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2024 Country Report – Belgium

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on the economic, social, employment, structural and budgetary policies of Belgium

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European Commission

Belgium

2024 Country Report

#EURO at 25



ECONOMIC AND EMPLOYMENT SNAPSHOT

Growth remains resilient

The Belgian economy continues to grow thanks to resilient private consumption and strong corporate investment ([1]). The automatic indexation of wages and social benefits helped households maintain their purchasing power. Private consumption is expected to increase further as consumers face lower price increases and employment is set to continue rising. Investment also recovered strongly on the back of a rebound in corporate investment.

Inflation and wages closely track energy prices due to automatic indexation. Headline inflation fell to 2.3% in 2023, reflecting the fast impact of falling wholesale gas and electricity prices on retail prices, along with the effect of government measures to limit prices. The withdrawal of these measures is expected to push up headline inflation, resulting in a projected increase to 4% in 2024. As energy prices are expected to increase at a slower pace in 2025, inflation is forecast to be 2.3%.

Private debt remains high, **even though credit growth has slowed.** High financing costs are expected to continue holding back investment in residential construction. After a sharp fall in 2023, exports and imports are set to gradually recover and return to robust growth in 2025. However, net exports are expected to remain a drag on GDP growth in 2024. Overall, GDP growth is forecast to reach 1.3% in 2024 and 1.4% in 2025.

([1]) The cut-off date for the data used to prepare the 27 Country Reports was 15 May 2024.

Pressure on public finances is rising

Belgium's public finances have deteriorated structurally since the COVID-19 pandemic. Although Belgium has progressively withdrawn the temporary measures taken to tackle the energy crisis by 2024, the budget deficit is forecast to remain high and keep rising, from 4.4% of GDP in 2023 to 4.7% of GDP in 2025. The Federal Planning Bureau (2023) estimates the deterioration of the structural deficit in 2023 at 2 percentage points compared to pre-pandemic projections for the same year. This reflects the combined effects of permanent discretionary measures taken since 2019 (e.g. to increase the minimum pension and increase public health-sector wages) and the structural impact of inflation on the budget deficit, which boosted current primary spending following multiple rounds of spending indexation ([2]).

Spending pressures will constrain fiscal space in the coming years at a time of high public investment needs. In the years ahead, the government will grapple with the challenge of rebuilding fiscal space and restoring the medium-term fiscal sustainability amid rising spending pressures. The pressure stems from rising social spending caused by demographic ageing and higher average borrowing costs. At the same time, public investment remains low compared with other EU countries and stepping up the

([2]) The automatic indexation of social spending and public sector wages concerns nearly half of all primary government spending. Most other items of primary spending are also adjusted to price developments. Between 2021 and 2025, the indexation of government spending is expected to have outpaced that of the GDP deflator, pushing the spending-to-GDP ratio (for a detailed discussion, see Cornille et al. 2023).

Box 1:

Belgium's competitiveness – in brief

Belgium is taking action to improve its performance in terms of competitiveness. It performs well on trade integration, research and innovation spending, the circular economy and on the rate of digital technology adoption by companies. Belgium's recovery and resilience plan tackles some of the challenges related to improving the business environment. In particular, the measures involve digitising the public administration, improving cybersecurity and connectivity and streamlining permitting to boost investment in renewable energy installations.

However, the following competitiveness challenges remain:

- **labour shortages**, notably in technical professions, in a context of a low employment rate and high disincentives to work, which curb productivity growth;
- **innovation being highly concentrated** in a few sectors and the low level of take-up of new technology, which is a drag on productivity growth;
- **low business dynamism**, a high level of regulation in services and a low share of high-growth enterprises, which are also potential drags on productivity.

level of public investment will be a priority to finance the green and digital transitions.

To stabilise the debt-to-GDP ratio, it is crucial to consolidate government finances. Reducing Belgium's high debt-to-GDP ratio will require consolidation in the years ahead. Although high inflation has enabled the government debt ratio to fall in 2022, maintaining unchanged policy would result in government debt increasing continuously over the next decade from 105.2% in 2023 to 119% of GDP in 2034 (see Annex 21). Revenue and expenditure measures should be flanked by action to improve fiscal coordination, to strengthen the medium-term framework and to review the design of fiscal rules to tackle enduring pressures on government finances. Boosting productivity growth and employment could also help restore fiscal sustainability.

Structural challenges remain

Low labour market participation and regional disparities in labour market outcomes persist. Although overall Belgium performs well on implementing the European Pillar of Social Rights (see Annex 14), the employment rate in 2023 (72.1%) is still below the EU average (75.3%) and the gap has widened since 2019. The government has taken measures to boost employment and to improve the reintegration of the increasing number of workers in long-term sick leave in the labour force. Nevertheless, in 2023 the activity rate was low at 76.1% against the EU average of 80.0%, with significant regional disparities (see Annex 14). Belgium also has a high level of inactivity among older workers and disadvantaged groups.

Wage growth remained strong in 2023, leading to a significant rebound in real wages as inflation abated. The automatic indexation of salaries helped Belgian workers maintain their purchasing power despite moderate labour productivity gains. Nominal hourly wages increased by 7.4% in 2023 ([3]), well above the 5.3% average in the three neighbouring countries (DE, FR and NL). This is because the smoothed health index, the price measure used to index wages, captures volatile components of the consumer price basket (most energy and food products). This leads to a strong responsiveness of wages to energy price shocks (especially large negative terms of trade ones).

The strict implementation of the wage setting framework mitigates the risk of lasting competitiveness losses from the increase in nominal wages. Enforcing the

([3]) Central Economic Council, 2024, Technical report of the secretariat on maximum margins available, 2023.

Box 2:

UN Sustainable Development Goals (SDGs)

Belgium performs above the EU average and is making further progress on all SDGs on competitiveness and productivity (SDGs 4, 8 and 9). Despite having good quality education systems, improving young people's basic skills remains a challenge. Job creation has increased in recent years but the employment rate is low. R&D intensity is well above the EU average, but the sizeable R&D tax reliefs could be more efficient. Challenges remain in certain areas such as affordable and clean energy (SDG 7) and the country lags behind on SDG 15 (life on land). Belgium also made progress on several indicators related to employment (SDG 8). However, it also lags behind on reducing inequalities (SDG 10), in ensuring that people with a migrant background participate in the labour market and in tackling inequalities in educational outcomes linked to students' socio-economic and migrant background (see Annex 1).

Out of 17 indicators, Belgium is below the EU average on 9 SDGs. In addition to those mentioned above, it underperforms on environmental goals (SDGs 2, 6, 11, 12 and 13) and on macroeconomic stability (SDG 17).

wage rules (which limit real negotiated wage increases to avoid cost differentials with key export competitors) is expected to progressively offset the swift reaction of nominal wages to changes in consumer prices. According to the Central Council of the Economy, the gap in hourly nominal wage costs from Belgium's three neighbours is set to narrow from 2.9% in 2023 to 1.8% in 2024 ([4]). This implies that, after no negotiated real wage increases over 2023-2024, there will be no room for real increases in the new wage norm (extent to which the average real salary cost of a company may increase) until 2025-2026 (see the 2023 Country Report for Belgium). In recent years, real wage growth has remained broadly in line with the limited productivity growth.

Belgium ranks high on labour productivity compared with the EU average, although growth has been below average since the 2000's ([5]). The reasons behind the low productivity growth include labour and skills shortages, the low take-up of innovation and workers not moving to more productive sectors. The lack of business dynamism and a comparatively high level of regulation in services also hold back productivity growth (see Box 1 and Annex 12). In addition to these factors, which weaken Belgium's competitiveness, the country has huge investment needs to ensure that the electricity grids and distribution networks keep pace with the decarbonisation of electricity production and of industry and with the twin green and digital transition.

Contributing to EU climate neutrality by 2050 and achieving Belgium's 2030 targets will require significant investments in the green transition. Even taking into account the planned policies and measures, Belgium is 4.4 percentage points away from its 2030 effort sharing target to reduce emissions by - 47% below 2005 levels (Annex 6). Closing this gap will require extra measures and significant efforts. Furthermore, Belgium's projected renewable energy and energy efficiency are significantly below the national contribution needed under EU legislation (see Annex 6).

([4]) Idem.

([5]) 2023 Report from the National Productivity Board.

IMPLEMENTATION OF KEY REFORMS AND INVESTMENTS USING EU INSTRUMENTS

Funding from the Recovery and Resilience Facility (RRF) and cohesion policy is mutually reinforcing Belgium's efforts to boost its competitiveness and foster sustainable growth. In addition to the EUR 5.3 billion of RRF funding described in Annex 3, cohesion policy provides Belgium with EUR 2.5 billion for the 2021-2027 period. Combined support from these two instruments is equivalent to around 1.33% of the country's 2023 GDP, against the EU average of 5.38% of GDP (see Annex 4).

Under its recovery and resilience plan (RRP), Belgium has launched important policy measures that are expected to improve the country's competitiveness. In particular, the plan envisages major reforms to digital connectivity, lifelong learning (see Box 3), sustainable transport, renewable energy and spending reviews to boost the efficiency and sustainability of public spending. Belgium has also made substantial investments in digitalising its public administration and justice systems, in an offshore energy island to connect renewable energy, in charging infrastructure for electric vehicles, in education and in housing for vulnerable people.

The implementation of Belgium's recovery and resilience plan is significantly delayed. Belgium has submitted one payment request, corresponding to 20 milestones and targets in the plan (see Annex 3). The Commission assessment is ongoing.

Cohesion policy funding helps tackle Belgium's growth and competitiveness challenges and reduce the country's territorial and social disparities. Under the 2014-2020 cohesion programming period, support focused on research and innovation, business development, energy efficiency, access to the job market, lifelong learning and social inclusion. For the current 2021-2027 programming period, the support focuses on promoting competitiveness, the green transition and social cohesion. For example, it will help fund building renovations, circular economy projects, the shift away from carbon-intensive activities (under the Just Transition Fund), research and innovation, and measures to stimulate employment, notably for vulnerable groups of people.

Investing in people to boost economic growth and resilience

RRF reforms and investments, together with cohesion policy funds, focus on social inclusion for vulnerable groups. Under the RRF, the Brussels Capital Region adopted a reform that seeks to promote the sustainable integration of vulnerable groups of people into the job market, including jobseekers with a disability. The reform is complemented by an RRF investment setting out a path to sustainable integration for workers and jobseekers with disabilities. This sustainable integration pathway is taken up in the disability project run by the Brussels public employment service. It will involve creating a legislative framework with funding from the European Social Fund Plus to help match jobseekers with disabilities with employers.

Investing in energy efficiency

The RRF and cohesion policy funds support measures to accelerate the pace of energy-efficient building renovation. For instance, Belgium's RRP includes a reform amending the Brussels code on air, climate and energy (COBRACE) to bring in new

Box 3: **Combined action for more impactful EU funds**

To boost economic growth and maximise the impact of EU funding, Belgium's RRP includes reforms that support investments under other EU instruments and vice versa, creating important synergies and complementarities between the various funds. For example, to stimulate lifelong learning and to reduce skills mismatches, Belgium adopted an RRP reform giving all workers an individual right to training and providing incentives for firms to offer additional training. The European Regional Development Fund and the RRF help finance investments in training infrastructure and equipment to support the reform (see Annex 4).

obligations on the energy efficiency of existing and new buildings. The European Regional Development Fund helps achieve the ambitions of this reform by co-financing the energy-efficient renovation of public buildings in the Brussels Capital Region (see Annex 4). More broadly, the RRP provides extensive support for energy efficiency improvements to both public and private buildings through actions at federal and regional level. Nevertheless, significant action is still needed to decarbonise the building stock. Heating and cooling account for over 85% of Belgium's final energy consumption in the residential sector, of which only 9% is generated by renewable energy (see Annex 7).

Promoting better and greener mobility

RRF measures support a shift to more sustainable forms of transport with the aim of reducing congestion and pollution. For example, the revision of the federal 'mobility budget' scheme makes it easier (through simplification and more flexibility) for employers to offer their employees a budget to spend on a range of sustainable forms of transport to the workplace in exchange for giving up their right to a company car. Investments in bike storage in railway stations will help people combine different forms of transport.

The effect of these measures is boosted by several investments under the European Regional Development Fund, which co-financed the construction of bridges and tunnels to eliminate barriers on cycling routes in Flanders. Building bike-friendly infrastructure creates important links to give cyclists easier and safer access to the growing bike network in the region (see Annex 4). These measures will need to be stepped up and sustained, given that the transport sector still accounts for a large share of oil consumption. Final energy consumption in the transport sector increased by 3.7% in 2022 and traffic congestion is above the EU average (see Annexes 6 and 7).

Boosting the green transition with action through REPowerEU

Belgium's RRP now also includes a REPowerEU chapter containing measures to boost energy efficiency in buildings, decarbonise industry, develop a transport network for hydrogen and accelerate the roll-out of renewable energy. Examples are the reform of the appeal procedures of the Council of State, a new obligation to install solar panels on rooftops for large electricity consumers and public buildings in Flanders and a reform promoting onshore wind turbines in Wallonia. However, Belgium will need to further accelerate investments in this area to keep pace with EU climate and energy targets (see Annexes 6 and 7). For instance, although action is foreseen to reinforce the electricity distribution network in Wallonia, further modernisation will be needed to tackle the delayed roll-out of smart meters in Wallonia and Brussels. Additional investments in the capacity of Belgium's onshore electricity network are needed to cope with the surge in electricity demand, accommodate the increase in renewable energy sources and avoid grid congestion (see Annex 7).

FURTHER PRIORITIES AHEAD

Belgium faces additional challenges related to the tax and benefits system, skills mismatches, fiscal sustainability and the green transition. Tackling these challenges will help boost Belgium's long-term competitiveness and ensure the resilience of its economy. It will also help achieve the UN Sustainable Development Goals (see Annex 1).

