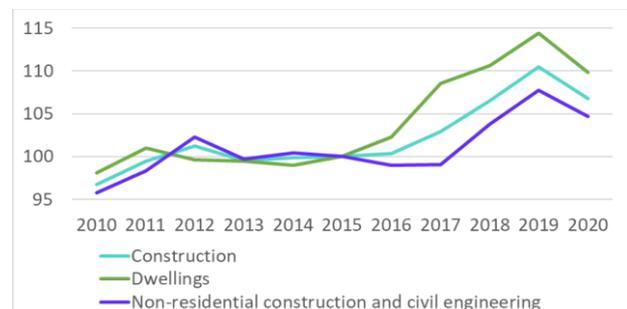
The **investment index in the broad construction sector**<sup>176</sup> has exhibited an upward trend over the 2010-2020 period with an overall increase of 10.4% (Figure 11). The growth was primarily driven by the investment in dwellings by the whole economy and non-residential construction and civil engineering,

which experienced growth of 12.0% and 9.3% respectively over the reference period.

In absolute terms, **investment in the broad construction sector** totalled EUR 44.4 billion in 2019<sup>177</sup>, out of which EUR 18.5 billion were invested in dwellings and EUR 25.9 billion in non-residential buildings and civil engineering<sup>178</sup>.

Investment in broad construction sector between 2010 and 2020 **↑ 10.4%**

Figure 11: Investment index in the Austrian construction sector between 2010 and 2020 (2010=100)



Source: AMECO, 2021.

Total **inland infrastructure investment**<sup>179</sup> as a share of GDP has remained stable throughout the 2012-2019<sup>180</sup> period, standing at 0.6% of GDP (against 0.8% of GDP in 2010). Between 2010 and 2019<sup>181</sup>, investment in railway and inland waterways infrastructure decreased by 10.3% and 59.1% respectively<sup>182</sup>. In contrast, investment in road infrastructure increased by 44.1% over the same reference period, reaching EUR 562.0 million in 2019<sup>183</sup>.

Investment in inland waterways infrastructure between 2010 and 2019 **↓ 59.1%**

**Investment in rail and road infrastructure maintenance** increased over the 2010-2019 period<sup>184</sup>. Specifically, railway infrastructure maintenance grew by 65.4%, from EUR 344.0 million to EUR 569.0 million, and road maintenance marked an increase of 34.5%, growing from EUR 559.0 million in 2010 to EUR 752.0 million in 2019<sup>185</sup>.

Investment in railway infrastructure maintenance between 2010 and 2019

↑ 65.4%

The **Transport Plan for Austria** (*Gesamt-verkehrsplan für Österreich*) defines the country's transport policy and sets its objectives and priorities until 2025<sup>186</sup>. In particular, the initiative **Target Network 2025+** (*Zielnetz 2025+*), launched in 2011, is focused on the sustainable development of the railway network and constitutes a key element of overall transport strategy. The investments are aimed at providing further rail connections along the major axes between cities<sup>187</sup>. Target Network 2025+ plan was developed by ÖBB-Infrastruktur AG, in cooperation with the Federal Ministry of Transport, Innovation and Technology (BMVIT) and the Ministry of Finance together with external transport planners. The plan is gradually implemented via the network development plan of ÖBB-Infrastruktur AG and by individual route development plans<sup>188</sup>.

In 2016, Austria's federal government approved the Austrian Federal Railways' Infrastructure Investment plan for 2017-2022, which seeks to invest EUR 15.2 billion into ongoing construction projects, including the *Semmering* Base Tunnel, *Koralmbahn* Line and Brenner Base Tunnel, the rail network and the modernisation of stations over the next five years<sup>189</sup>.

In June 2020, *ÖBB Infrastruktur* agreed to invest EUR 1.1 billion in railway projects across three Austrian regions namely *Styria*, *Tirol* and *Vorarlberg*<sup>190</sup>. It will invest around EUR 460.0 million in the Styrian railway infrastructure, focusing on the maintenance of the network and major construction projects along the new southern route<sup>191</sup>.

Austria also benefits from EU support. In the current multiannual financial framework, the financial allocation from the EU cohesion policy funds for

Austria, including national co-financing, stands at EUR 3.0 billion. This is equivalent to around 0.1% of the country's annual GDP. By the end of 2019, Austria allocated around EUR 2.6 billion (roughly 88.0% of the total) to projects, of which around EUR 906.0 million have been spent<sup>192</sup>.

In November 2019, the EIB financed the "OEPNV GRAZ" project for rail and road infrastructure maintenance, with EUR 100.0 million. This project deals with the extension and enhancement of the tram infrastructure and improvement of the bus and tram fleet in Graz. The total cost of implementation is estimated to be around EUR 221.0 million<sup>193</sup>.

**In 2020, the EIB Group invested EUR 355.0 million in infrastructure<sup>194</sup>. In parallel, Austria also benefitted from investments from the European Fund for Strategic Investments (EFSI).**

As of December 2020, financing under EFSI amounted to EUR 2.0 billion and is set to trigger additional investments of EUR 6.8 billion. Under the infrastructure and innovation window, 27 projects have been approved, amounting to EUR 1.7 billion and are set to trigger EUR 5.0 billion in total investments. Under the SMEs window, 6 agreements have been approved, involving a total financing of EUR 374.0 million, and are set to trigger investments of up to EUR 1.7 billion<sup>195</sup>.

**As per the Austrian Recovery and Resilience Plan, the government plans to invest EUR 256.0 million in emission-free transport to support the transition from fossil-fuel powered buses to zero-emission buses through a large-scale rollout of electric vehicles and installing charging stations. The plan also includes investing EUR 543.0 million in expanding the electrified rail network between regions<sup>196</sup>.**

In October 2020, Austria's Council of Ministers approved the Federal Ministry for Climate Action, Energy, Environment, Mobility, Innovation and Technology's (BMK) plan for Austrian Federal Railways (ÖBB). The plan includes the investment of EUR 17.5 billion in the expansion and modernisation of rail infrastructure between 2021-2026. The funding will be provided to ÖBB Infrastruktur to improve urban, sub-urban and regional rail services. All domestic lines will also be electrified by 2035. This includes projects under the 2018-2023

framework, as well as EUR 8.0 billion in new investments<sup>197</sup>.

**In January 2021, OBB announced its intention to invest EUR 2.1 billion across rail networks in eight regions in Austria, in keeping with the plan approved in October 2020<sup>198</sup>.**

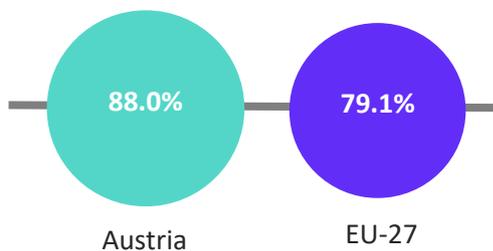
The funds are intended to contribute to the development of modern, high-performance infrastructure in Austria and increase the attractiveness and efficiency of rail travel for passengers and freight<sup>199</sup>.

**Household renovation spending** in Austria increased by 26.6% between 2010 and 2019<sup>200</sup>, from EUR 1.9 billion to EUR 2.4 billion. This is well below the EU-27 average of EUR 73.7 billion. Renovation spending as a share of disposable income has remained stable in 2019<sup>201</sup> standing at 1.0%, just as it did in 2010. This is slightly above the EU-27 average of 0.9%. This could be partially explained with income growth and strong consumer confidence favouring spending.

## TO 2 – Skills

In Austria, **vocational education and training (VET)** enjoys one of the highest participation rates in the EU. In 2018<sup>202</sup>, participation in VET stood at 68.4%, compared to the EU-27 average of 48.4%. Similarly, the **employment rate among recent VET graduates** is high at 88.0% in 2019, above the EU-27 average of 79.1%<sup>203</sup>. Despite the fact that the **share of early leavers from education and training** increased from 7.3% in 2018 to 7.8% in 2019, it is still below the EU-27 average of 10.2%.