It is important to tackle the challenges both at national and regional level to reduce regional disparities and improve the administrative and investment capacity in a balanced way across the country. Regional differences in terms of labour market outcomes and education (see Annex 17) hamper long-term, sustainable and inclusive growth.

Tackling competitiveness challenges

Innovation is concentrated in only a few sectors and large companies, which curbs widespread take-up and productivity growth. Belgium ranks as one of the EU's innovation leaders according to the European Innovation Scoreboard ([6]). Business spending on R&D is the highest in the EU (2.53% of GDP in 2022) but it is highly concentrated. A breakdown by company size reveals that companies with 500 employees or more account for almost half of all R&D spending, while companies with fewer than 10 workers (95% of all companies) account for only 5% of this spending ([7]). In addition, spending on innovation is focused in a few sectors, such as the pharmaceutical sector. This may be due to the design of R&D tax incentives in Belgium (see sub-section below). Another factor limiting the spread of innovation to the rest of the economy is low job mobility in Belgium ([8]), which may be due – among other elements – to high seniority pay and low pay transparency ([9]).

Low business dynamism and high trade restrictions in the service sector weaken productivity. Belgium has one of the lowest levels of business dynamism in the EU (see Annex 11). In spite of a recent increase, the rate of new businesses starting up remains low, notably for firms with employees. Moreover, the share of high-growth firms in Belgium is significantly below the EU average. Likewise, the exit rate of Belgian businesses and the number of bankruptcies are low, indicating that structurally unviable companies may stay in business too long (see Annex 12). High trade restrictions in the service sector may play a role in weakening business dynamism. The country shows one of the highest services trade restrictiveness indices for architecture, courier services, telecoms ([10]), logistics (customs brokerage and freight forwarding) and air transport. It also ranks high on service restrictions for construction, commercial banking, accounting services and to a lesser extent on engineering services. Lifting restrictions on regulated professions would also need to be addressed, in particular for architects, accountants, lawyers and estate agents (see Annex 12).

([6]) See the European Innovation Scoreboard (europa.eu).

([7]) Belgian Science Policy Office, Monitoring and Evaluation of Research and Innovation (MERI) database, https://meri.belspo.be/site/research_development_groups_en.stm.

([8]) https://economie.fgov.be/fr/themes/entreprises/tableau-de-bord-de-la/determinants-de-la/innovation/european-innovation-scoreboard.

([9]) Low pay transparency because of the relatively large share of fringe benefits and alternative wage forms.

([10]) The arrival of a fourth player in the telecoms market in summer 2024 may improve competition in this sector.

A high regulatory burden and complexity impairs Belgium's business environment. The administrative burden on firms is heavy, notably on tax and labour law. The compliance costs that SMEs face for labour and tax systems are comparatively high in Belgium (see Annex 19), in particular companies that need to manage multiple regional systems.

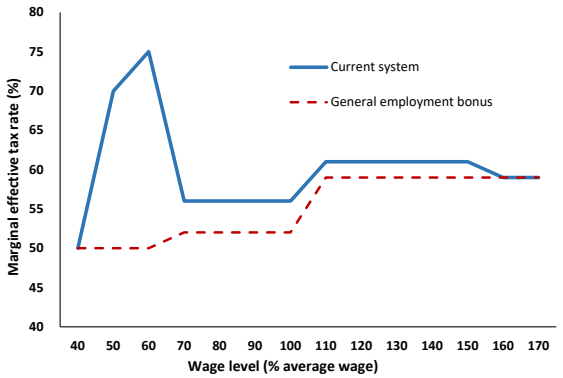
Belgium has a high level of dependency on imported fossil fuels, which dents its competitiveness and makes it particularly vulnerable to energy price hikes. Remedying this situation requires accelerating the pace of action on the energy transition. It would merit charting a pathway to reach the 2030 and 2050 climate policy objectives, including support to decarbonise industry and to help businesses transition to a net-zero economy. At the same time, measures will be needed to identify and phase out fossil fuel subsidies.

The Belgian economy's vulnerabilities to the effects of climate change hamper the business environment. For instance, the transport, energy and agriculture sectors are exposed to risks of water scarcity or flooding. Belgium will update its comprehensive national climate and vulnerability assessment in 2024. Water quality is highly affected by pollution from nutrients and pesticides and the conservation status of protected habitats and species in Belgium is a cause of serious concern. Both issues require action to meet the agreed EU goals. Nature-based solutions and sustainable water management are key to building climate resilience and to shielding the economy from the impacts of extreme weather events (see Annexes 6 and 7).

The tax and benefits systems need reform to boost competitiveness

Belgium levies high taxes on labour, which is a brake on the employment rate. The tax burden on labour (social contributions and income taxes) is well above the EU average at all wage levels, except for very low wage earners (50% of the average; see Annex 19). Even average income earners are subject to the highest income tax rates (45% and 50%). Although personal income taxes are already high compared with other countries, local authorities levy surcharges on personal income taxes, adding to the high tax burden. Some measures to increase the net income of low wage earners ([11]) also increase the high marginal tax rate for people earning between 60% and 80% of the average wage (up to 75% of income is taxed away; see peak on Graph 3.1). The High Council of Finance estimated that extending the in-work tax credit and social security contribution reduction to all private-sector employees would substantially reduce the 'low wage trap' ([12]). For second income earners, taxes on earnings and specific tax features such as the 'marital quotient' also greatly reduce the incentives to work.

Graph 3.1: **Marginal effective tax rate by wage level, single earner, 2020**



Source: High Council of Finance (2020)

Moreover, the design of social benefits discourages recipients from taking up work or from working more hours. Several non-cash benefits are not means-tested and linked to the unemployment status of beneficiaries, increasing the disincentives to work. Although unemployment benefits taper off over time, Belgium is the only Member State in which they are unlimited in time.

([11]) These measures include the job bonus in Flanders and in-work benefits for the long-term unemployed or interregional mobility at federal level.

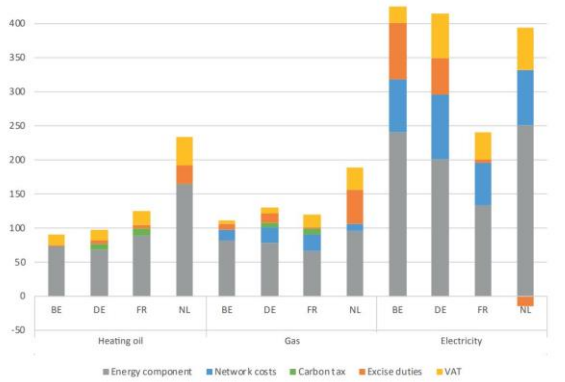
([12]) Adopting a general employment bonus (budgetary cost of 2.5% of GDP) would bring the tax burden on labour in Belgium close to the euro-area average. High Council of Finance, 2020, *Reducing the tax burden on labour and financing options*.

Moreover, unemployment benefits for the long-term unemployed are not means-tested. This may reduce the effectiveness of regional activation policies when combined with relatively lenient benefit eligibility conditions ([13]).

The heavy tax burden on labour is offset by many wage subsidies, leading to distortions. Special tax schemes such as meal vouchers, commuter subsidies, flexi-jobs or withholding tax exemption for overtime, R&D work and night/shift work (0.6% of GDP) are costly for the budget and tend to create inefficiencies, but their use has increased. Wage subsidies and other tax expenditure also make the tax system complex, which weighs on the business environment. Some income tax deductions (e.g. deductions for service vouchers to pay for household services such as cleaning) disproportionally benefit high-income earners. Moreover, there are tax incentives for several types of assets, like immovable property, which risk distorting resource allocation and potentially generates tax-induced over-investment ([14]) (see Annex 18).

High levels of R&D tax relief fail to reach companies with the highest growth potential. Belgium has one of the highest levels of government support for business R&D, mainly through tax relief. Studies ([15]) show that direct subsidies – rather than tax relief – would boost R&D spending in small start-ups and that the multiple R&D tax schemes ([16]) are not conducive to investment and innovation. Reforming the federal R&D tax schemes could improve the efficiency of public support (0.4% of GDP) and better allocate resources to high-growth businesses. The corporate tax system also includes other special tax schemes (e.g. tax shelter for audiovisual and film productions), which do not seem to be the most cost-efficient means of supporting specific sectors.

Graph 3.2: **Average price of household heating products, 2023 (EUR/MWh)**



Source: FPS Health and environment (2023)

Electricity prices are comparatively high for industry and households. Excise duties on gas and electricity were linked to market price levels (under the *cliquet system*), but gas and heating oil prices for households remain lower than electricity prices. In combination with high electricity network costs, this creates high price differences, hindering the switch to greener heating systems. A recent study ([17]) shows that, to encourage the use of heat pumps, the electricity price should not be more than 2.1 and 2.5 times the price of gas and heating oil respectively. The electricity price ratios are below these thresholds in France and the Netherlands, but well above them in Belgium (see Graph 3.2), despite several measures adopted by the Belgian authorities to reduce the electricity bill. The high administrative costs charged by electricity providers in Flanders and Wallonia also hinder energy sharing ([18]). The federal government has considered shifting charges from electricity to gas as of 2028 but keeping the price of heating oil unchanged. This would keep contributing to the already high level of fossil fuel subsidies.

([13]) OECD, 2018, How demanding are activation requirements for jobseekers?

([14]) OECD, 2018, *Taxation of household savings*, OECD Tax Policy Studies, 25

([15]) Schoonackers, R., 2020, *Tax incentives for R&D: Are they effective?* NBB Economic Review.

([16]) Partial exemption for private companies from paying the withholding tax for R&D work and R&D tax credit.

([17]) FPS Health and Finance, 2023, The landscape of carbon and energy pricing and taxation in Belgium.

([18]) In Brussels, energy sharing is managed by the distribution system operator, Sibelga.

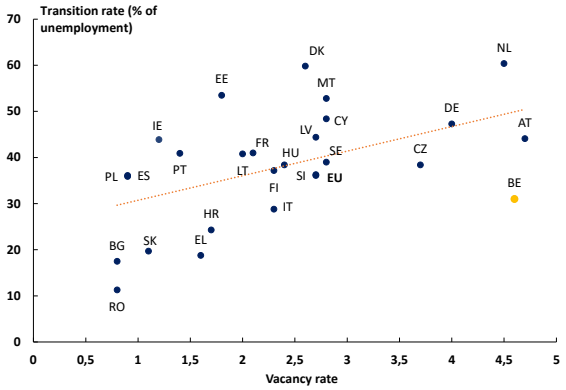
Fossil fuel subsidies are high and often take the form of tax relief. A recent report estimated federal direct fossil fuel subsidies to amount to EUR 12 billion (2.4% of GDP) ([19]) and indirect subsidies to more than EUR 2.6 billion in 2021 in Belgium. This persistent support for heating oil, natural gas and coal contradicts Belgium's commitments to reduce greenhouse gas emissions and improve air quality. So far, a plan with concrete actions to phase out fossil fuel subsidies is lacking.

The tax system still favours road transport, creating traffic congestion. Despite the recent measures taken, professional transporters still benefit from reduced excise rates on diesel. The design of vehicle registration and circulation taxes also creates adverse incentives in terms of car ownership and use. These tax features exacerbate congestion, especially in Brussels, one of the EU cities with the highest time lost in traffic. A recent study ([20]) shows that – unlike increased road infrastructure – smart road pricing (differentiated by time and place) reduces traffic volumes, saves travel time and delivers major environmental benefits. Policy options such as smart road pricing for private vehicles (already in place for lorries) ([21]) and improving suburban public transport could help reduce road congestion and boost the supply and use of other forms of transport.

High labour shortages and falling educational outcomes

Although job creation has increased, the employment rate is held back by an overall subdued and stagnating activity rate (76.1% vs the EU average of 80.0% in 2023 (aged 20-64)), particularly among disadvantaged groups (see Annex 14). Unemployment is at an historical low (5.3% of the labour force in 2023), but there are significant regional disparities (see Annex 17). Despite numerous jobs created in 2022 (around 100 000) and Belgium having the second highest job vacancy rate in 2023 in the EU, the employment rate is well below the national target of at least 80% of adults in employment by 2030. The transition rate to employment is below the EU average (see Graph 3.3), questioning the efficiency of activation measures.

Graph 3.3: **Job vacancy rate and transition from unemployment to employment, 2023**



Note: (1) For FR and DK: data on 10 employees or more in business economy
Source: European Commission

Labour shortages remain a pressing challenge, especially to achieving the green transition. Labour shortages are among the highest in the EU, with the job vacancy rate at 4.6% in 2023. Most of the job vacancies are in technical occupations, including healthcare (see Annex 16) and STEM (science, technology, engineering and mathematics) related jobs, which are needed for the accelerating green transition (see Annex 8). Labour shortages, which undermine Belgium's potential to boost competitiveness (see Annex 20), could be tackled by increasing the number of STEM graduates (16.4 per 1 000 inhabitants aged 20-29 vs 21.9 in the EU) and by strengthening the labour market relevance of vocational education and training (VET) in technical professions.