Employment rate of recent VET graduates, 2019



**Adult participation in learning** (aged 25-64]) stood at 14.7% in 2019, slightly below the 2018 level (15.1%) but above the EU-27 average of 10.8%<sup>204</sup>.

During 2019, the Federal Ministry for Digital and Economic Affairs introduced a review of apprenticeship programmes (*Lehrberufsscreening*)

to develop updated and new apprenticeship training content. It developed guidelines for the competence-oriented development of apprenticeships to inform all those accountable for the design, steering and implementation of competence-oriented job profiles, training and examination regulations<sup>205</sup>.

In the beginning of 2019, the Austrian Public Employment Service introduced the New Digital Skills initiative together with leading companies in five economic sectors including production, trade, tourism, construction and office/administration/IT. Its objective is to drive the adaptation of programmes and curricula in initial and continuing VET<sup>206</sup>.

The PORR Group, a leading construction company in Austria, offers commercial trainee programmes (ufBAU Business) for university graduates to get a first hands-on experience in the construction sector<sup>207</sup>.

The Austrian Recovery and Resilience Plan includes measures for providing upskilling and reskilling opportunities for people who became unemployed during the COVID-19 pandemic. The plan includes an investment of EUR 277.0 million<sup>208</sup>.

On 17 June 2020, the Austrian Federal Ministry of Education, Science and Research presented an 8-Point plan for digitisation in education. The plan aims at the preparation of all educators for digital and digitally supported teaching and learning; standardisation of processes at school; optimisation of the infrastructure framework and access to a digital end device for all students at the lower secondary level. A total of EUR 200.0 million will be invested up to 2022<sup>209</sup>.

## TO 3 – Resource efficiency / Sustainable construction

In Austria, the European Energy Efficiency Directive is implemented by the Austrian Energy Efficiency Act (*Energieeffizienzgesetz* - EEEffG). Under this act, Austria is increasing its energy efficiency efforts aiming for a final energy consumption of 1,050 Petajoules (PJ), and cumulative energy savings of 310 PJ by 2020<sup>210</sup>.

Austria has taken several initiatives to improve energy efficiency across sectors, in particular for buildings, such as the implementation of the

Ecodesign Directive. This has improved the energy efficiency of household appliances<sup>211</sup>.

According to the Energy Efficiency law, energy suppliers must achieve savings of 0.7% of the previous year's consumption, 40.0% of which must come directly from households. The law's strict requirements for building regulations and thermal renovation of buildings have also resulted in 50.0% more energy savings<sup>212</sup>.

These energy saving measures have contributed to a steady fall-off of energy intensity in the last decade. This has also resulted in a reduction in the overall energy consumption in 2018. Nevertheless, these measures are not enough to offset the increases in 2016-2017. Therefore, it is expected that Austria will not be able to meet its 2020 energy efficiency target<sup>213</sup>.

The Climate and Energy Funds provide financing for the installation of photovoltaic cells on residential buildings that contain at least two dwelling units. It is designed as a refund scheme to applicants, after the cells have been installed. In 2018, it provided a total of EUR 4.5 million in funding<sup>214</sup>.

The Energy Performance Certificate Law (*Energieausweisvorlagegesetz* - EAVG), adopted to implement the Directive on the Energy Performance of Buildings, stipulates that an **Energy Performance Certificate** (*Energieausweis*) must be provided during every building transaction (sale, lease, rental, etc.<sup>215</sup>). The certificates should contain information such as the building type, location, specific heating and cooling demands, primary energy demands, final energy demands, carbon dioxide emissions and energy efficiency classes (A++ to G)<sup>216</sup>.

Several sustainable construction initiatives have been launched across Austria. These include the Austrian Society for a Sustainable Building Economy (ÖGNI), the Austrian Programme on Technologies for Sustainable Development and Klimaaktiv<sup>217</sup>. The latter, Klimaaktiv, a climate protection initiative set up by the Austrian Ministry of Agriculture, Forestry, Environment and Water Management, launched the programme *Bauen & Sanieren* (Building and Refurbishment). It aims to foster energy-efficient building and utilisation of renewable sources of energy. As part of the scheme, the Klimaaktiv building standard was developed to promote ecological construction by assessing energy

performance; quality of planning and implementation; quality of building materials and construction; and core aspects of comfort and indoor air quality<sup>218</sup>. Since September 2020, there is a new edition of the Klimaaktiv criteria catalogues for all building categories, new construction and refurbishment. The new criteria catalogue now fundamentally excludes the use of fossil fuels in Klimaaktiv buildings and tightens the quality requirements in the area of energy efficiency<sup>219</sup>.

**In August 2021, the Austrian government has provided additional financing of EUR 20.0 million to the Climate and Energy Fund to support the installation of solar photovoltaic (PV) systems of up to 50 kW (kilowatt) against the backdrop of strong demand, thereby helping more small and mid-sized companies as well and individuals to switch to renewable energy from solar power<sup>220</sup>.**

The Austrian Sustainable Building Council (ÖGNI) is a non-governmental organisation, founded in 2009, for establishing sustainability in the construction and real estate sectors. It focuses on the certification of sustainable buildings – Blue Buildings<sup>221</sup>.

The objective of the ÖGNI is to demonstrate the added value of building certification to establish environmentally friendly and resource-saving buildings with high economic and social efficiency. It is also a cooperation partner of the DGNB (German Sustainable Building Council), whose certification system was adopted and adapted to Austria in 2009 and has been continuously developed since then. It is the only Austrian council that is an “established member” of the World GBC (World Green Building Councils)<sup>222</sup>.

In January 2020, Austria's new federal government announced its plan to equip 1.0 million roofs with solar panels by 2030 as part of its plan to achieve climate neutrality by 2040. Properties of any kind will be involved, and a funding for photovoltaics on other buildings, such as car parks, will soon be added. The decision is in line with the Solar4Buildings campaign, calling for photovoltaic panels to be installed on all new and renovated residential, commercial and industrial buildings in the EU<sup>223</sup>.

The Austrian federal government announced its economic stimulus package aimed at helping to overcome the COVID-19 crisis with key investments

in climate action. Substantial investments of EUR 540.0 million will be made in public transport in 2021 and 2022 for promoting sustainable and climate-friendly mobility. This includes the financing of an Austria-wide ticket for all forms of public transport. At the same time, the federal government will invest an additional EUR 300.0 million in public transport as a climate-friendly form of mobility. This money will primarily go to the expansion of infrastructure. An annual subsidy of EUR 10.0 million will also be provided for night trains starting in 2024<sup>224</sup>.

Another investment of EUR 2.4 billion will be made for the renovation of buildings/schools till 2030. It focuses on the renovation of the building substance and adaptation measures to improve the school functions, as well as the construction of new buildings. The main focus will be on ecological criteria/sustainable school construction<sup>225</sup>.

**The Recovery and Resilience Plan of Austria provides funding of EUR 159.0 million for energy efficiency of homes with the aim to support private households to replace oil and gas heating with more sustainable heating devices<sup>226</sup>.**

The plan supports the thermal renovation of dwellings of low-income households prone to energy poverty, and thus reduce their energy consumption and costs in a sustainable manner. The scheme involves an investment of EUR 50.0 million in at least 1000 thermal renovation projects approved by BMK under the support scheme by Q2 2023, and at least 2250 thermal renovation projects by Q4 2025.

Funding of a further EUR 20.0 million will be granted to support at least 1000 companies for their investments in thermal renovation until the first quarter of 2025. Both individual measures and comprehensive renovations are eligible for funding.

The plan also includes funding for renovation of buildings in town centres. EUR 17.5 million will be invested in at least 100 thermal renovation projects of companies and municipalities in town centres. These are to be completed by Q4 2023 and at least 250 (baseline 100) by Q2 2026. Also, EUR 17.5 million will be provided for at least 1150 projects for the connection of buildings to high-efficiency district heating, to be completed by Q4 2023 and at least 2490 (baseline 1150) by Q2 2026.

The renovation measures envisaged in the plan also include a EUR 13.9 million investment for the renovation of two historic buildings taking into consideration 'Federal Building Culture Guidelines'. It will lead to significant increase in the energy efficiency of both the buildings.

Advantage Austria and the Enterprise Europe Network organised an international conference on the **Future of Building 2021- Sustainability in the construction sector and B2B matchmaking event** in March 2021. The conference explored the issue of sustainability in the construction sector addressing topics such as energy-efficient construction, using hybrid construction materials and ecological and low-emission building materials<sup>227</sup>.

In January 2021, the Austrian bank *Raiffeisenlandesbank Niederösterreich-Wien* (RLB NÖ-Wien) received a loan totalling EUR 150.0 million from the European Investment Bank (EIB) to support green investments across Austria. The first EUR 50.0 million of the loan has been signed, with most of the funding being provided to small and medium-sized businesses (SMEs), especially those in the Vienna area and the Lower Austria region, to invest in sustainable projects. The funds can be used to support the construction of onshore wind, solar and hydropower projects, in addition to financing electric vehicles (EVs) and charging stations as well as the energy efficiency of companies and buildings<sup>228</sup>.

In April 2021, Graz University of Technology (TU Graz) and the Austrian Association for Building Materials and Ceramic Industries (Stones and Ceramics Association) contractually agreed on the establishment of an endowed professorship for sustainable construction. The association will fund the professorship for a period of three years, with the option of an extension. Content will include further development of methods for lifecycle-based sustainability assessment and on the implementation of greenhouse gas-free and climate-robust construction projects<sup>229</sup>.

## TO 4 – Single Market



**As per the EU Single Market Scoreboard 2020, Austria performs well in terms of trade integration in the single market for goods and services<sup>230</sup>.**

As per the report, Austria's transposition deficit stood at 0.7% in 2019, below the 1.0% threshold but still above the EU-28<sup>231</sup> average deficit of 0.6%. Its conformity deficit stood at 2.0% in 2019, above the previous year (1.1%) and the EU-28 average of 1.2%<sup>232</sup>. Due to limited use of the EU Pilot tool, Austria reported an increase in the number of infringement proceedings against it, reaching 35 pending cases in 2019. This is above the EU-28 average of 29 cases<sup>233</sup>.

In the context of Internal Market Information System, Austria performed very well in all the five indicators. Similarly, the country's trade integration in the single market for goods and services stood above the EU-28<sup>234</sup> average. Nevertheless, in terms of public procurement Austria's performance was unsatisfactory in 2019<sup>235</sup>.

As a first step, Austria has reviewed its public procurement rules to address its low performance on key aspects of effective procurement. In 2018, the Federal Act on Public Procurement laid down new rules for e-procurement and the open data source. Nonetheless, the share of public contracts for works, goods and services which got published by the Austrian authorities and entities under EU procurement legislation was only 2.1% of GDP. This is almost half the EU-28 average<sup>236</sup> of 4.1%<sup>237</sup>.

2018 was also marked by an investigation into price fixing in the Austrian construction sector, which resulted in 220 Austrian construction firms being under investigation<sup>238</sup>.

Austria has started to use public procurement in order to promote an ecological transition. Currently, Austrian public procurement stands at approximately EUR 40.0 billion a year. The country has also developed a toolbox for green public procurement. The government has also revised its action plan on sustainable public procurement to strengthen green public procurement<sup>239</sup>.

In terms of international equivalence of voluntary certification schemes, the SCC (Safety Certificate Contractors) and the VCA (*Veiligheid Gezondheit en Milieu Checklist Aannemers* - a certification for occupational safety) schemes are commonly recognised in Austria, Belgium and the Netherlands. Thanks to the requirements of simplification and mutual recognition in the Services Directive<sup>240</sup>, the acknowledgment of such schemes helps cross-border service providers.

## TO 5 – International competitiveness

According to the World Bank Doing Business 2020 report, Austria ranked 1<sup>st</sup> out of 190 countries in ease of trading across borders in 2019<sup>241</sup>.

As per the report, in Austria it takes 1 hour and zero hours to be documentary and border compliant, respectively. In terms of costs, business do not need to spend anything for both documentary and border compliance<sup>242</sup>.

The **internationalisation of construction products** in the Austrian construction sector has shown signs of growth for the past few years. **The export values of all construction-related products** increased from EUR 3.5 billion in 2010 to EUR 4.3 billion in 2020, marking an increase of 24.8%. Austria's share of exports of all construction-related products stood at 51.0% of the total production value in 2018, higher than the 2010 level of 43.9% and well above the EU-27 average of 11.3%. In 2019, the share reduced to 47.3%. In 2020, the share remained at the same level as 2019.

Export value of all construction-related products between 2010 and 2020  **24.8%**

The export value of architectural services experienced a decrease of 44.1% between 2010 and 2020, from EUR 10.4 million to EUR 5.8 million.

Export value of all architectural services between 2010 and 2020  **44.1%**

In the context of **inward FATS (foreign affiliates statistics)**<sup>243</sup>, value added at factor cost in the narrow construction sub-sector decreased by 9.7%, while it increased by 97.1% in the real estate activities sub-sector between 2010 and 2018<sup>244</sup>. Similarly, turnover in the narrow construction sub-sector declined by 6.7%, while it increased by 99.8% in the real estate activities sub-sector during the 2010-2018 period.

In terms of **outward FATS**<sup>245</sup>, turnover in the narrow construction sub-sector grew by 42.4%, while it declined by 30.1% in the real estate activities

sub-sector between 2010 and 2017. In contrast, the number of people employed in the narrow construction and real estate activities sub-sectors declined by 4.0% and 11.6% respectively during the same period.

According to the SME Fact Sheet 2021, internationalisation plays a key role in the Austrian economy making it one of the strongest exporters in Europe. Almost every second job is directly or indirectly dependent on internationalisation. 15.0% of Austrian SMEs export to non-EU countries (against 10.0% in the EU), selling their products and services in more than 200 countries, with start-ups being internationally-minded in particular<sup>246</sup>.

The Austrian government actively helps SMEs internationalise through various programmes like go-international, a joint initiative of the Federal Ministry for Digital and Economic Affairs (*Bundesministerium für Digitalisierung und Wirtschaftsstandort*) and the Austrian Federal Economic Chamber (*Wirtschaftskammer Österreich*). It was launched in 2003 with the aim to direct financial support to Austrian exporters and focuses on supporting structures for the internationalisation activities of start-ups and SMEs, as well as promoting Austria as an attractive business location. The programme was extended in 2019 with the addition of EUR 25.6 million for the next two years. The funding will focus on the areas of innovation and technology, value chains and digitalisation<sup>247</sup>.

The Federal Ministry for Digital and Economic Affairs also launched the initiative 'SDG Business Forum – Austrian Business and the Global Goals for Sustainable Development'. It aims to attract Austrian companies to new markets in emerging and developing countries by identifying the connecting factors between the core business of

Austrian companies and the Agenda 2030 for Sustainable Development. This creates a framework for strengthening international business engagement and thereby contributing to the achievement of the SDGs<sup>248</sup>.

According to the Small Business Administration (SBA) Fact Sheet 2019, during the 2018-2019 period, the Austrian government introduced two key measures. First, in December 2018, the Ministry for Digital and Economic Affairs adopted an internationalisation strategy, the foreign trade strategy (*Außenwirtschaftsstrategie*). It comprises of 63 measures as part of a roadmap to implement the EU's trade and investment agreement. It is also aimed at recruiting a skilled foreign workforce and at promoting Austria as a business location. It also supports start-ups and SMEs in their internationalisation efforts<sup>249</sup>.

The second initiative includes the expansion of the Global Incubator Network (GIN). GIN is a joint initiative by the *Forschungsförderungsgesellschaft* (FFG), and the Austrian Federal Promotional Bank (aws)<sup>250</sup>.