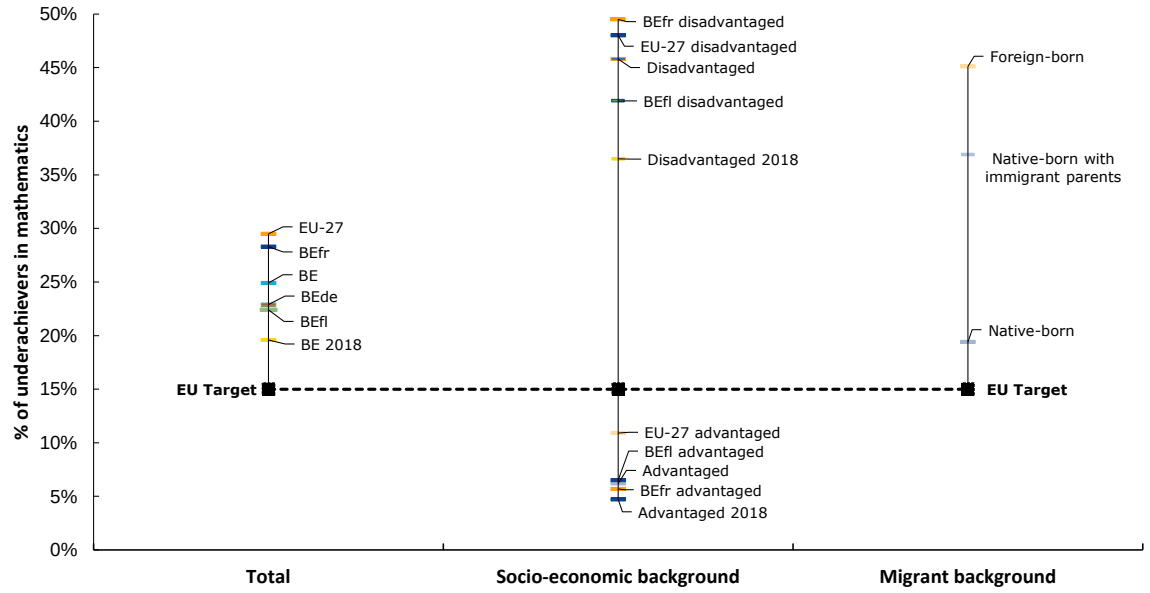
Effective activation policies are needed to better integrate disadvantaged groups. Given the high labour shortages, sizeable

([19]) FPS Finance, 2024, Inventory of federal fossil fuel subsidies.

([20]) Boussauw, K., 2023, Expanding the Brussels ring road and the myth of travel time savings.

([21]) OECD, 2021, OECD Environmental performance reviews: Belgium 2021.

Graph 3.4: **Share of underachievers in mathematics, by Community, socioeconomic and migrant background (PISA 2022)**



Source: OECD (2023) PISA 2022

hiring and wage subsidies do not seem to be the most cost-efficient policy to increase labour market participation. The efficiency of public employment services could be improved by refocusing support on helping jobseekers find a job ([22]). In addition, targeted measures are needed to better integrate disadvantaged groups in the labour market (including older people, people with disabilities, with low skills or with a migrant background). After the number of workers on long-term sick leave increased markedly between 2013-2021, the federal government took measures to help them reintegrate into the labour force.

Strengthening participation of adults in upskilling and reskilling could boost productivity. With only 34.9% ([23]) of adults participating in learning activities in 2022, Belgium is still far from its target of at least 60.9% by 2030. The share of adults in training is particularly low among low-qualified people (12.5% against the EU average of 18.4%). Incentives for adults, especially disadvantaged groups, are key for their activation on the labour market and to tackling labour shortages and skills mismatches.

Like in other EU countries, young people's basic skills worsened in Belgium, particularly for disadvantaged students. Despite Belgium spending more on education than its neighbouring countries, education outcomes are no better ([24]). The 2022 PISA study results show that 25% of 15-year-olds underperformed in mathematics, 25.3% in reading and 22.4% in science (see Annex 15). The share of low-achieving students in mathematics increased significantly since 2018 (19.6%) (see Graph 3.4), while the drop in performance in reading and science has been more gradual since 2012. The share of students underperforming varies by Community, with the widest performance gap registered in mathematics. In 2012, Belgium had the highest share of top performers in mathematics in the EU (19.5%), but performance has declined noticeably in all Communities over the last 10 years (11.5%). Since 2000, performance in mathematics has declined more among high-achievers than

([22]) VDAB external audit: https://www.vlaamsparlement.be/nl/parlementaire-documenten/gedachtewisselingen-hoorzittingen/1809473.

([23]) Eurostat - adult education survey (AES) in % of people aged 25-64.

([24]) OECD, 2022, Economic Surveys: Belgium.

among low-achievers, which indicates the need to maintain a focus on both performance and equity to ensure continued competitiveness in educational outcomes. The gap in underachievement between advantaged and disadvantaged students has also widened since 2018. A student's migrant background is also associated with a higher risk of underachievement. Belgium has the highest share of students who self-reported repeating at least one grade during their school career (primary and secondary education) in the EU, with a high share among disadvantaged students.

Teacher shortages affect students' educational outcomes. The sharp increase in the number of principals reporting problems of teacher shortages indicates an increased awareness and acuteness of the issue (see Annex 15). The increasing number of teachers leaving prematurely the profession, the difficult working conditions and the decrease in the number of new graduates are exacerbating the shortages ([25]). To keep teachers in the profession, it is essential to make it more attractive, for example by improving mentoring programmes for new teachers, providing job stability and continuous training adapted to evolving needs, and by pursuing the planned reforms.

Increasing ageing costs put public finances under pressure

The 2024 Ageing Report projects age-related spending in Belgium to increase by 5.1 percentage points (pps) of GDP between 2022 and 2070 ([26]). This is 0.5 pps of GDP more than in the 2021 Ageing Report. Spending on pensions, healthcare and long-term care is projected to increase by 3.5, 0.6 and 1.7 pps respectively over the period 2022-2070, while spending on education is projected to fall by 0.8 pp. By 2030, age-related spending is projected to increase by 0.9 pps of GDP, which indicates that age-related costs add on average 0.1 pp to the deficit each year. The projected increase in age-related costs will make it challenging to consolidate government finances and bring down the high level of debt.

Measures legislated in December 2020 (not included in the 2021 Ageing Report), are projected to increase spending by 0.6% of GDP in 2070. In the 2024 Ageing Report, the increase in spending on pensions between 2022 and 2070 is projected to be 1.2 pps of GDP higher than in the 2021 Ageing Report (rising to 3.5% of GDP from 2.3%). Measures legislated in December 2020 explain half of this increase in pension spending ([27]). The remaining half is explained by different underlying assumptions, notably productivity, demography and labour market.

Measures legislated in April 2024 (not included in the 2024 Ageing Report) only partially offset the increase in pension spending by the measures legislated in December 2020. Although the measures adopted in December 2020 are expected to increase spending by 0.6 pps of GDP by 2070, measures adopted in April 2024 are estimated to reduce spending on pensions by 0.2 pps of GDP by 2070. These measures include the reintroduction of a pension bonus to incentivise workers to remain longer in the labour market, the introduction of a cap on the adjustment of civil servants' pensions to changes in public-sector wages (significant savings are not expected before 2038) and the introduction of a condition of years of effective work to have access to the minimum pension. Further measures will be needed to put the pension system on a financially sustainable path. For instance, the favourable conditions under some special regimes in the

([25]) European Commission, 2023 Education and Training Monitor: Belgium.

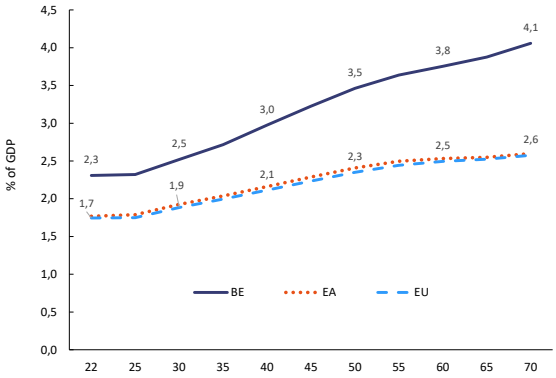
([26]) European Commission and Economic Policy Committee, 2024 Ageing report, available at: https://economy-finance.ec.europa.eu/publications/2024-ageing-report-economic-and-budgetary-projections-eu-member-states-2022-2070_en

([27]) These measures include increasing the minimum pension, abolishing the correction coefficients used to calculate the new pension in the self-employed scheme, increasing the minimum non-contributory pension and raising the wage ceiling used to calculate pensions.

public sector could be reviewed towards more convergence of pension regimes within the public sector.

In line with the ageing of the population, spending on long-term care is expected to increase substantially, as confirmed by the 2024 Ageing Report. In 2022, government spending on long-term care amounted to 2.3% of GDP (EU average 1.8%), which made Belgium one of the countries with the highest long-term care spending in the EU (see Graph 3.5). Spending on long-term care is projected to increase further by 1.7 pps of GDP by 2070 (against an average increase of 0.8 pps in the EU).

Graph 3.5: **Gross government spending on long-term care, 2022-2070 (% of GDP)**



Source: European Commission, 2024 Ageing Report

Despite the policy action taken, improving the financial sustainability of long-term care remains a challenge. The Brussels-Capital Region has adopted measures to narrow the gap between the supply of elderly care facilities and the needs of the elderly, and to limit the risk of a budget overrun by recovering unoccupied beds. Measures in the Walloon Region focus on improving the quality of long-term care spending rather than on tackling the expected cost increase. In Flanders, recent measures have started targeting cost-efficiency improvements. Further action is underway including a spending review, which is expected to lead to specific policy measures by mid-2024 to help contain long-term care spending below the threshold set in the spending norm, while ensuring a high level of quality services.

Evidence suggests a possible overuse of residential care and unnecessary or premature institutionalisation. Available data suggest that there is a high level of unnecessary or premature institutionalisation (in a residential care facility), although this has decreased in recent years ([28]). The overuse of residential care, compared with other countries, suggests that there may be room to improve the cost-efficient use of different care settings, including by strengthening community-based services. In particular, the share of individuals affected by this issue was high in Brussels-Capital and the Walloon Region. Belgium spends less on public health and disease prevention than many other EU countries (see Annex 16). An effective monitoring of the system for elderly care is paramount to improve the use of the different care settings and notably of all elderly care related expenditure.

Improving the quality of the fiscal framework

Belgium's medium-term budgetary framework ranks among the weakest in the EU (see Annex 13). Belgium is the only euro-area country that lacks a fully developed multiannual fiscal planning at national level ([29]) beyond the stability programme, despite some multiannual fiscal planning at local authority level and to a certain extent for some regions and communities ([30]). Belgium's stability programme sets multiannual fiscal targets (T+3) for the different levels of government but the budgetary trajectories are of indicative nature, described in limited detail, and the targets are frequently missed.

([28]) Available at https://www.healthybelgium.be/en/health-system-performance-assessment/specific-domains/care-for-the-elderly#ELD-1.

([29]) National Bank of Belgium, 2020, 'Belgium's fiscal framework: what is good and what could be better?', Economic Review.

([30]) Flanders has a multi-annual budgetary framework which since 2022 includes a non-binding spending norm. It is expected to apply a binding expenditure rule from the 2025 annual budget onwards.

Box 4:

The mid-term review of cohesion policy funding for Belgium

The mid-term review of cohesion policy funding is an opportunity to assess cohesion policy programmes and tackle emerging needs and challenges in EU Member States and their regions. Member States are reviewing each programme taking into account, among other things, the challenges identified in the European Semester, including in the 2024 country-specific recommendations, as well as progress in implementing the integrated national energy and climate plans. This review forms the basis for a proposal by the Member State for the definitive allocation of 15% of EU funding included in each programme.

Belgium has made progress in implementing cohesion policy programmes and the European Pillar of Social Rights, but challenges remain (see Annexes 14 and 17). In particular, intra-regional disparities in economic and social development remain high in Belgium and differences persist in terms of R&D intensity between provinces. Against this background, it is important to continue implementing the planned priorities, focusing on:

(i) enhancing research, innovation and digitalisation;
(ii) the green transition, climate change adaptation and energy efficiency;
(iii) improving access to employment and training measures, particularly for vulnerable groups, long-term unemployed and young people;
(iv) supporting lifelong learning, and in particular upskilling and reskilling for professional mobility and for anticipating change;
(v) fostering active inclusion and the employability of disadvantaged groups.

Belgium could benefit from the opportunities available under the Strategic Technologies for Europe Platform (STEP) initiative ([31]) to support the transformation of industry, to develop advanced digital technologies and services, circular and advanced materials and to build capacity related to sustainable clean energy, resilient housing and innovation in the health sector.

Frequent target revisions are not envisaged under the reformed economic governance.

Strengthening the fiscal framework requires commitment from the different levels of government. Other than the targets set in the stability programme, the number and coverage of fiscal rules in Belgium is limited compared with other Member States. Fiscal rules include healthcare spending targets at federal level and strict rules set for local authorities. Despite the federal level and the regions accounting for a high share of general government spending, there are few formal rules governing these levels, with the main exception being Flanders' recent spendings target. Belgium also lacks green budgetary practices to help increase the accountability and transparency of the budget in contributing to the country's green objectives.

It is essential to fully implement the 2013 cooperation agreement. The federal government and the federated entities signed an agreement in 2013 to ensure effective budgetary coordination. However, its implementation remains limited. The absence of agreement on the multiannual targets proposed at each level of government by the High Council of Finance (HCF) prevents effective monitoring of compliance and increases the risk of deviating from the medium-term fiscal trajectory. At the same time, it is essential to boost the autonomy and staff capacity of the secretariat of the Borrowing Section of the HCF to ensure it is able to fully perform its main task of monitoring compliance with the fiscal rules. The government also plays a large role in nominating members of the HCF and the secretariat staff. With many investment responsibilities delegated to the regions and language communities, there is scope to improve coordination to increase the level and efficiency of public investment.

([31]) Regulation (EU) 2024/795

KEY FINDINGS

Belgium's recovery and resilience plan (RRP) includes measures to address a series of structural challenges in synergy with other EU funds, including cohesion policy funds, by:

- **Accelerating the roll-out of renewable energy** by reforming regulatory frameworks to boost investment in renewable energy installations, building an energy island to connect offshore windfarms and phasing out the use of fossil fuels in new buildings;
- **Investing in the energy-efficient renovation** of buildings, in clean mobility, the circular economy and in the hydrogen value chain;
- **Investing in digitalising** the public administration and education and in a reform to improve digital connectivity;
- **Improving the sustainability** of the pension system;
- **Improving the efficiency and quality of public spending** by conducting spending reviews;

The implementation of Belgium's RRP is facing significant delays which require decisive actions to ensure completion of all the measures of Belgium's RRP by August 2026.