**GIN is a one-stop-shop for start-ups, investors and incubators. It connects the Austrian start-up ecosystem with international partners interested in Austrian and European markets<sup>251</sup>.**

It is focused on selected hotspots in Asia including Hong Kong, Israel, Japan, mainland China, Singapore and South Korea<sup>252</sup>.

According to Austrian government data, the COVID-19 pandemic-related disruptions in 2020 resulted in a significant decline in Austrian international trade, with total imports falling by 7.1% and exports declining by 8.5%. Still, the Austrian economy remains highly international with more than one-half of GDP linked to exports<sup>253</sup>.

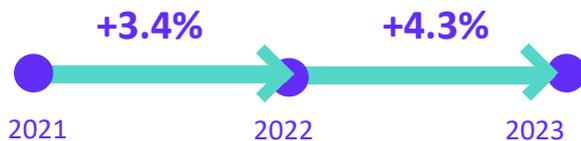
## 8

# Outlook

The Austrian economy is expected to return to pre-crisis levels around the end of 2021 or start of 2022 with the lifting of containment measures and the positive international economic conditions.

Austria's GDP is projected to increase by 3.4% in 2021 and then increase by 4.3% in 2022, reaching EUR 376.8 billion in 2022.

Expected GDP growth between 2020-2022



The **volume index of production** in the broad construction sector is expected to increase by 4.9 ip annually in 2021, mainly due to a 5.0 ip and 4.7 ip increase in the construction of buildings and the construction of civil engineering in 2021, respectively. Similarly, the volume index of production in the broad construction sector is expected to grow by 3.1 ip annually in 2022.

In turn, **turnover** in the broad construction sector is forecast to increase by 7.5% in 2021, reaching a value of EUR 106.5 billion. Similarly, the **total value added** of the broad construction sector is expected to grow by 7.6% in 2021, reaching EUR 42.4 billion.

Following the same trend, the number of **persons employed** in the broad construction sector is also expected to increase by 7.4% to 558,944 in 2021. This increase is projected to come from the all the sub-sectors including the real estate activities (+8.2%), the architectural and engineering activities (+7.8%), the narrow construction (+7.4%) and the manufacturing sub-sectors (+6.5%) in 2021.

Number of persons employed in the broad construction sector between 2021 and 2022



The main driver of the broad construction sector will continue to be the **housing market**. In August 2020, the EIB and Erste Bank (*Erste Bank der oesterreichischen Sparkassen AG*) entered into an agreement to provide EUR 300.0 million for social housing in Austria over the next three years. The agreement supports the construction of new subsidised and non-profit rental units. The financing is primarily to be used in cities where the demand for affordable housing is particularly high.

The **civil engineering** sector is expected to be driven by the government's focus on the development of road, port and railway infrastructure with the EU's support. The EUR 17.5 billion investment in the expansion and modernisation of rail infrastructure, as well as EUR 2.1 billion in rail networks in eight regions by national rail operator Austrian Federal Railways (ÖBB), are expected to support the development of Austria's broad construction sector in the upcoming years.

**In conclusion, the short-term outlook for the Austrian construction sector is positive. This is mainly due to the strength of EU investment in transport and energy infrastructure as well as investment in new housing, industrial and office buildings. The activity and investment levels will also remain elevated over the medium term for the construction sector<sup>254</sup>.**

# References

- 1 Please note that this 2020 data is a nowcast - please refer to the methodology notes for further details.
- 2 Please note that the share of each sub-sector in the value added of the broad construction sector should not be compared to the shares of the Gross Value Added in the GDP, since the GDP also includes taxes and excludes subsidies.
- 3 Please note that this 2020 data is a nowcast - please refer to the methodology notes for further details.
- 4 Data unavailable for subsequent years.
- 5 Data unavailable for subsequent years.
- 6 Report Linker, Construction in Austria- key trends and opportunities to 2025.  
<https://www.reportlinker.com/p05009207/Construction-in-Austria-Key-Trends-and-Opportunities-to.html>
- 7 Apparent labour productivity refers to the gross value added per person employed
- 8 Data unavailable for subsequent years.
- 9 Please note that this 2020 data is a nowcast - please refer to the methodology notes for further details.
- 10 Data unavailable for subsequent years.
- 11 The gross operating rate is the ratio of Gross Operating Surplus to Turnover and is an indicator of profitability.
- 12 Data unavailable for subsequent years.
- 13 Please note that this 2020 data is a nowcast - please refer to the methodology notes for further details.
- 14 Data unavailable for subsequent years.
- 15 WIFO reports on Austria, Strong economic upswing in Austria- economic outlook for 2021 and 2022  
[https://www.wifo.ac.at/jart/prj3/wifo/resources/person\\_dokument/person\\_dokument.iart?publikationsid=67367&mime\\_type=application/pdf](https://www.wifo.ac.at/jart/prj3/wifo/resources/person_dokument/person_dokument.iart?publikationsid=67367&mime_type=application/pdf)
- 16 Statistics Austria, Population forecast 2020: from 2021 more elderly people than children and teenagers.  
[https://www.statistik.at/web\\_en/press/124764.html](https://www.statistik.at/web_en/press/124764.html)
- 17 Global Property Guide, Austria's house price rises accelerating, July 2021  
<https://www.globalpropertyguide.com/Europe/Austria/Price-History>
- 18 World Bank Group, Doing Business 2020, Economy Profile for Austria,  
<https://www.doingbusiness.org/content/dam/doingBusiness/country/a/austria/AUT.pdf>
- 19 As the publication of the WB Doing Business report 2021 was not available at the time of the writing, this report relies on the data provided by the 2020 edition.
- 20 World Bank Group, Doing Business 2020, Economy Profile for Austria,  
<https://www.doingbusiness.org/content/dam/doingBusiness/country/a/austria/AUT.pdf>
- 21 Global Entrepreneurship Monitor, Entrepreneurial Behaviour and Attitudes, 2020  
<https://www.gemconsortium.org/data/key-aps>
- 22 European Commission, SME Performance Review- Additional documents- Database of SBA policy measures 2021  
[https://ec.europa.eu/growth/smes/sme-strategy/performance-review\\_en](https://ec.europa.eu/growth/smes/sme-strategy/performance-review_en)
- 23 European Commission, 2021 SME Country Fact Sheet for Austria <https://ec.europa.eu/docsroom/documents/46066>
- 24 Ibidem.
- 25 Ibidem.
- 26 World Bank Group, Doing Business 2020, Economy Profile for Austria,  
<https://www.doingbusiness.org/content/dam/doingBusiness/country/a/austria/AUT.pdf>
- 27 European Commission, SME Performance Review- Additional documents- Database of SBA policy measures 2021  
[https://ec.europa.eu/growth/smes/sme-strategy/performance-review\\_en](https://ec.europa.eu/growth/smes/sme-strategy/performance-review_en)
- 28 European Commission, SME Performance Review- Additional documents- Background documents of the SME fact sheet 2021  
[https://ec.europa.eu/growth/smes/sme-strategy/performance-review\\_en](https://ec.europa.eu/growth/smes/sme-strategy/performance-review_en)
- 29 Data unavailable for subsequent years.
- 30 Data unavailable for subsequent years.
- 31 Data unavailable for subsequent years.
- 32 According to Eurostat, construction services comprise Construction Abroad (code 250) and Construction in the Compiling Economy (code 251). They do not include architectural services, or engineering services.
- 33 Data unavailable for 2010 and 2011
- 34 Data unavailable for 2010 and 2011
- 35 SAFE Report 2020- Austria, <https://ec.europa.eu/docsroom/documents/43871>
- 36 Ibidem.
- 37 European Investment Bank- EIBIS 2020 – Austria overview, December 2020.  
[https://www.eib.org/attachments/efs/eibis\\_2020\\_austria\\_en.pdf](https://www.eib.org/attachments/efs/eibis_2020_austria_en.pdf)
- 38 Data unavailable for subsequent years.
- 39 Ibidem.

## Country Fact Sheet Austria

- 40 Eureporter- Commission approves Austrian guarantee schemes to support SMEs affected by #Coronavirus outbreak, April 2020. <https://www.eureporter.co/frontpage/2020/04/20/commission-approves-austrian-guarantee-schemes-to-support-smes-affected-by-coronavirus-outbreak/>
- 41 Global Property Guide, Austria's house price rises accelerating, July 2021 <https://www.globalpropertyguide.com/Europe/Austria/Price-History>
- 42 Data unavailable for 2020.
- 43 Global Property Guide, Austria's house price rises accelerating, July 2021 <https://www.globalpropertyguide.com/Europe/Austria/Price-History>
- 44 Ibidem.
- 45 Ibidem.
- 46 Statistik Austria, building permit, Table- Apartments and new buildings approved from 2010 to 2019, [http://www.statistik.at/web\\_de/statistiken/menschen\\_und\\_gesellschaft/wohnen/wohnungs\\_und\\_gebaeudeerrichtung/baubewilligungen/index.html](http://www.statistik.at/web_de/statistiken/menschen_und_gesellschaft/wohnen/wohnungs_und_gebaeudeerrichtung/baubewilligungen/index.html)
- 47 Data unavailable for 2020.
- 48 Statistik Austria, Completions, Table- Apartments and new buildings completed between 2005 and 2018, [http://www.statistik.at/web\\_de/statistiken/menschen\\_und\\_gesellschaft/wohnen/wohnungs\\_und\\_gebaeudeerrichtung/fertigstellungen/index.html](http://www.statistik.at/web_de/statistiken/menschen_und_gesellschaft/wohnen/wohnungs_und_gebaeudeerrichtung/fertigstellungen/index.html)
- 49 The overcrowding rate is defined as the percentage of the population living in an overcrowded household
- 50 Eurostat, Overcrowding rate. [http://ec.europa.eu/eurostat/product?code=ilc\\_lvho05a&language=en&mode=view](http://ec.europa.eu/eurostat/product?code=ilc_lvho05a&language=en&mode=view)
- 51 Eurostat, Severe housing deprivation rate is defined as the percentage of population living in the dwelling, which is considered as overcrowded, while also exhibiting at least one of the housing deprivation measures. Housing deprivation is a measure of poor amenities and is calculated by referring to those households with a leaking roof, no bath/shower and no indoor toilet, or a dwelling considered too dark.
- 52 The housing cost overburden rate is the percentage of the population living in households where the total housing costs represent more than 40 % of disposable income
- 53 World Economic Forum, The Global Competitiveness Report 2019. [http://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf)
- 54 Ibidem.
- 55 Data unavailable for 2020.
- 56 Data unavailable for 2020.
- 57 ABA Invest in Austria – Austria ranked second in railway investment, July 2019. <https://investinaustria.at/en/news/2019/07/investments-infrastructure.php#:~:text=Austria%20is%20well%20on%20track,rated%20second%20in%20the%20EU>
- 58 Railtech.com, OBB unveils major infrastructure projects <https://www.railtech.com/infrastructure/2020/02/03/obb-unveils-major-infrastructure-projects/>
- 59 Data unavailable for subsequent years.
- 60 Data unavailable for subsequent years.
- 61 Euler Hermes Collection Profile- Austria, [https://www.eulerhermes.com/content/dam/onemarketing/ehndbx/eulerhermes\\_com/en\\_gl/erd/collection/Austria.pdf](https://www.eulerhermes.com/content/dam/onemarketing/ehndbx/eulerhermes_com/en_gl/erd/collection/Austria.pdf)
- 62 Data for previous years not available
- 63 Oesterreichische Nationalbank- Financial Stability Report, June 2021. <https://www.oenb.at/en/Publications/Financial-Market/Financial-Stability-Report.html>
- 64 Statistics Austria, Bankruptcies decreased again sharply in the first quarter of 2021; registrations increased slightly [https://www.statistik.at/web\\_en/press/125951.html](https://www.statistik.at/web_en/press/125951.html)
- 65 Coronavirus: Strabag closes all its Austrian construction sites, March 2020. <https://www.constructionglobal.com/construction-projects/coronavirus-strabag-closes-all-its-austrian-construction-sites>
- 66 STRABAG gradually resumes work on construction sites in Austria <https://americahighways.com/2020/03/27/strabag-resumes-work-austria/>
- 67 Solid order backlog, results affected by COVID-19, August 2020. <https://porr-group.com/en/press/press-release/news/porr-half-year-report-2020/>
- 68 Atradius- Payment Practices Barometer, Austria: Businesses express confidence in 2021 domestic economy, November 2020. <https://group.atradius.com/publications/payment-practices-barometer/austria-2020-businesses-confident-in-2021-domestic-economy.html>
- 69 Ibidem.
- 70 Ibidem.
- 71 Ibidem.
- 72 SAFE Report 2020, [https://ec.europa.eu/growth/access-to-finance/data-surveys\\_en](https://ec.europa.eu/growth/access-to-finance/data-surveys_en)
- 73 Ibidem.
- 74 Ibidem.
- 75 CRIBIS Dun & Bradstreet- Payment Study 2020, <https://hello.bisnode.com/rs/145-JUC-481/images/Payment-Study-2020-cs.pdf>
- 76 Ibidem.
- 77 Ibidem.
- 78 Ibidem.
- 79 Atradius- Payment Practices Barometer, Austria: Businesses express confidence in 2021 domestic economy, November 2020. <https://group.atradius.com/publications/payment-practices-barometer/austria-2020-businesses-confident-in-2021-domestic-economy.html>
- 80 Ibidem.
- 81 Ibidem.