Beyond the reforms and investments in the RRP and the cohesion programmes, Belgium would benefit from:

- **Reforming the tax and benefits system to strengthen incentives to work** by shifting the tax burden away from labour and by reviewing the design of social benefits;
- **Reviewing tax expenditure** to reduce economic and social distortions;
- **Taking steps to phase out fossil fuel subsidies,** including by shifting charges from electricity to fossil fuels;
- **Tackling the projected increase in age-related costs**, including by improving the effectiveness and efficiency of its long-term care systems, which will help improve the country's fiscal sustainability;
- **Increasing the effectiveness of the national fiscal framework** by ensuring the effective coordination of fiscal policies at all government levels and by increasing the autonomy and staff capacity of the secretariat of the High Council of Finance;
- **Tackling labour shortages and skills mismatches**, including for the green transition, and strengthen activation policies to further integrate disadvantaged groups into the labour market;
- **Improving basic skills** by enhancing the performance and equity of the education and training systems and pursuing reforms to boost the teaching profession;
- **Improving the business environment and business dynamics** by reducing the regulatory burden and complexity, and by easing the restrictions in the service sector;
- **Tackling road congestion** by reforming the tax system, including through smart road pricing, and by developing active mobility and public transport solutions;
- **Improving climate resilience** by making ecosystems more robust, investing in sustainable water management and reducing nitrogen emissions.

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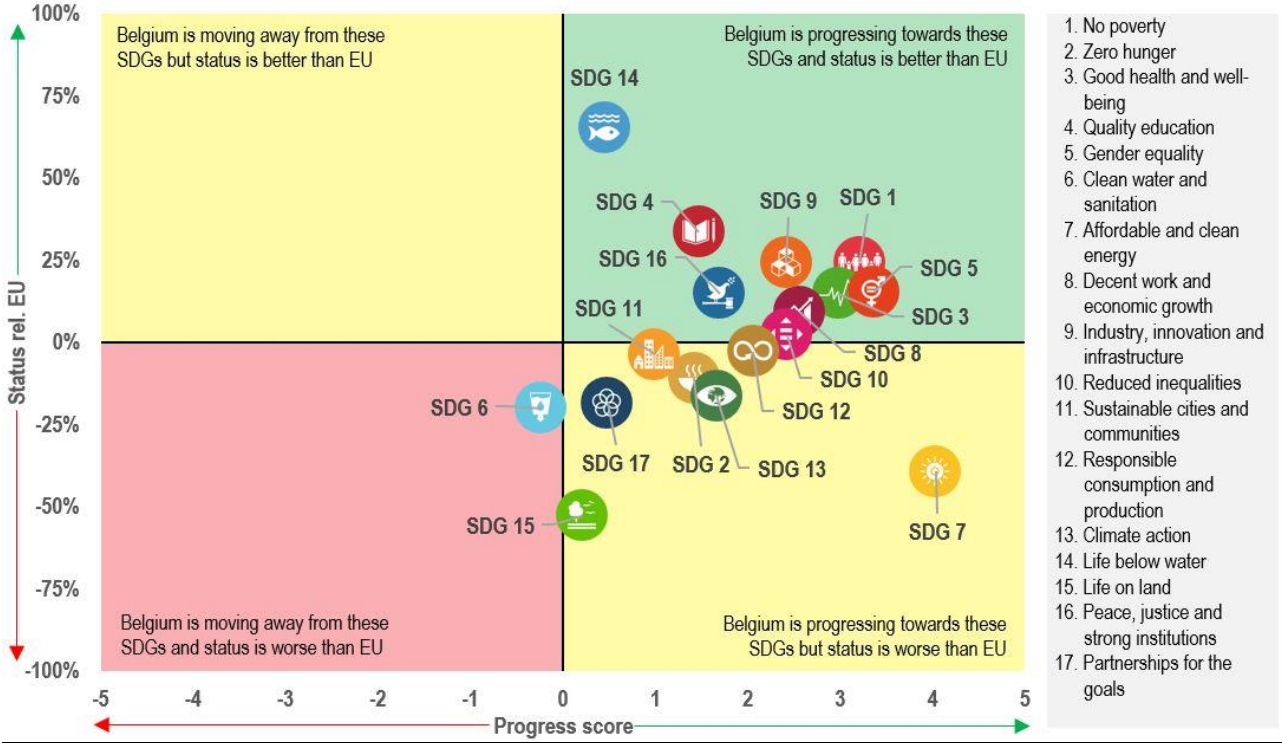
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This Annex assesses Belgium's progress on the Sustainable Development Goals (SDGs) along the four dimensions of competitive sustainability. The 17 SDGs and their related indicators provide a policy framework under the UN's 2030 Agenda for Sustainable Development. The aim is to end all forms of poverty, fight inequalities and tackle climate change and the environmental crisis, while ensuring that no one is left behind. The EU and its Member States are committed to this historic global framework agreement and to playing an active role in maximising progress on the SDGs. The graph below is based on the EU SDG indicator set developed to monitor progress on the SDGs in an EU context.

While Belgium performs well or is improving on most of the SDG indicators related to *environmental sustainability*, it needs to catch up with the EU average, in particular on SDG 7 (Affordable and clean energy), 15 (Life on land), 13 (Climate action) and SDG 6 (Clean water and sanitation). Belgium has made some progress on energy consumption indicators, including the share of renewable energy in gross final energy consumption (SDG 7), which increased from 9.1% in 2017 to 13.8% in 2022. Nevertheless, Belgium's performance remains below the EU average (23% in 2022). The final energy consumption in household per capita (SDG 7) decreased from 3.2 to 2.9 tonnes of oil equivalent but is still above the EU average of 2.1 in 2022. Belgium's recovery and resilience plan (RRP) includes measures to support the shift from fossil fuels, in particular for the energy renovation of buildings, decarbonisation of industrial production, and sustainable transport. Emissions from agriculture (ammonia, nitrates) are above the EU average (SDGs 2 and 6); this is also the case for the indicator phosphate in rivers (SDG 15). On SDG 12, the circular material use rate improved from 19.1% in 2017 to 22.2% in 2022 and is well above the EU average (11.5%).

Belgium performs well or is improving on

Graph A1.1: **Progress towards the SDGs in Belgium**



For detailed datasets on the various SDGs, see the annual Eurostat report 'Sustainable development in the European Union'; for details on extensive country-specific data on the short-term progress of Member States: Key findings – Sustainable development indicators - Eurostat (europa.eu). A high status does not mean that a country is close to reaching a specific SDG, but signals that it is doing better than the EU on average. The progress score is an absolute measure based on the indicator trends over the past 5 years. The calculation does not take into account any target values as most EU policy targets are only valid for the aggregate EU level. Depending on data availability for each goal, not all 17 SDGs are shown for each country.
Source: Eurostat, latest update of 25 April 2024. Data refer mainly to the period 2017-2022 or 2018-2023. Data on SDGs may vary across the report and its annexes due to different cut-off dates.

most SDG indicators related to *fairness* (SDGs 1, 3, 4, 5, 7, 8, 10). The country performs well on poverty and inclusive growth (SDGs 1 and 8), reflecting the high redistributive impact of the tax and benefits system. The share of people at risk of poverty or social exclusion fell in 2022 to 18.7%, below the EU average of 21.6%. Belgium has made progress on various employment indicators. These include indicators like the long-term unemployment rate (2.6% in 2018 against 2.2% in 2023) and the number of young people not in employment, education or training (11.4% in 2018, 9.6% in 2023). Several measures in the RRP aim to further tackle unemployment, in particular by improving training and life-long learning. However, despite these measures the employment rate remains well below the 2030 national target, held back by a low activity rate (see Annex 14). Labour market participation remains low in particular for vulnerable groups, such as adults with a lower level of education, people with a migrant background and people with disabilities. Although Belgium needs to catch up with the EU average on affordable and clean energy (SDG 7), the proportion of the population unable to keep their home adequately warm is lower than the EU average (5.1% in 2022; EU average: 9.3%).

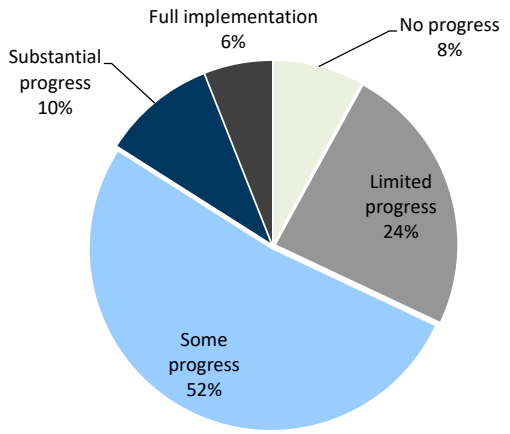
Belgium performs well and is making further progress on all SDGs on *productivity* (SDGs 4, 8, 9). It performs strongly in particular on innovation, with R&D intensity of 3.4% of GDP in 2022 well above the EU average (2.2%). The share of households with a high-speed internet connection in 2022 (78.3%) is now above the EU average (73.4%). Belgium is performing well on education indicators overall, although there are still concerns over high inequalities in educational outcomes linked to the socio-economic background of pupils. The share of adults with at least basic digital skills was above the EU average in 2023 at 59.4% (EU 55.6%). Nevertheless, the country still faces a significant challenge to improve digital skills. The RRP includes large investments to improve digital infrastructure and equipment in schools.

Belgium is improving on SDG indicators related to *macroeconomic stability* (SDGs 8, 16, 17). It performs well on the quality of its institutions (SDG 16), in particular on access to justice and personal security. The perceived independence of the justice system by the population increased from 64% in 2018 to 66% in 2023 and was substantially above the EU average of 53% in 2023. Belgium performs better than the EU average on indicators related to SDG 8 (Decent work and economic growth).

As the SDGs form an overarching framework, any links to relevant SDGs are either explained or depicted with icons in the other annexes.

The Commission has assessed the 2019-2023 country-specific recommendations (CSRs) ([32]) addressed to Belgium as part of the European Semester. These recommendations concern a wide range of policy areas that are related to 14 of the 17 Sustainable Development Goals (SDGs) (see Annexes 1 and 3). The assessment considers the policy action taken by Belgium to date ([33]) and the commitments in its recovery and resilience plan (RRP) ([34]). At this stage of RRP implementation, 52% of the CSRs focusing on structural issues from 2019-2023 have recorded at least 'some progress', while 24% recorded 'limited progress' (see Graph A2.1). As the RRP is implemented further, considerable progress in addressing structural CSRs is expected in the coming years.

Graph A2.1: **Belgium's progress on the 2019-2023 CSRs (2024 European Semester)**



Source: European Commission

([32]) 2023 CSRs: EUR-Lex - 32023H0901(01) - EN - EUR-Lex (europa.eu)

2022 CSRs: EUR-Lex - 32022H0901(01) - EN - EUR-Lex (europa.eu)
2021 CSRs: EUR-Lex - 32021H0729(01) - EN - EUR-Lex (europa.eu)
2020 CSRs: EUR-Lex - 32020H0826(01) - EN - EUR-Lex (europa.eu)
2019 CSRs: EUR-Lex - 32019H0905(01) - EN - EUR-Lex (europa.eu)

([33]) Including policy action reported in the national reform programme and in Recovery and Resilience Facility (RRF) reporting (published twice a year reporting on progress in implementing milestones and targets on the basis of the payment requests assessment).

([34]) Member States were asked to effectively address in their RRPs all or a significant subset of the relevant country-specific recommendations issued by the Council. The CSR assessment presented here considers the degree of implementation of the measures included in the RRP and of those carried out outside of the RRP at the time of assessment. Measures laid down in the Annex of the adopted Council Implementing Decision on approving the assessment of the RRP, which have not yet been adopted or implemented but considered credibly announced, in line with the CSR assessment methodology, warrant 'limited progress'. Once implemented, these measures can lead to 'some/substantial progress or full implementation', depending on their relevance.