## Country Fact Sheet Austria

- 82 Ibidem.
- 83 Ibidem.
- 84 Ibidem.
- 85 Intrum: European Payment Report 2021  
<https://www.intrum.com/publications/european-payment-report/european-payment-report-2021/>
- 86 As the EU-27 average data was not available, the EU-28 average was used for comparative purposes.
- 87 Ibidem.
- 88 Ibidem.
- 89 Intrum: European Payment Report 2020, Special Edition COVID-19 White Paper  
<https://www.intrum.com/publications/european-payment-report/european-payment-report-2021/>
- 90 Euler Hermes- Collection Profile Austria.  
[https://www.eulerhermes.com/content/dam/onemarketing/ehndbx/eulerhermes\\_com/en\\_gl/erd/collection/Austria.pdf](https://www.eulerhermes.com/content/dam/onemarketing/ehndbx/eulerhermes_com/en_gl/erd/collection/Austria.pdf)
- 91 World Bank Group, Doing Business 2020. <https://www.doingbusiness.org/content/dam/doingBusiness/country/a/austria/AUT.pdf>
- 92 As the publication of the WB Doing Business report 2021 was not available at the time of the writing, this report relies on the data provided by the 2020 edition.
- 93 The warehouse in this example is defined as a structure for general storage activities, with two stories, above ground and with total constructed area of approx. 1,300 square meters. The ground, on which the warehouse is built is owned by the company that will use it and valued at 50 times income per capita. There are architectural and technical plans prepared for the warehouse, which are also taken into account and counted as procedures if their preparation requires obtaining further documentation or getting prior approvals from external agencies. Finally, in this example the warehouse takes 30 weeks to construct, excl. all delays due to administrative and regulatory requirements.
- 94 World Bank Doing Business Report 2020, Economy Profile Austria,  
<https://www.doingbusiness.org/content/dam/doingBusiness/country/a/austria/AUT.pdf>
- 95 Obtain a building permit refers to a sub-process of the building permit system, that needs to be completed in order to obtain the actual building permit. This information is provided to allow comparability between the countries. For more precise information, the reader is invited to consult the methodology (hyperlink of WB methodology) and the conditions of the concrete case.
- 96 World Bank Doing Business Report 2020, Economy Profile Austria,  
<https://www.doingbusiness.org/content/dam/doingBusiness/country/a/austria/AUT.pdf>
- 97 Data unavailable for 2020.
- 98 Data unavailable for 2020.
- 99 migration.gv.at, Austria-wide shortage occupations,  
<https://www.migration.gv.at/en/types-of-immigration/permanent-immigration/austria-wide-shortage-occupations/>
- 100 European Commission, Country Report Austria 2020, February 2020,  
<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0519&from=EN>
- 101 Migration and Labour Integration in Austria, January 2019, [https://www.donau-uni.ac.at/dam/jcr:27600429-4a71-4101-9f6d-20cf671b6f88/biffl\\_2019\\_sopemi\\_report\\_labour\\_migration\\_austria\\_2017-18\\_final.pdf](https://www.donau-uni.ac.at/dam/jcr:27600429-4a71-4101-9f6d-20cf671b6f88/biffl_2019_sopemi_report_labour_migration_austria_2017-18_final.pdf)
- 102 European Investment Bank- EIBIS 2020 – Austria overview, December 2020.  
[https://www.eib.org/attachments/efs/eibis\\_2020\\_austria\\_en.pdf](https://www.eib.org/attachments/efs/eibis_2020_austria_en.pdf)
- 103 Ibw research brief, demand for/ lack of skilled labour in Austria in 2020. <https://ibw.at/en/library/id/523/>
- 104 Ibidem.
- 105 Data unavailable for subsequent years.
- 106 Eurostat, generation of waste-by-waste category, hazardousness and NACE Rev. 2 activity  
<https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>
- 107 European Commission, Resource efficient use of mixed wastes – improving management of construction and demolition waste  
[https://ec.europa.eu/environment/system/files/2021-01/resource\\_efficient\\_uses\\_mixed\\_waste\\_Final\\_Report.pdf](https://ec.europa.eu/environment/system/files/2021-01/resource_efficient_uses_mixed_waste_Final_Report.pdf)
- 108 Social enterprises in Austria launch project to help re-use construction materials, <https://www.rreuse.org/social-enterprises-in-austria-launch-project-to-help-re-use-construction-materials/>
- 109 Ibidem.
- 110 Data unavailable for 2020.
- 111 Data unavailable for 2020.
- 112 Analysis of the recovery and resilience plan for Austria, June 2021.  
<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021SC0160&qid=1624626088799>
- 113 European Commission, Austria's recovery and resilience plan, June 2021  
[https://ec.europa.eu/info/system/files/austria-recovery-resilience-factsheet\\_en.pdf](https://ec.europa.eu/info/system/files/austria-recovery-resilience-factsheet_en.pdf)
- 114 European Commission, European innovation scoreboard 2021- Austria, <https://ec.europa.eu/docsroom/documents/45904>
- 115 Ibidem.
- 116 Data unavailable for subsequent years.
- 117 Data unavailable for 2010.
- 118 Data unavailable for subsequent years.
- 119 Data unavailable for 2010.
- 120 Statistics Austria, Expenditure on research and development stagnated in 2020 [http://www.statistik.at/web\\_en/press/125847.html](http://www.statistik.at/web_en/press/125847.html)
- 121 A full-time equivalent (FTE) is a unit to measure employed persons in a way that makes them comparable, although they may work a different number of hours per week. The unit is obtained by comparing an employee's average number of hours worked to the average

number of hours of a full-time worker. A full-time person is therefore counted as one FTE, while a part-time worker gets a score in proportion to the hours worked.

- 122 Data unavailable for 2010.
- 123 The 2020 EU Industrial R&D Investment Scoreboard,  
[https://iri.jrc.ec.europa.eu/scoreboard/2020-eu-industrial-rd-investment-scoreboard#field\\_data](https://iri.jrc.ec.europa.eu/scoreboard/2020-eu-industrial-rd-investment-scoreboard#field_data)
- 124 As the EU-27 average data was not available, the EU-28 average was used for comparative purposes.
- 125 European Commission, Eco-innovation in Austria, EIO Country Profile, 2019.  
[https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio\\_country\\_profile\\_2018-2019\\_austria.pdf](https://ec.europa.eu/environment/ecoap/sites/default/files/field/field-country-files/eio_country_profile_2018-2019_austria.pdf)
- 126 As the EU-27 average data was not available, the EU-28 average was used for comparative purposes.
- 127 European Commission, Eco-innovation in Austria, EIO Country Profile, 2018. [https://ec.europa.eu/environment/ecoap/indicators/index\\_en](https://ec.europa.eu/environment/ecoap/indicators/index_en)
- 128 As the EU-27 average data was not available, the EU-28 average was used for comparative purposes.
- 129 European Commission- Digital Economy and Society Index (DESI) 2020: Austria,  
[https://ec.europa.eu/newsroom/dae/document.cfm?doc\\_id=66906](https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=66906)
- 130 European Investment Bank- EIBIS 2020 – Austria overview, December 2020.  
[https://www.eib.org/attachments/efs/eibis\\_2020\\_austria\\_en.pdf](https://www.eib.org/attachments/efs/eibis_2020_austria_en.pdf)
- 131 Open4innovation is a learning innovation tool of the BMK. The targeted provision of research results from publicly funded from Fast Track to Innovation (FTI) forms the basis of this innovation tool. This makes it possible to facilitate new research, gain fascinating insights and draw conclusions for innovation, as well as to create new co-operations.
- 132 Federal Ministry, Republic of Austria. <https://nachhaltigwirtschaften.at/en/sdz/>
- 133 Federal Ministry, Republic of Austria. <https://nachhaltigwirtschaften.at/en/sdz/projects/baubehoerde-at.php>
- 134 European Construction Sector Observatory- Analytical Report- Digitalisation in the construction sector, April 2021  
<https://ec.europa.eu/docsroom/documents/45547>
- 135 The Austrian Research Promotion Agency (FFG), <https://www.ffg.at/en>
- 136 Competence Centre for Construction,  
[https://www.forschung--bau-at.translate.goog/%C3%BCber-uns/aufgaben-ziele-strategie/?x\\_tr\\_sl=de&x\\_tr\\_tl=en&x\\_tr\\_hl=en&x\\_tr\\_pto=nui,sc](https://www.forschung--bau-at.translate.goog/%C3%BCber-uns/aufgaben-ziele-strategie/?x_tr_sl=de&x_tr_tl=en&x_tr_hl=en&x_tr_pto=nui,sc)
- 137 BIM adoption around the world: how good are we? December 2018. <https://www.geospatialworld.net/article/bim-adoption-around-the-world-how-good-are-we/>
- 138 buildingSMART, <https://www.buildingsmart.co.at/bim-zert/>
- 139 UK Construction online, who's winning BIM adoption game in Europe?  
<https://www.ukconstructionmedia.co.uk/features/whos-winning-bim-adoption-game-in-europe/>
- 140 buildingSMART is an open, neutral and international not-for-profit organization. buildingSMART is the worldwide industry body driving the digital transformation of the built asset industry. buildingSMART is committed to delivering improvement by the creation and adoption of open, international standards and solutions for infrastructure and buildings.
- 141 Ibidem.
- 142 Ibidem.
- 143 Ibidem.
- 144 Ein Service der, Stadt Wien, Platform for digital innovation in the construction industry  
<https://translate.google.com/translate?hl=en&sl=auto&tl=en&u=https%3A%2F%2Fsmartcity.wien.gv.at%2Fen%2Fdigital-findet-stadt%2F&prev=search>
- 145 Ibidem.
- 146 European Commission, EIF and UniCredit Bank Austria provide EUR 500.0 million in subsidized loans for innovative companies with up to 3000 employees [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_20\\_1397](https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1397)
- 147 Ibidem.
- 148 Institute for Real Estate Construction and Housing Ltd. Vienna / Austria, <http://iibw.at/index.php/en/housing-policy>
- 149 Housing Policy in Austria, May 2019. [http://www.ectp-ceu.eu/images/stories/Gen-assemblies/Madrid-May2019-conference/Housing%20Policy%20in%20Austria-Gerhard%20Vittinghoff%20-%20Madrid\\_may2019.pdf](http://www.ectp-ceu.eu/images/stories/Gen-assemblies/Madrid-May2019-conference/Housing%20Policy%20in%20Austria-Gerhard%20Vittinghoff%20-%20Madrid_may2019.pdf)
- 150 CEJSH, privileged but challenged: the state of social housing in Austria in 2018,  
<http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.ddeee87a-698f-4f64-bc3f-00ca49426226>
- 151 CEJSH, Privileged but challenged: the state of social housing in Austria in 2018,  
<http://cejsh.icm.edu.pl/cejsh/element/bwmeta1.element.ddeee87a-698f-4f64-bc3f-00ca49426226>
- 152 Vienna's Affordable Housing Paradise, February 2019. [https://www.huffingtonpost.in/entry/vienna-affordable-housing-paradise\\_n\\_5b4e0b12e4b0b15aba88c7b0?ri18n=true](https://www.huffingtonpost.in/entry/vienna-affordable-housing-paradise_n_5b4e0b12e4b0b15aba88c7b0?ri18n=true)
- 153 Ibidem.
- 154 Arbeiterkammer Wien, Bausparen. <https://wien.arbeiterkammer.at/beratung/konsumentenschutz/geld/sparen/Bausparen.html>
- 155 Wohnnet, Förderung für barrierefreien Umbau, January 2019. <https://www.wohnet.at/finanzieren/foerderungen/umbau-barrierefrei-foerderung-9470311>
- 156 Wohnberatung Wien, Vienna Residential Ticket- Income Limits, 2021. <https://wohnberatung-wien.at/footer/einkommenshoechstsgrenzen>
- 157 National strategies to fight homelessness and housing exclusion-Austria,  
<https://ec.europa.eu/social/BlobServlet?docId=21592&langId=en&~:text=In%20Austria%2C%20there%20is%20no,of%20the%20nine%20federal%20provinces.>
- 158 Feantsa, Country Fiche- Austria, November 2020  
[https://www.feantsa.org/public/user/Resources/country\\_profiles/AT/AT - Country Profile 2020.pdf](https://www.feantsa.org/public/user/Resources/country_profiles/AT/AT - Country Profile 2020.pdf)