Table A2.1: **Summary table on 2019-2023 CSRs**

Belgium	Assessment in May 2024*	RRP coverage of CSRs until 2026	Relevant SDGs
2019 CSR 1	**Limited progress**		
Ensure that the nominal growth rate of net primary government expenditure does not exceed 1,6 % in 2020, corresponding to an annual structural adjustment of 0,6 % of GDP.	Not relevant anymore	Not applicable	SDG 8, 16
Use windfall gains to accelerate the reduction of the general government debt ratio.	Not relevant anymore	Not applicable	SDG 8, 16
Continue reforms to ensure the fiscal sustainability of the long-term care	Limited Progress		SDG 3
and pension systems, including by limiting early exit possibilities from the labour market.	Limited Progress	Relevant RRP measures planned as of 2021	SDG 8
Improve the composition and efficiency of public spending, in particular through spending reviews,	Some Progress		SDG 8, 16
and the coordination of fiscal policies by all levels of government to create room for public investment.	Limited Progress		SDG 8, 16
2019 CSR 2	**Some progress**		
Remove disincentives to work and strengthen the effectiveness of active labour market policies, in particular for the low-skilled, older workers and people with a migrant background.	Limited Progress	Relevant RRP measures planned as of 2021, 2023, 2024.	SDG 8, 10
Improve the performance and inclusiveness of the education and training systems	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024, 2025, 2026	SDG 4, 8, 10
and address skills mismatches.	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024, 2025, 2026	SDG 4
2019 CSR 3	**Some progress**		
Focus investment-related economic policy on sustainable transport, including upgrading rail infrastructure,	Some Progress	Relevant RRP measures planned as of 2022, 2023, 2024	SDG 10, 11
the low carbon and energy transition	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024, 2026	SDG 7, 9, 10, 11, 13
and research and innovation, in particular in digitalisation, taking into account regional disparities.	Substantial Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024, 2025,	SDG 9, 10, 11
Tackle the growing mobility challenges, by reinforcing incentives and removing barriers to increase the supply and demand of collective and low emission transport.	Some Progress	Relevant RRP measures planned as of 2021,2022, 2023, 2024, 2025, 2026	SDG 11
2019 CSR 4	**Some progress**		
Reduce the regulatory and administrative burden to incentivise entrepreneurship	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024	SDG 8, 9
and remove barriers to competition in services, particularly telecommunication, retail and professional services.	Some Progress		SDG 9
2020 CSR 1	**Substantial progress**		
Take all necessary measures, in line with the general escape clause of the Stability and Growth Pact, to effectively address the COVID-19 pandemic, sustain the economy and support the ensuing recovery. When economic conditions allow, pursue fiscal policies aimed at achieving prudent medium-term fiscal positions and ensuring debt sustainability, while enhancing investment.	Not relevant anymore	Not applicable	SDG 8, 16
Reinforce the overall resilience of the health system and ensure the supply of critical medical products.	Substantial Progress	Relevant RRP measures planned as of 2022, 2023	SDG 3
2020 CSR 2	**Some progress**		
Mitigate the employment and social impact of the COVID-19 crisis, notably by promoting effective active labour market measures	Substantial Progress	Relevant RRP measures planned as of 2023, 2024	SDG 1, 2, 8, 10
and fostering skills development.	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024, 2025	SDG 4
2020 CSR 3	**Some progress**		
Ensure effective implementation of the measures to provide liquidity to assist SMEs and the self-employed	Full Implementation		SDG 8, 9
and improve the business environment.	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024	SDG 8, 9
Front-load mature public investment projects	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024, 2025, 2026	SDG 8, 16
and promote private investment to foster the economic recovery.	Some Progress	Relevant RRP measures planned as of 2022	SDG 8, 9
Focus investment on the green and digital transition, in particular on infrastructure for sustainable transport,	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024, 2025, 2026	SDG 11
clean and efficient production and use of energy,	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024	SDG 7, 9, 13
the circular economy,	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024	SDG 6, 12, 15
digital infrastructure, such as 5G and Gigabit Networks,	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2025, 2026	SDG 9
and research and innovation.	Substantial Progress	Relevant RRP measures planned as of 2022, 2023	SDG 9

(Continued on the next page)

Table (continued)

2021 CSR 1	**Not relevant anymore**		
In 2022, use the Recovery and Resilience Facility to finance additional investment in support of the recovery while pursuing a prudent fiscal policy. Preserve nationally financed investment.	Not relevant anymore	Not applicable	SDG 8, 16
When economic conditions allow, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions and ensuring fiscal sustainability in the medium term.	Not relevant anymore	Not applicable	SDG 8, 16
At the same time, enhance investment to boost growth potential. Pay particular attention to the composition of public finances, on both the revenue and expenditure sides of the budget, and to the quality of budgetary measures in order to ensure a sustainable and inclusive recovery. Prioritise sustainable and growth-enhancing investment, in particular investment supporting the green and digital transition.	Not relevant anymore	Not applicable	SDG 8, 16
Give priority to fiscal structural reforms that will help provide financing for public policy priorities and contribute to the long-term sustainability of public finances, including, where relevant, by strengthening the coverage, adequacy and sustainability of health and social protection systems for all.	Not relevant anymore	Not applicable	SDG 8, 16
2022 CSR 1	**Limited progress**		
In 2023, ensure prudent fiscal policy, in particular by limiting the growth of nationally financed primary current expenditure below medium-term potential output growth, taking into account continued temporary and targeted support to households and firms most vulnerable to energy price hikes and to people fleeing Ukraine. Stand ready to adjust current spending to the evolving situation.	No Progress	Not applicable	SDG 8, 16
Expand public investment for the green and digital transitions, and for energy security taking into account the REPowerEU initiative, including by making use of the Recovery and Resilience Facility and other Union funds.	Full Implementation	Not applicable	SDG 8, 16
For the period beyond 2023, pursue a fiscal policy aimed at achieving prudent medium-term fiscal positions and ensuring credible and gradual debt reduction and fiscal sustainability in the medium term through gradual consolidation, investment and reforms.	No Progress	Not applicable	SDG 8, 16
Prioritise reforms to improve the fiscal sustainability of long-term care, including by promoting a cost efficient use of the different care settings.	Limited Progress		SDG 3
Reform the taxation and benefit systems to reduce disincentives to work by shifting the tax burden away from labour and by simplifying the tax and benefit system. Reduce tax expenditures and make the tax system more investment-neutral.	Limited Progress		SDG 8, 10, 12
2022 CSR 2			
Proceed with the implementation of its recovery and resilience plan, in line with the milestones and targets included in the Council Implementing Decision of 13 July 2021.	RRP implementation is monitored by assessing RRP payment requests and analysing reports published twice a year on the achievement of the milestones and targets. These are to be reflected in the country reports.		
Submit the 2021-2027 cohesion policy programming documents with a view to finalising their negotiations with the Commission and subsequently starting their implementation.	Progress on the cohesion policy programming documents is monitored under the EU cohesion policy.		
2022 CSR 3	**Some progress**		
Address labour shortages and skills mismatches, notably by improving the performance and inclusiveness of the education and training system, enhancing the quality and labour market relevance of the vocational education and training and developing more flexible and attractive career paths and training for teachers.	Some Progress	Relevant RRP measures planned as of 2021, 2022, 2023, 2024, 2025, 2026	SDG 4
2022 CSR 4	**Some progress**		
Reduce overall reliance on fossil fuels	Limited Progress	Relevant RRP measures planned as of 2022, 2023	SDG 7, 9, 13
by stepping up energy efficiency improvements and the reduction of fossil fuel use in buildings,	Some Progress	Relevant RRP measures planned as of 2022, 2023, 2024	SDG 7
promoting the use and supply of public transport as well as soft mobility	Some Progress	Relevant RRP measures planned as of 2021,2022, 2023, 2024, 2025, 2026	SDG 11
and accelerating the deployment of renewable energies and related grid infrastructure by further streamlining the permitting procedures including by reducing the length of appeal procedures and adopting framework conditions to boost investments in solar energy installations	Some Progress	Relevant RRP measures planned as of 2022, 2023	SDG 7, 8, 9, 13

(Continued on the next page)

Table (continued)

2023 CSR 1	**Limited progress**		
Wind down the emergency energy support measures in force, using the related savings to reduce the government deficit, as soon as possible in 2023 and 2024. Should renewed energy price increases necessitate new or continued support measures, ensure that these are targeted at protecting vulnerable households and firms, fiscally affordable, and preserve incentives for energy savings.	Substantial Progress	Not applicable	SDG 8, 17
Ensure prudent fiscal policy, in particular by limiting the nominal increase in nationally financed net primary expenditure in 2024 to not more than 2%.	No Progress	Not applicable	SDG 8, 17
Preserve nationally financed public investment and ensure the effective absorption of RRF grants and other EU funds, in particular to foster the green and digital transitions.	Full implementation	Not applicable	SDG 8, 17
For the period beyond 2024, continue to pursue a medium-term fiscal strategy of gradual and sustainable consolidation, combined with investments and reforms conducive to higher sustainable growth, to achieve a prudent medium-term fiscal position.	No Progress	Not applicable	SDG 8, 17
Strengthen efforts to improve the efficiency of long-term care.	Limited progress		SDG 3
Pursue the reform of the taxation and benefits system to reduce disincentives to work by shifting the tax burden away from labour and by simplifying the tax and benefits system.	Limited progress		SDG 8, 10, 12
Review tax expenditures to reduce their economic, social and environmental harmful impact.	Limited progress		SDG 8, 10, 12
2023 CSR 2			
Ensure an effective governance to allow for a swift and steady implementation of its recovery and resilience plan. Swiftly finalise the REPowerEU chapter with a view to rapidly starting its implementation. Proceed with the speedy implementation of cohesion policy programmes, in close complementarity and synergy with the recovery and resilience plan.	RRP implementation is monitored through the assessment of RRP payment requests and analysis of the bi-annual reporting on the achievement of the milestones and targets, to be reflected in the country reports. Progress with the cohesion policy is monitored in the context of the Cohesion Policy of the European Union.		
2023 CSR 3	**Limited progress**		
Address labour shortages and skills mismatches, in particular by strengthening activation policies (including guidance) to integrate disadvantaged groups into the labour market.	Some Progress	Relevant RRP measures being planned as of 2021, 2022, 2023, 2024, 2025, 2026	SDG 8, 10
Improve the performance and equity of the education and training systems and continue reforms to strengthen the teaching profession.	Limited progress	Relevant RRP measures being planned as of 2021, 2022, 2023, 2024, 2025, 2026	SDG 4
2023 CSR 4	**Some Progress**		
Reduce overall reliance on fossil fuels	Limited progress	Relevant RRP measures being planned as of 2021, 2022, 2023, 2024, 2025, 2026	SDG 7, 9, 13
by stepping up energy efficiency improvements and the reduction of fossil fuel use in buildings,	Some Progress	Relevant RRP measures being planned as of 2022, 2023, 2024, 2025, 2026	SDG 7
by further stimulating the decarbonisation of industry and	Some Progress	Relevant RRP measures being planned as of 2022, 2023, 2024	SDG 7
by promoting the use and supply of public transport as well as soft mobility.	Some Progress	Relevant RRP measures being planned as of 2021, 2022, 2023, 2024, 2025, 2026	SDG 11
Accelerate the deployment of renewable energies and related grid infrastructure by further streamlining the permitting procedures, including by reducing the length of appeal procedures, and by adopting legal frameworks to further boost investments in renewable energy installations and facilitate energy sharing.	Some Progress	Relevant RRP measures being planned as of 2022, 2023, 2024, 2025, 2026	SDG 7, 8, 9, 13
Step up policy efforts aimed at the provision and acquisition of skills and competences needed for the green transition.	Some Progress	Relevant RRP measures being planned as of 2024	SDG 4

Note: * See footnote ([34]).

** RRP measures included in this table contribute to the implementation of CSRs. Nevertheless, additional measures outside the RRP may be necessary to fully implement CSRs and address their underlying challenges. Measures indicated as 'being implemented' are only those included in the RRF payment requests submitted and positively assessed by the European Commission.

Source: European Commission

This Annex provides a snapshot of Belgium's implementation of its recovery and resilience plan (RRP), past the mid-way point of the Recovery and Resilience Facility's (RRF) lifetime. The RRF has proven central to the EU's recovery from the COVID-19 pandemic, helping speed up the twin green and digital transition, while adapting to geopolitical and economic developments, and strengthening resilience against future shocks. The RRF is also helping implement the UN Sustainable Development Goals and address the country-specific recommendations (see Annex 2).

The RRP paves the way for disbursing up to EUR 5 034 million in grants and EUR 264 million in loans under the RRF over the 2021-2026 period, representing 0.9% of Belgium's GDP ([35]). As of mid-May 2024, EUR 915.2 million has been disbursed to Belgium under the RRF, comprising EUR 872.2 million in grants and EUR 43 million in loans.

Belgium still has EUR 4 382.8 million available in grants and loans from the RRF. This will be disbursed after the assessment of the future fulfilment of the remaining 230 milestones and targets ([36]) included in the Council Implementing Decision ([37]) (CID), ahead of the 2026 deadline established for the RRF.

Belgium's progress in implementing its plan is recorded in the Recovery and Resilience Scoreboard ([38]). The scoreboard gives an overview of the progress made in implementing the RRF as a whole. Graphs A3.1 and A3.2 show the current state of play as reflected in the scoreboard.

Table A3.1: **Key facts of the Belgian RRP**

Initial plan CID adoption date	13 July 2021
Scope	Revised plan with REPowerEU chapter
Last major revision	08 December 2023
Total allocation	EUR 5,034 million in grants and EUR 264 million in loans (0.9% of 2023 GDP)
Investments and reforms	119 investments and 40 reforms
Total number of milestones and targets	230
Fulfilled milestones and targets	0 (0% of total)

Source: RRF Scoreboard

Belgium's RRP includes a REPowerEU chapter to phase out its dependency on Russian fossil fuels, diversify its energy supplies, and produce more clean energy in the coming years. To kick-start the REPowerEU chapter's implementation, EUR 145.1 million was disbursed as pre-financing on 25 January 2024. This helped launch relevant reforms like the reform of the appeal procedures of the Council of State, which aims at accelerating the deployment of renewable energy in Belgium by removing administrative bottlenecks linked to investments in renewable energy.

The plan has a strong focus on the green transition, devoting 51% of the available funds to measures that support climate objectives and 27% of its total allocation to support the digital transition. It also retains a strong social dimension with social protection measures, especially related to reskilling and upskilling measures.

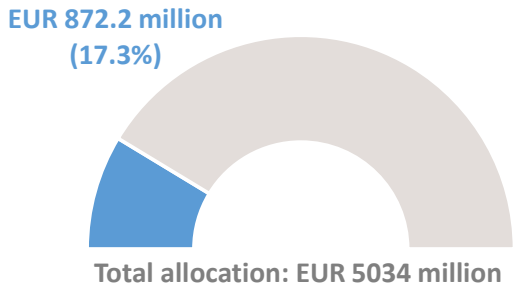
([35]) GDP information is based on 2023 data. Source: https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/index.html?lang=en

([36]) A milestone or target is satisfactorily fulfilled once a Member State has provided evidence to the Commission that it has reached the milestone or target and the Commission has assessed it positively in an implementing decision.