- 159 European Investment Bank- Austria: EIB and RLB NÖ-Wien promote affordable housing, December 2019.  
<https://www.eib.org/en/press/all/2019-337-eib-and-rlb-no-wien-promote-affordable-housing>
- 160 Ibidem.
- 161 Erste Group, EIB promises Erste Bank EUR 150 million for affordable housing in Austria  
<https://www.erstegroup.com/en/news-media/press-releases/2020/08/17/eib-promises-erste-bank-150-million-euros-for-affordable-housing-in-austria>
- 162 EPBD Implementation in Austria, <https://www.buildup.eu/sites/default/files/content/CA3-National-2012-Austria-ei.pdf>
- 163 Ibidem.
- 164 The OIB (Austrian Institute of Construction Engineering), <https://www.oib.or.at/en/homeen>
- 165 International Bar Association, Austria: new government promotes green building  
<https://www.ibanet.org/article/B33BB6C8-3A2B-43E6-8285-283D696A877C>
- 166 Ibidem.
- 167 Ibidem.
- 168 ELIOS- Liability and insurance regimes in the construction sector: national schemes and guidelines to stimulate innovation and sustainability,  
<http://www.elios-ec.eu/sites/default/files/pdf/Eliosreporton27MemberStates.pdf>
- 169 Lexology- At a glance: construction contracts and insurance in Austria, June 2020.  
<https://www.lexology.com/library/detail.aspx?g=d4faf973-71cb-47bd-97f7-84e95c95f415>
- 170 Ibidem.
- 171 This includes total investment by the construction and real estate sub-sectors, defined as gross fixed capital formation, i.e. acquisitions minus disposal, of total fixed assets (e.g. machinery and equipment, vehicles, dwellings and other buildings).
- 172 Data unavailable for 2020.
- 173 Data unavailable for 2020.
- 174 Data unavailable for 2020.
- 175 Data unavailable for 2020.
- 176 This includes total investment (i.e. gross fixed capital formation) in dwellings and non-residential construction and civil engineering by investors in the general economy (e.g. industry, financial and non-financial services, households, agricultural sector, etc.).
- 177 Data unavailable for 2020.
- 178 The indicator gross fixed capital formation in non-residential and civil engineering refers to the Eurostat indicator «Other buildings and structures»
- 179 According to the OECD, inland infrastructure includes road, rail, inland waterways, maritime ports and airports and takes account of all sources of financing.
- 180 Data unavailable for 2020.
- 181 Data unavailable for 2020.
- 182 Data unavailable for 2020.
- 183 Data unavailable for 2020.
- 184 Data unavailable for 2020.
- 185 Data unavailable for 2020.
- 186 Federal Ministry for Transport, Innovation and Technology, Gesamtverkehrsplan für Österreich.  
[https://www.bmvit.gv.at/verkehr/gesamtverkehr/gvp/downloads/gvp\\_vorwort.pdf](https://www.bmvit.gv.at/verkehr/gesamtverkehr/gvp/downloads/gvp_vorwort.pdf)
- 187 OBB Group, Future Rail, Target Network 2025+, <https://infrastruktur.oebb.at/en/company/for-austria/future-rail-target-network>
- 188 Target Network 2025+: Austria's rail development master plan, June 2017. <https://www.globalrailwayreview.com/article/70544/target-network-2025-austria-rail-plan/>
- 189 International Railway Journal (IRJ), Austria plans €15bn rail infrastructure investment, October 2016.  
<http://www.railjournal.com/index.php/europe/austria-plans-E152bn-rail-infrastructure-investment.html>
- 190 Railway Pro- EUR 1 billion railway investment in three Austrian states, March 2020. <https://www.railwaypro.com/wp/eur-1-billion-railway-investment-in-three-austrian-states/>
- 191 Ibidem.
- 192 European Commission, Country Report Austria 2020, February 2020,  
<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0519&from=EN>
- 193 EIB, November 2019, <https://www.eib.org/en/press/all/2019-294-environmentally-friendly-transport-in-graz-eib-provides-eur-100-million>
- 194 Austria and the EIB. <https://www.eib.org/en/projects/regions/european-union/austria/index.htm>
- 195 Investment Plan: Austria - December 2020.  
[https://ec.europa.eu/info/strategy/priorities-2019-2024/economy-works-people/jobs-growth-and-investment/investment-plan-europe/investment-plan-results/investment-plan-austria\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/economy-works-people/jobs-growth-and-investment/investment-plan-europe/investment-plan-results/investment-plan-austria_en)
- 196 European Commission, Austria's recovery and resilience plan, June 2021  
[https://ec.europa.eu/info/system/files/austria-recovery-resilience-factsheet\\_en.pdf](https://ec.europa.eu/info/system/files/austria-recovery-resilience-factsheet_en.pdf)
- 197 International Railway Journal, EUR 17.5 billion investment plan for Austria network accepted  
<https://www.railjournal.com/news/e17-5bn-investment-plan-for-austrian-network-accepted/>
- 198 International Railway Journal, OBB outlines EUR 2.13 billion investment in eight regions in 2021  
<https://www.railjournal.com/financial/obb-outlines-e2-13bn-investment-in-eight-regions-in-2021/>
- 199 Ibidem.
- 200 Data unavailable for 2019.
- 201 Data unavailable for 2019.