([37]) https://data.consilium.europa.eu/doc/document/ST-15570-2023-ADD-1/en/pdf

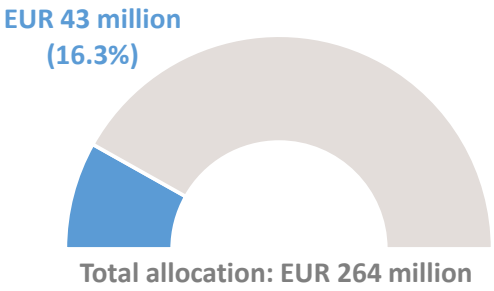
([38]) https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/country_overview.html

Graph A3.1: **Total grants disbursed under the RRF**



Note: This graph displays the amount of grants, including pre-financing, disbursed so far under the RRF. Grants are non-repayable financial contributions. The total amount of grants given to each Member State is determined by an allocation key and the total estimated cost of the respective RRP.
Source: RRF Scoreboard

Graph A3.2: **Total loans disbursed under the RRF**



Source: RRF Scoreboard

With a significantly delayed implementation of its RRP, Belgium is still working on the completion of its first payment request. As of 15 May 2024, the Commission is working in collaboration with Belgium to assess its first payment request. Table A3.2 highlights some relevant measures that will be implemented before 2026 to keep making Belgium's economy greener, more digital, inclusive, and resilient.

Table A3.2: **Measures in Belgium's RRP**

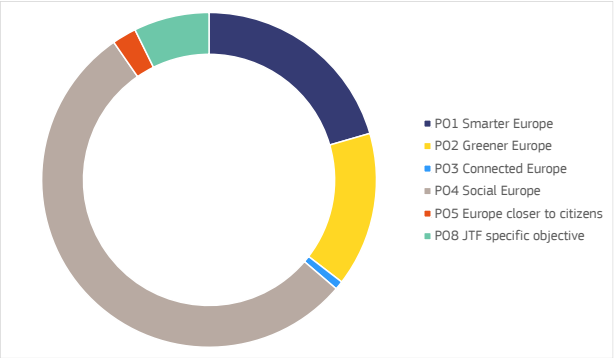
Upcoming reforms and investments
• Training and employment of vulnerable groups • Global cybersecurity governance framework • Renovation of social housing

Source: FENIX

EU funding instruments provide considerable resources for recovery and growth to the EU Member States. In addition to the EUR 5.3 billion of Recovery and Resilience Facility (RRF) funding described in Annex 3, EU cohesion policy funds ([39]) provide EUR 2.5 billion to Belgium for the 2021-2027 period ([40]). Support from these two instruments combined represents around 1.33% of the country's 2023 GDP, compared to the EU average of 5.38% of GDP ([41]). Cohesion policy supports regional development, economic, social and territorial convergence and competitiveness through long-term investment in line with EU priorities and with national and regional strategies.

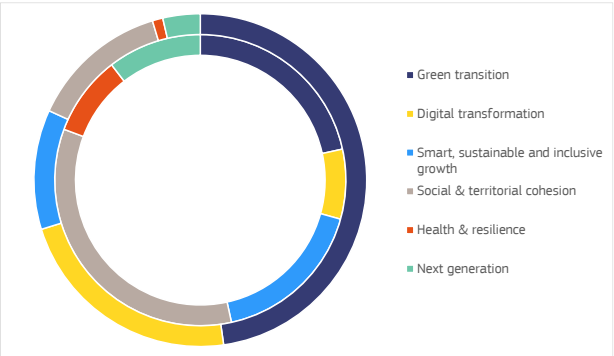
During the 2014-2020 programming period, cohesion policy funds boosted Belgium's competitiveness, with tangible achievements notably in business development, energy efficiency, access to the labour market, lifelong learning and social inclusion. By the end of the eligibility period in December 2023, 2014-2020 cohesion policy funds ([42]) had made EUR 2.3 billion available to Belgium ([43]), of which EUR 1.2 billion has been disbursed since March 2020, when the COVID-19 pandemic began ([44]). The achievements of cohesion policy funds over the programming period included support to over 13 900 start-ups, a decrease of 2 688 488 kWh in the annual primary energy consumption of public buildings, and 26 006 m^2 of public or commercial buildings built or renovated in urban areas. During the same period, over 1.6 million people benefited from projects funded by the European Social Fund (ESF) in Belgium focusing on vulnerable groups, particularly young people (41%) and low-skilled people (34%).

Graph A4.1: **Distribution of cohesion policy funding across policy objectives in Belgium**



Source: European Commission

Graph A4.2: **Distribution of RRF funding by pillar in Belgium**



(1) Each RRP measure helps achieve the aims of two of the six policy pillars of the RRF. The primary contribution is shown in the outer circle while the secondary contribution is shown in the inner circle. Each contribution represents 100% of the RRF funds. Therefore, the total contribution to all pillars displayed on this chart amounts to 200% of the RRF funds allocated to Belgium.

Source: European Commission

In the current programming period (2021-2027), cohesion policy will provide a further boost to Belgium's competitiveness, to the green transition and to social cohesion, improving the living and working conditions of the people. In 2021-2027, the European Regional Development Fund (ERDF) will help improve the energy performance of more than 233 400 m^2 of public buildings, help make an additional 6 868 tonnes/year of waste ready for reuse, and help an additional 3 761 businesses cooperate with research organisations. The Just Transition Fund (JTF) will create more than 960 jobs in recipient businesses. The European Social Fund Plus (ESF+) will contribute EUR 1.3 billion to a mixture of mainstream and innovative projects

([39]) In 2021-2027, cohesion policy funds include the European Regional Development Fund, the European Social Fund Plus and the Just Transition Fund.

([40]) European territorial cooperation (ETC) programmes are excluded from the figure. In 2021-2027, the total investment, including national financing, amounts to EUR 5.7 billion.

([41]) RRF funding includes both grants and loans, where applicable. The EU average is calculated for cohesion policy funds excluding ETC programmes. GDP figures are based on Eurostat data for 2022.

([42]) In 2014-2020, cohesion policy funds included the European Regional Development Fund, the European Social Fund and the Youth Employment Initiative. REACT-EU allocations are included but ETC programmes are excluded.

([43]) In 2014-2020, the total investment, including national financing, amounted to EUR 4.4 billion.

([44]) Cut-off date: 14 May 2024.

in Belgium to give social and job market assistance to vulnerable groups. For instance, in Wallonia, 17 local initiatives will test innovative approaches to tackle long-term unemployment. With this work, cohesion policy substantially contributes to achieving the UN Sustainable Development Goals (SDGs) in Belgium, in particular SDG 9 (Industry, innovation, infrastructure), SDG 8 (Decent work and economic growth) and SDG 1 (No poverty).

Through combined action, cohesion policy and the recovery and resilience plan (RRP) have a mutually reinforcing impact in Belgium. For instance, the ERDF co-finances the renovation of public buildings in the Brussels Capital Region to make them more energy efficient, and the RRP includes a reform of the Brussels code on air, climate and energy (COBRACE) to introduce new obligations on the energy efficiency of buildings. Flanders also benefits from the joint impact of RRF and cohesion policy funds, for instance in sustainable transport. The ERDF tackles bottlenecks to cycling by funding bicycle lanes and bridges connecting sections of the bicycle highway network, while the RRP reform of the federal 'mobility budget' makes it easier for employees to get an allowance for sustainable transport to the workplace in exchange for giving up their right to a company car. Together, cohesion policy and the RRP work to improve access to professional training in Wallonia. The RRP reform of the federal 'learning account' will give all workers the right to training and make it easier for temporarily unemployed workers to access training. In turn, the ERDF and the JTF boost the supply and quality of professional training by supporting cutting-edge equipment and infrastructure, while the ESF+, funds training provision. The contribution of cohesion policy and RRP funding by policy objective is illustrated by Graphs A4.1 and A4.2.

The Technical Support Instrument (TSI) helps the federal and regional authorities invest in their public administration and create a better enabling environment for EU and national investment. The TSI has funded projects in Belgium to design and implement growth-enhancing reforms since 2018. The support provided in 2023 included action to integrate the 'do no significant harm' principle into public funding programmes; improve market relevance and the use of vocational training profiles; review economic migration frameworks to attract qualified workers to shortage occupations; and boost the tax compliance capacity of public revenue authorities. The TSI also helps Belgium to increase its overall capacity to implement specific reforms and investments included in its RRP, such as institutionalising spending reviews and integrating them into budget processes.

Belgium also receives funding from several other EU instruments, including those listed in Table A4.1.

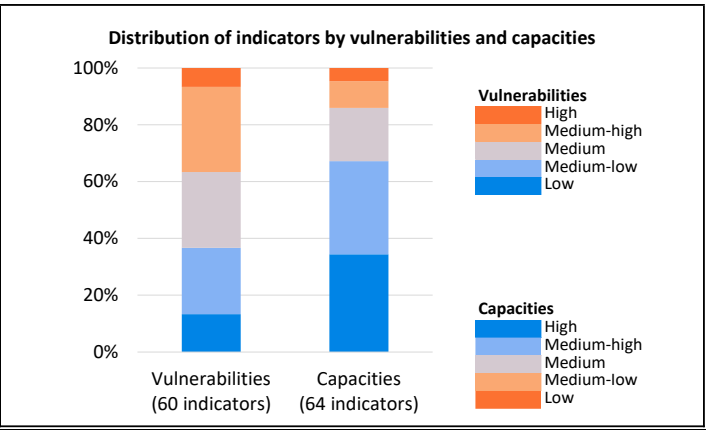
Table A4.1: **Support from EU instruments in Belgium**

EU grants			
	Amount 2014-2020 (EUR million)		Amount 2021-2027 (EUR million)
Cohesion policy	2 339.0		2 503.1
RRF grants (1)	-		5 033.9
Public sector loan facility (grant component) (2)	-		13.9
Common agricultural policy (3)	5 800.0		3 249.0
EMFF/EMFAF (4)	41.7		40.3
Connecting Europe Facility (5)	784.2		631.2
Horizon 2020 / Horizon Europe (6)	3 395.3		2 191.9
LIFE programme (7)	130.8		146.0
EU guarantees			
	EU Guarantee (EUR million)		Volume of operations (EUR million)
European Fund for Strategic Investment 2015-2020 (8)	602.5		1 655.7
InvestEU 2021-2027 (9)	104.3		225.7
EU loans			
	Period	Total amount available (EUR million)	Disbursed amount (EUR million)
SURE (10)	2020-2022	8 197.5	8 197.5
RRF	2021-2026	264	43

(1) RRF implementation period is 2021-2026.
(2) The public sector loan facility's programming period is 2021-2025 and the amount reflects the national share in its grant component reserved until the end of the period.
(3) Common agricultural policy programming periods are 2014-2022 and 2023-2027.
(4) EMFF – European Maritime and Fisheries Fund, EMFAF – European Maritime, Fisheries and Aquaculture Fund.
(5) Data on the Connecting Europe Facility covers transport and energy and has a cut-off date of 15 May 2024.
(6) Data on Horizon Europe (2021-2027) has a cut-off date of 13 May 2024.
(7) 2021-2027 data on the LIFE programme has a cut-off date of 15 May 2024.
(8) The amount of the EU guarantee signed under the EFSI Infrastructure and Innovation Window was derived based on the signed amount of the operations and the average internal multiplier, as reported by the EIB (cut-off date is 31 December 2023).
(9) The amount of the EU guarantee and of the volume of operations signed under InvestEU includes the EU compartment as well as the Member State compartments (cut-off date is 31 December 2023).
(10) SURE - European instrument for temporary support to mitigate unemployment risks in an emergency.
Source: European Commission

Table A5.1: **Resilience indices across dimensions for Belgium and the EU-27**

Dimension		BE 2023 RDB	BE 2024 RDB	EU-27 2024 RDB
Overall resilience	Vulnerabilities			
	Capacities			
Social and economic	Vulnerabilities			
	Capacities			
Green	Vulnerabilities			
	Capacities			
Digital	Vulnerabilities			
	Capacities			
Geopolitical	Vulnerabilities			
	Capacities			



(1) The synthetic indices aggregate the relative resilience situation of countries across all considered indicators. For an indicator, each country's relative situation in the latest available year is compared with the collection of values of that indicator for all Member States and all years in the reference period.
Source: Resilience Dashboards - version spring 2024, data up to 2022

This Annex uses the Commission's resilience dashboards (RDB) ([45]) to show Belgium's relative resilience capacities and vulnerabilities ([46]) that may be of relevance for societal, economic, digital, and green transformations, and for dealing with future shocks and geopolitical challenges ([47]).

According to the RDB's set of resilience indicators, Belgium has medium overall vulnerabilities (in line with the EU average) and high overall capacities (above the EU average). The capacities have improved with respect to last year, while the vulnerabilities have remained stable. This is also reflected in the distribution of indicators among different resilience categories: under 40% of vulnerability indicators fall into the medium-low or low category, while on the capacity side, above 60% of indicators are in the medium-high, or high, capacity range.

With respect to the 2023 RDB, Belgium has maintained its medium vulnerabilities and high capacities in the social and economic dimension. Belgium's self-reported unmet need for medical care has improved and the country has reduced its government debt. On the contrary, some vulnerabilities have worsened, with a higher percentage of people employed in manufacturing with a risk of automation and increased antimicrobial resistance. On the capacity side, Belgium's household saving rate and its average PISA score have decreased but its active labour market policies per person wanting to work have increased.

In the green dimension, **Belgium's overall vulnerabilities have increased to a medium-high level, whilst its capacities have remained stable.** The increase in its vulnerabilities is mainly due to higher raw material consumption per capita and to higher CO_2 emissions in road transport. The country still has many high and medium-high vulnerabilities relating, for instance, to the high percentage of sealed soil surfaces or to fossil fuel subsidies. Belgium is currently lagging behind the EU average for specific capacity indicators, such as the proportion of renewable energy in final energy consumption or energy productivity.

In the digital dimension, **Belgium's vulnerabilities and capacities are stable with**

([45]) Https://ec.europa.eu/info/strategy/strategic-planning/strategic-foresight/2020-strategic-foresight-report/resilience-dashboards_en. Resilience is defined as the ability not only to withstand and cope with challenges but also to undergo transitions, in a sustainable, fair, and democratic manner. 2020 Strategic Foresight Report: *Charting the course towards a more resilient Europe* (COM(2020) 493).

([46]) Vulnerabilities describe features that can exacerbate the negative impact of crises and transitions, or obstacles that may hinder the achievement of long-term strategic goals, while capacities refer to enablers or abilities to cope with crises and structural changes and to manage transitions.

([47]) This Annex is linked to Annex 1 on SDGs, Annex 6 on the green deal, Annex 8 on the fair transition to climate neutrality, Annex 9 on resource productivity, efficiency and circularity, Annex 10 on the digital transition and Annex 14 on the European pillar of social rights.

respect to last year's dashboard. The country continues to have low vulnerabilities in terms of the proportion of businesses without information and communication technology (ICT) training programmes or the share of employees not able to use teleworking. However, it has high vulnerabilities for ICT security incidents in businesses. It also still has low capacities in the advanced digital competences of young people and in the number of ICT Master's graduates, but maintains high capacities in different indicators, such as the investment per employee in high-technology sectors.

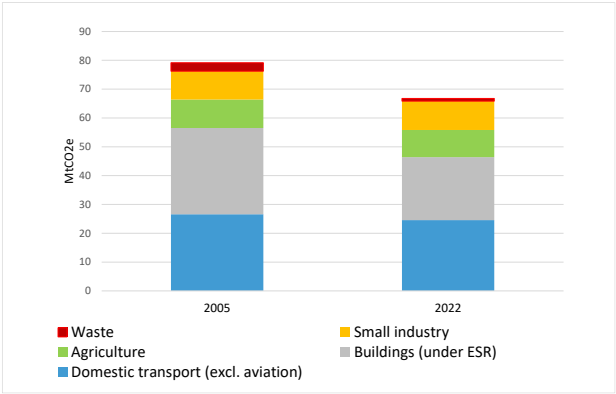
Finally, Belgium's geopolitical vulnerabilities have remained stable and are on a par with the EU average whilst its capacities have increased and are now above the EU average. The country has, for instance, improved its extra-EU trade openness (a capacity indicator of the degree of global integration). On the contrary, it has seen an increase in its vulnerabilities relating to the net lending/borrowing ratio (an indicator of vulnerability to external shocks from trade and financial markets).

Belgium has made progress in the green transition, with more action needed to increase its renewable energy and energy efficiency ambition for 2030, to protect biodiversity and ecosystems and in other areas. This Annex provides a snapshot of climate, energy, and environmental aspects of the transition in Belgium ([48]).

Belgium's draft updated national energy and climate plan (NECP) does not yet map all its investment needs and funding sources to achieve its 2030 climate and energy targets. Belgium's draft plan includes information on the expected investment needs for strategic investments up to 2030, based on a report by independent experts covering six sectors. But the information dates to September 2018 and does not directly link to specific policies and measures in the plan. Belgium's plan also lacks an updated overview of national, regional, and EU-level funding sources, which means it is not possible to identify potential funding gaps ([49]).

Even including the planned additional policies and measures, Belgium still has a gap to close to reach its 2030 effort sharing target ([50]). Belgium's 2022 greenhouse gas emissions from its effort sharing sectors are expected to come in at 18.2% below 2005 levels. Current policies are projected to reduce Belgium's effort sharing emissions by 21.6% from 2005 levels by 2030. The additional policies included in Belgium's draft updated NECP are projected to reduce these emissions by 42.6% from 2005 levels. This leaves a gap of 4.4 percentage points below Belgium's effort sharing target to achieve a 47% reduction ([51]).

Graph A6.1: **Greenhouse gas emissions from the effort sharing sectors in Mt CO2eq, 2005-2022**



Source: European Environment Agency

Belgium has renewable energy and energy efficiency targets in its draft updated NECP that are significantly below the shares resulting from the national contribution expected under EU legislation ([52]). Belgium's renewable energy contribution set in its draft updated NECP, 21.7% by 2030, is significantly below the expected contribution of 33%. Its energy efficiency contribution of 36.5 Mtoe in primary energy consumption and 29.9 Mtoe in final energy consumption for 2030 set in the draft updated NECP are also less ambitious than the contribution expected by the Energy Efficiency Directive.

Continued momentum is crucial to accelerate the take-up of zero-emission transport in

([48]) This Annex is complemented by Annex 7 on energy transition and competitiveness, Annex 8 on the fair transition to climate neutrality, Annex 9 on resource efficiency, circularity, and productivity, and relevant topics in other annexes to this country report.

([49]) See the Commission's (2023) assessment of the draft national energy and climate plan of Belgium.

([50]) The national greenhouse gas emission reduction target is laid down in Regulation (EU) 2023/857 (the Effort Sharing Regulation). The aim is to align action in the sectors concerned with the objective to reach the EU-level economy-wide target of greenhouse gas reductions of at least 55% compared to 1990 levels. The target also applies to the sectors outside the current EU Emissions Trading System, notably buildings (heating and cooling), road transport, agriculture, waste, and small industry (known as the effort sharing sectors).

([51]) The effort sharing emissions for 2022 are based on approximated inventory data. The final data will be established in 2027 after a comprehensive review. Projections on the impact of current policies ('with existing measures', WEM) and additional policies ('with additional measures', WAM) as per Belgium's draft updated NECP.

([52]) The EU target set out in the revised Renewable Energy Directive is to have 42.5% of gross final energy consumption coming from renewable energy sources by 2030, with the aspiration to reach 45%. The formula in Annex I to Directive (EU) 2023/1791 sets the indicative national contribution for Belgium at 33.8 Mtoe for primary energy consumption. The Commission communicated a corrected national contribution of 29.04 Mtoe in final energy consumption for 2030 in accordance with Article 4(5) of the Energy Efficiency Directive to increase the contribution towards the Union's binding energy efficiency target.

Belgium ([53]). Passenger transport in Belgium is split by means of transport broadly in line with the EU average ([54]). Freight is predominantly transported by road. At 12%, inland waterways transport more than twice the share of freight than the EU average (5.4%). Belgium has the second highest share of electrified railway lines in the EU, at 87%. Road traffic congestion is above the EU average ([55]). At 2.6% in 2023, the share of battery electric vehicles in Belgium's passenger cars fleet has grown dynamically, as has the number of publicly accessible charging points, reaching 35 000 in 2023, or one charging point for every eight e-vehicles (above the EU average of 1:10).

Belgium's actions to increase carbon removals through land use, land-use change and forestry (LULUCF) are becoming more ambitious. Belgium achieves net carbon removals through its forests. To reach the 2030 LULUCF target, additional carbon removals of 320 kt CO2eq are needed ([56]). Belgium is currently on track to meet this target ([57]).

On climate change, there is scope for more action to increase adaptive capacity ([58]). Belgium is updating its comprehensive national climate and vulnerability assessment, due in 2024. Water management is increasingly identified as a key affected sector, and for all sectors the water-related hazards, fluvial and pluvial floods and droughts, are signalled. The climate protection gap ([59]) in Belgium is low, indicating decent insurance coverage for all risk categories, including floods (the highest risk).

Sustainable water management, pollution reduction and climate adaptation are major environmental issues in Belgium. Transport, energy, buildings, agriculture, and tourism are all susceptible to increased risks of water scarcity and flooding. The water exploitation index plus (WEI+) measured 5.8 in 2019, with the worst seasonal water scarcity conditions recorded at 13.2 in Q3 of 2019. To tackle water scarcity, Flanders started a pilot project for desalinating water from the North Sea, but the resulting energy consumption is high. On average, 4.6% of land in Belgium was affected by droughts over the period 2000-2020. This rose dramatically to affect 53% of land in 2022, with croplands the most damaged ecosystem. In terms of water productivity, in 2019, Belgium generated EUR 106 per cubic metre of water abstracted, above the EU average. Only 27% of surface freshwater bodies reached good ecological status and 2.3% good chemical status due to ubiquitous substances being persistent, bio-accumulative and toxic. Marine waters are not in a good environmental status, as tracked by the descriptors used in the Marine Strategy Framework Directive.

Despite making significant progress on nature protection, Belgium's ecosystems are still subject to major degradation. Belgium protects 14.6% of its land and 38% of its marine areas. However, only 4% of habitats and 25% of species were reported to be in a favourable conservation status. Nature restoration would bring significant economic benefits, as every euro invested in nature is estimated to generate at least EUR 8 in benefits ([60]).

Intensive agriculture has a major impact on ecosystems, biodiversity and air quality. The annual output of Belgium's agricultural sector was EUR 9.1 billion ([61]) in 2023. Belgium has a lower share of organic farming than the EU average, with major differences between Wallonia and Flanders. The share of organic agricultural area in Wallonia is rather high, 11% of the utilised agricultural area, but very low in Flanders, at 1.3%. In 2019, over 90% of land under organic farming in Belgium was in Wallonia. Further action would

([53]) Unless otherwise indicated, data in this section refer to 2021. See European Commission, 2023, EU transport in figures, transport.ec.europa.eu.

([54]) Passenger cars: 85% of passenger-kilometres; railways: 6%; buses and coaches: 8%, tram and metro: 1 %.

([55]) In 2020, road vehicle drivers experienced peak-hour delays of 41 hours on average in Belgium (EU average: 29 hours).

([56]) National LULUCF targets of the Member States in line with Regulation (EU) 2023/839.

([57]) Projections submitted in Belgium's draft updated national energy and climate plan, 2023.

([58]) See the Commission's 2023 assessment and recommendation on Belgium's progress on climate adaptation.

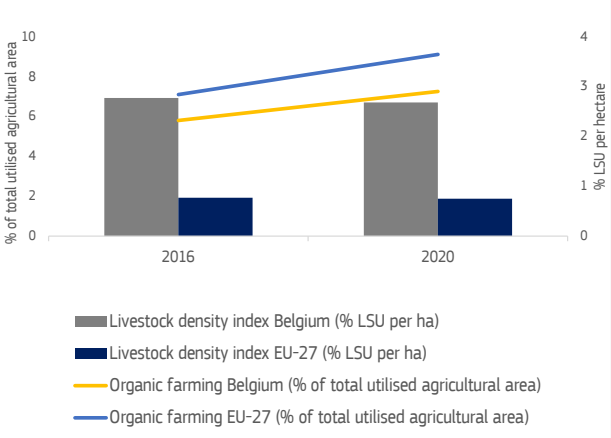
([59]) On the climate protection gap, see the annotations to Table A6.1.

([60]) European Commission (2022), impact assessment accompanying the proposal for a Regulation of the European Parliament and the Council on nature restoration, SWD(2022) 167 final.

([61]) Production value at basic price (2015=100).

contribute to the goal of at least 25% of the EU's agricultural land under organic farming by 2030. Belgium's livestock farming is among the most intensive in the EU. The livestock density index stood at 2.68 in 2020 (EU average: 0.75). Intensive poultry and pig farming is among the sectors with the highest environmental burden of ammonia emissions into the air. Agriculture generated 91.3% of all ammonia emissions, against the EU-27 average of 90.7%.

Graph A6.2: **Changes in livestock density and organic farming**

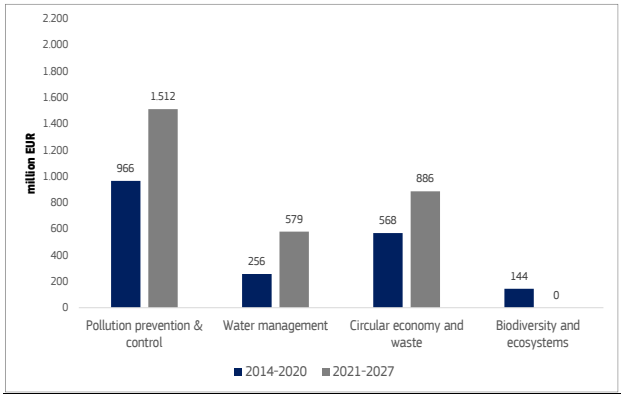


Livestock unit (LSU)/ha of UAA: it measures the stock of animals (cattle, sheep, goats, equidae, pigs, poultry and rabbits) converted in LSUs per hectare of UAA.
Source: Eurostat

Intensive agriculture also increases the risks of nitrate and pesticide pollution, particularly in Flanders. Belgium's gross nitrogen balance on agricultural land is one of the worst in the EU. The content of nitrates in groundwater exceeds the EU average at 28.6 (against the average of 20.5 mg nitrates/l) and 16% of groundwater monitoring stations have levels above the maximum 50 mg nitrates/l. Very high livestock density, which affects not only surface water quality but also quantity, is instrumental in causing this pollution. Pesticide pollution in surface water bodies is a major concern. In 2021, in 74.1% of all surface water monitoring sites pesticides exceedances were detected making Belgium one of the most polluted EU countries. Based on the impact assessment for the Soil Monitoring Law, 56% of Belgian soil could be considered as unhealthy ([62]), ([63]), mainly due to excess nutrients. 46% of cropland and grassland areas are also unhealthy due to a loss of soil organic carbon.

The uptake of organic products is increasing, but food waste remains a major issue. Total spending on organic products in Belgium increased by 13% between the second half of 2022 and 2023. Belgium generates the second highest volume of food waste in the EU, with 262 kg per person wasted a year, considerably above the EU average of 131 kg per person in 2021. Most waste was generated during manufacturing.

Graph A6.3: **Environmental investment gap, annual average**



The numbers are computed by the European Commission based on the latest internal reports, Eurostat, EIB and national data sources.
Source: European Commission

Belgium would benefit from investing more in sustainable water management and pollution prevention. Over 2014 to 2020, the environmental investment gap was estimated at EUR 2.1 billion per year, equivalent to 0.5% of average GDP, below the EU average of 0.8%. The gap is estimated to be increasing over 2021-2027 at close to EUR 3 billion per year. There remains an opportunity to increase funding, in particular for pollution prevention and control (EUR 1.5 billion per year), circular economy and waste (EUR 886 million per year) and sustainable water management (EUR 579 million per year), as the investment gap has widened there.