- 202 Data unavailable for subsequent years.
- 203 European Commission, Education and Training Monitor 2020 Austria,  
<https://op.europa.eu/en/publication-detail/-/publication/b6837464-2494-11eb-9d7e-01aa75ed71a1/language-en/format-PDF/source-171314305>
- 204 Ibidem.
- 205 European Commission, Country Report Austria 2020, February 2020,  
<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0519&from=EN>
- 206 Ibidem.
- 207 PORR, aufBAU Business - Commercial trainee program for university graduates, <http://www.porr.at/index.php?id=4115&L=1>
- 208 European Commission, Austria's recovery and resilience plan, June 2021  
[https://ec.europa.eu/info/system/files/austria-recovery-resilience-factsheet\\_en.pdf](https://ec.europa.eu/info/system/files/austria-recovery-resilience-factsheet_en.pdf)
- 209 European Commission, Austria, national reforms in education  
[https://eacea.ec.europa.eu/national-policies/eurydice/content/national-reforms-school-education-1\\_en](https://eacea.ec.europa.eu/national-policies/eurydice/content/national-reforms-school-education-1_en)
- 210 European Commission, Country Report Austria 2020, February 2020,  
<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0519&from=EN>
- 211 Ibidem.
- 212 Ibidem.
- 213 Ibidem.
- 214 Wohnet, KLIENT Förderung für Photovoltaik. <https://www.wohnet.at/finanzieren/foerderungen/flimafonds-photovoltaik-foerderung-32719419>
- 215 Bundeskanzleramt Österreich, General information about the energy performance certificate.  
<https://www.help.gv.at/Portal.Node/hlpd/public/content/21/Seite.210400.html>
- 216 Bundeskanzleramt Österreich, Inhalt eines Energieausweises.  
<https://www.help.gv.at/Portal.Node/hlpd/public/content/21/Seite.210460.html>
- 217 AUSTRIA: Construction-related laws and regulations. [http://www.ecoenergy-bg.net/Success\\_Guide/part2/construction\\_laws.pdf](http://www.ecoenergy-bg.net/Success_Guide/part2/construction_laws.pdf)
- 218 Federal Ministry for Agriculture, Forestry, Environment and Water Management, Klimaaktiv – The Austrian Climate Protection Initiative. December 2015.  
[http://www.klimaaktiv.at/dms/klimaaktiv/publikationen/klimaaktiv/ka\\_english/ka\\_allgemein\\_englisch\\_boa.pdf](http://www.klimaaktiv.at/dms/klimaaktiv/publikationen/klimaaktiv/ka_english/ka_allgemein_englisch_boa.pdf)
- 219 Klimaaktiv, Sustainability is in demand! <https://www.klimaaktiv.at/english/buildings/Buildings.html>
- 220 Renewables Now, Austria to support small-scale solar PV projects with EUR 20.0 million  
<https://renewablesnow.com/news/austria-to-support-small-scale-solar-pv-projects-with-eur-20m-751197/>
- 221 World Green Building Council- Austrian Sustainable Building Council  
<https://www.worldgbc.org/member-directory/austrian-sustainable-building-council>
- 222 World Green Building Council- Buildings & Energy Brochure.  
[https://worldgbc.org/sites/default/files/O%CC%88GNI\\_Brochure\\_Buildings%26Energy.pdf](https://worldgbc.org/sites/default/files/O%CC%88GNI_Brochure_Buildings%26Energy.pdf)
- 223 Forbes, Austria pledges to fit 1.0 million roofs with solar by 2030.  
<https://www.forbes.com/sites/emanuelabariroglio/2020/01/13/austria-pledges-to-fit-1-million-roofs-with-solar-by-2030/?sh=6a0970633920>
- 224 Platform for redesign 2020, Austria  
<https://platform2020redesign.org/countries/austria/>
- 225 Ibidem.
- 226 European Commission, Austria's recovery and resilience plan, June 2021  
[https://ec.europa.eu/info/system/files/austria-recovery-resilience-factsheet\\_en.pdf](https://ec.europa.eu/info/system/files/austria-recovery-resilience-factsheet_en.pdf)
- 227 Advantage Austria, Future of building 2021: Sustainability in the construction sector- International conference and B2B matchmaking event, 23 March 2021, online  
<https://www.advantageaustria.org/om/news/20210308-Future-of-Building-2021.en.html>
- 228 Energy Live News, Austrian Bank and EIB to support sustainable projects.  
[https://www.energylivenews.com/2021/01/04/austrian-bank-and-eib-to-support-sustainable-projects-with-e300m-funding/?\\_cf\\_chl\\_jschl\\_tk\\_\\_=pmd\\_84qN9OLPi8InLm5srhAQKtzs8ROI6nJkR1npwefjQig-1633568264-0-ggNtZGzNAqWjcnBszQI9](https://www.energylivenews.com/2021/01/04/austrian-bank-and-eib-to-support-sustainable-projects-with-e300m-funding/?_cf_chl_jschl_tk__=pmd_84qN9OLPi8InLm5srhAQKtzs8ROI6nJkR1npwefjQig-1633568264-0-ggNtZGzNAqWjcnBszQI9)
- 229 EurekAlert, Sustainable Construction: Austrian stones and ceramics association endows TU Graz professorship  
<https://www.eurekalert.org/news-releases/900042>
- 230 European Commission, EU Single Market Scoreboard 2020 – Austria.  
[https://ec.europa.eu/internal\\_market/scoreboard/performance\\_by\\_member\\_state/at/index\\_en.htm](https://ec.europa.eu/internal_market/scoreboard/performance_by_member_state/at/index_en.htm)
- 231 As the EU-27 average data was not available, the EU-28 average was used for comparative purposes.
- 232 Ibidem.
- 233 Ibidem.
- 234 As the EU-27 average data was not available, the EU-28 average was used for comparative purposes.
- 235 European Commission, EU Single Market Scoreboard 2020 – Austria.  
[https://ec.europa.eu/internal\\_market/scoreboard/performance\\_by\\_member\\_state/at/index\\_en.htm](https://ec.europa.eu/internal_market/scoreboard/performance_by_member_state/at/index_en.htm)
- 236 As the EU-27 average data was not available, the EU-28 average was used for comparative purposes.
- 237 European Commission, Country Report Austria 2020, February 2020,  
<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0519&from=EN>
- 238 Reuters, UPDATE-1 Austria widens investigation into price fixing in construction industry.

- <https://www.reuters.com/article/austria-construction-price-fixing/update-1-austria-widens-investigation-into-price-fixing-in-construction-industry-idUSL5N1TA2LF>
- 239 European Commission, Country Report Austria 2020, February 2020,  
<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020SC0519&from=EN>
- 240 European Commission, Simplification and mutual recognition in the construction sector under the Services Directive. November 2015.  
<http://bookshop.europa.eu/en/simplification-and-mutual-recognition-in-the-construction-sector-under-the-servicesdirectivepbET0116073/?pgid=lq1Ekni0.1ISR00OK4MycO9B0000lmlnlpjsk;sid=egc3ESlmSpk3EHSUXQyptkADN2QpY4DlBlc=?CatalogCategoryID=9cQKABstREYAAAEjkJEY4e5L>
- 241 World Bank Doing Business 2020 report, Economy Profile Austria.  
<https://www.doingbusiness.org/content/dam/doingBusiness/country/a/austria/AUT.pdf>
- 242 Ibidem.
- 243 Inward FATS describe the overall activity of foreign affiliates resident in the compiling economy. A foreign affiliate within the terms of inward FATS is an enterprise resident in the compiling country over which an institutional unit not resident in the compiling country has control.
- 244 Data unavailable for subsequent years.
- 245 Outward FATS explains the activity of foreign affiliates abroad controlled by the compiling country.
- 246 European Commission (2021). 2021 SME Fact Sheet – Austria.  
<https://ec.europa.eu/docsroom/documents/46066>
- 247 Ibidem.
- 248 Ibidem.
- 249 European Commission (2019). 2019 SBA Fact Sheet – Austria.  
<https://ec.europa.eu/docsroom/documents/38364/attachments/2/translations/en/renditions/native>
- 250 Ibidem.
- 251 Global Incubator Network Austria, <https://www.gin-austria.com/>
- 252 Ibidem.
- 253 International Trade Administration, Austria- Country Commercial guide  
<https://www.trade.gov/country-commercial-guides/austria-market-overview>
- 254 Fitch Solutions, Austria infrastructure report. <https://store.fitchsolutions.com/infrastructure/austria-infrastructure-report>