([62]) SWD 417 final of 5.7.2023 - impact assessment for the Directive of the European Parliament and of the Council on Soil Monitoring and Resilience (Soil Monitoring Law).

([63]) However, not all soil degradation processes could be quantified for all land uses. This number simply indicates an order of magnitude.

Table A6.1: **Indicators tracking progress on the European Green Deal from a macroeconomic perspective**

							Target	Distance	
		2005	2019	2020	2021	2022	2030	WEM	WAM
Progress to climate and energy policy targets									
Greenhouse gas emission reductions in effort sharing sectors [1]	Mt CO_{2eq}, %, pp	81.605,6	-10%	-19%	-14,8%	-18,2%	-47%	-25	-4
Net greenhouse gas removals from LULUCF [2]	Kt CO2eq	-1 765	-400,000	-374,000	-270,000	-408,000	-1.352	n/a	n/a
Share of energy from renewable sources (1) [3]	%	2%	10%	13%	13%	14%	33%	-	-
Energy efficiency: primary energy consumption [3]	Mtoe	51,6	48,4	43,9	48,7	45,2	33,8		
Energy efficiency: final energy consumption [3]	Mtoe	36,8	35,8	33,2	35,9	33,4	29,02		
							EU-27		Projected
		2018	2019	2020	2021	2022	2021	2022	2030
Green transition: mobility									
Greenhouse gas emissions: road transport	Mt CO2e	-	-	-	23,8	24,6	769,0	786,6	16,4
Share of zero-emission vehicles in new registrations [4]	%	0,7	1,6	3,5	5,8	10,3	9,0	12,1	n/a
Number of publicly accessible AC/DC charging points		-	-	8095	12524	23508	299178	446956	n/a
Share of electrified railways	%	85,8%	85,8%	85,7%	86,6%	-	56,1%	-	n/a
Green transition: buildings									
Greenhouse gas emissions: buildings	Mt CO2e	-	-	-	25,1	21,9	537,0	486,7	16,3
Final energy consumption in buildings	2015=100	99,0%	97,0%	95,5%	102,2%	87,8%	104,0%	97,2%	
Climate adaptation									
Climate protection gap [5]	score 1-4	-	-	1,7	1,2	1,3	1,5	1,5	n/a
		2018	2019	2020	2021	2022	2020	2021	2022
State of the environment									
Water | Water exploitation index (WEI+) (1) [6]	% of renewable freshwater	3,9	5,8	-	-	-	3,6	-	-
Circular economy | Material footprint [7]	tonnes per person	14,9	12,8	13,0	13,0	16,4	14,2	14,8	14,9
Pollution | Years of life lost due to air pollution by PM2.5 [8]	per 100.000 inhabitants	552	424	315	409	-	545	584	-
Biodiversity | Habitats in good conservation status [9]	%	4,3					14,7		
Common farmland bird index [10]	2000=100	61	59	57	-	-	78	-	-
Green transition: agri-food sector									
Organic farming	% of total utilised agricultural area	6,56	6,85	7,25	7,48	-	9,1	-	-
Nitrates in groundwater	mg NO_3/litre	-	-	-	-	-	20,42	-	-
Food waste per capita	Kg per capita			250	262	-	130	131	-
Share of soil in poor health [11]	%					56			41
Soil organic matter in agricultural land [12]	Mt per ha	61	-	-	-	-	7.904	-	-

Sources: (1) Member States' emission data for 2019 and 2020 are in global warming potential (GWP) values from the 4th Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC). Member States' 2005 base year emissions under Regulation (EU) 2018/842, emissions data for 2021 and 2022, and 2030 projections are in GWP values from the 5th Assessment Report (AR5) of the IPCC. 2021 data are based on the final inventory reports, 2022 data are based on approximated inventory reports and European Environmental Agency's calculation of effort sharing emissions. The final data for 2021 and 2022 will be established after a comprehensive review in 2027. The 2030 target is in percentage change of the 2005 base year emissions. Distance to target is the gap between the 2030 target and projected effort sharing emissions with existing measures (WEM) and with additional measures (WAM), in percentage change from the 2005 base year emissions. The measures included for the 2030 emission projections reflect the state of play as reported in Member States' draft updated national energy and climate plans or, if unavailable, as reported by 15 March 2023 as per Regulation 2018/1999. (2) Net removals are expressed in negative figures, net emissions in positive figures. Reported data are from the 2024 greenhouse gas inventory submission. 2030 value of net greenhouse gas removals as in Regulation (EU) 2023/839 – Annex IIa. (3) The 2030 national objectives for renewable energy and energy efficiency are indicative national contributions, in line with Regulation (EU) 2018/1999 (the Governance Regulation), the EU-level 2030 renewable energy target set out in Directive EU/2018/2001 amended by Directive EU/2023/2413 (the revised Renewable Energy Directive) – 42.5% of gross final energy consumption with the aspiration to reach 45% –, and the formula in Annex I to Directive (EU) 2023/1791 (the Energy Efficiency Directive). (4) Passenger battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV). (5) The climate protection gap refers to the share of non-insured economic losses caused by climate-related disasters, based on modelling of the risk from floods, wildfires, windstorms, and the insurance penetration rate. Scale: 0 (no protection gap) –4 (very high gap) (European Insurance and Occupational Pensions Authority, 2022). (6) Total water consumption in renewable freshwater resources available for a territory and period. (7) Material extractions for consumption and investment. (8) Years of potential life lost through premature death due to exposure to particulate matter with a diameter of less than 2.5 micrometres. (9) Share of habitats in good conservation status according to the records submitted under Art. 17 of the Habitats Directive (Directive 92/43/EEC) for 2013-2018. (10) Multi-species index measuring changes in population abundances of farmland bird species. (11) Source: annex 12 of the Commission's proposal for a soil monitoring law, SWD (2023) 417 final. (12) Estimates of organic carbon content in arable land.

This Annex ([64]) sets out Belgium's progress and challenges in accelerating the net-zero energy transition, while supporting its competitiveness in the clean energy sector ([65]). It considers measures and targets put forward in the draft updated National Energy and Climate Plans (NECP) for 2030 ([66]).

Belgium displays positive developments in terms of increased renewable energy capacity installed, development of energy infrastructure, including for hydrogen, energy efficiency measures. However, further efforts are needed to accelerate the clean energy transition. Belgium is highly dependent on fossil fuels and remains dependent on imports from non-EU countries for most clean energy technologies.

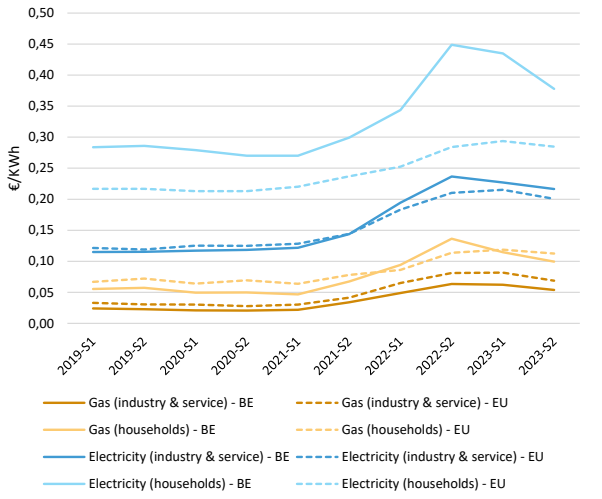
Belgium has an electricity interconnection level of just above the advised 15%. In the first Project of Common Interest (PCI) / Project of Mutual interest (PMI) list it has one interconnection project with France, the line between Lonny and Gramme. It will also increase internal capacity between Zandvliet and Liefkenshoek. It develops an interconnector with the UK, the Cronos project. Regarding offshore electricity, Belgium develops a hybrid interconnector with Denmark, the Triton link and with the UK the Nautilus link.

The further development of the electricity grids in Belgium requires significant investment. As an example, between 2024 and 2027 Elia will invest EUR 6.5 billion in the high voltage grid, which is more than four times the amounts it has invested during the past three years. Significant amounts will be needed also for the distribution network.

The existing natural gas infrastructure is well developed to ensure security of gas supply. The development of natural gas infrastructure is no longer an option under the new TEN-E Regulation.

Belgium invests in hydrogen infrastructure (a backbone pipeline, a pipeline to France and receiving terminals), and has five hydrogen candidate projects for the next (PCI)/(PMI) list. It is also active in carbon capture and storage, with projects intending to capture and transport CO2 from the industrial areas around the ports of Antwerp-Bruges and Gent to storage under either the Dutch or the Norwegian continental shelf. In 2023 the EU-first CCS transport from Antwerp to Denmark and the storage under the sea in Denmark was realised.

Graph A7.1: **Belgium's energy retail prices for households and industry**



(1) For industry, consumption bands are I3 for gas and IC for electricity, which refer to medium-sized consumers and provide an insight into affordability
(2) For households, the consumption bands are D2 for gas and DC for electricity
(3) Industry prices are shown without VAT and other recoverable taxes/levies/fees as non-household consumers are usually able to recover VAT and some other taxes
Source: Eurostat

Energy average retail prices in gas and electricity showed a noteworthy decline in 2023 in Belgium, dipping below the levels recorded in the second half of 2022. In the second semester of 2023, the retail gas and electricity prices for households decreased both by 13%. However, although gas prices declined by 12% compared to the EU average, electricity prices were 33% higher. For the industrial and services sector, gas prices declined by 14% in the second semester of 2023 and about 24% below the EU average. Moreover, electricity prices at the end of 2023 had decreased by 5% since the

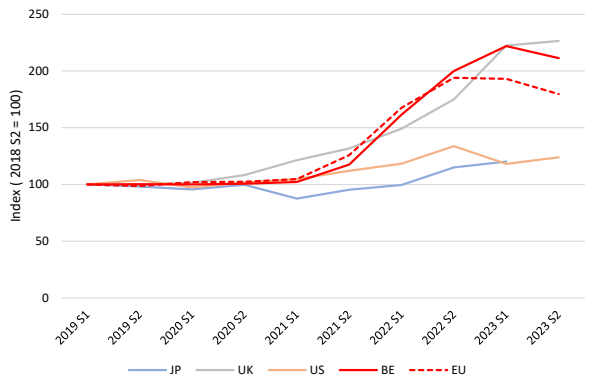
([64]) It is complemented by Annex 6 as the European Green Deal focuses on the clean energy transition and by Annex 8 on the action taken to protect the most vulnerable groups, complementing ongoing efforts under the European Green Deal, REPowerEU and the European Green Deal Industrial Plan.

([65]) In line with the Green Deal Industrial Plan and the Net-Zero Industry Act

([66]) Belgium submitted its draft updated NECP in December 2023.

beginning of the year, remaining however about 8% higher than the EU average. In relative terms, electricity prices for non-household consumers have increased significantly compared to the US and Japan, thus potentially affecting the international competitiveness of energy-intensive industries in Belgium.

Graph A7.2: **Trends in electricity prices for non-household consumers (EU and foreign partners)**



(1) For Eurostat data (EU and BE), the consumption band is ID, which refers to large-sized consumers with an annual consumption of between 2 000 MWh and 20 000 MWh, such as in electricity intensive manufacturing sectors, and provides an insight into international competitiveness
(2) JP = Japan
Source: Eurostat, IEA

Most of the direct energy support measures for final consumers implemented since the outset of the energy crisis were not targeted at the most vulnerable households or firms. The federal government provided direct energy support measures to households until end 2023, using a variety of measures, including: (i) two basic packages for gas (EUR 270 and EUR 405) and two basic electricity packages (EUR 122 and EUR 183), (ii) a one-off lump sum payment of EUR 80 to help the most vulnerable households and (iii) a VAT reduction on solar photovoltaic panels, solar thermal panels, solar boilers and heat pumps. The regional governments adopted additional measures, e.g. the Flemish government adopted several measures to protect vulnerable citizens with low incomes and to support a structural reduction of energy consumption.

Belgium's energy mix remains highly dependent on fossil fuels. According to Eurostat data for 2022, less than one third of its energy came from renewable energy (11%) and nuclear energy (20%).

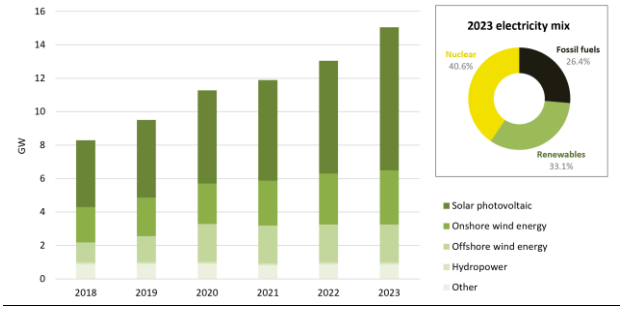
Natural gas is still quite important in the Belgian energy system. In 2022 it still accounted for 24.6% of gross available energy in the country and for 23% of gross electricity production. While Belgium fully relies on imports of natural gas, only a small part of imports come from Russia. Traditionally its dependence on imports from Russia was lower than the EU average, amounting to 12% in 2021. Belgium operates one underground storage facility with a total capacity of around 0.8 bcm, representing only 5% of its total yearly demand. Belgium fulfilled its gas storage obligations last winter, reaching 99.1% by 1 November 2023, and ended the winter season with a storage filled at 54.35% by 1 April 2024. Belgium also has one LNG terminal in Zeebrugge. The latter became crucial after the invasion of Ukraine by Russia, and should see its regasification capacity enhanced by an additional 10.5 GWh per hour by 2026. Belgium managed to reduce its gas demand between August 2022 and December 2023 by 17% in comparison with the average over the previous five years. However, the share of gas in gross energy consumption is expected to increase by 2030 (according to the most recent information provided by the Belgian authorities, mainly to replace electricity generation of 4000 MW of nuclear capacity that have already been closed in 2023 of will close in 2025).

Belgium has reconsidered the future of its nuclear powerplants, to ensure the security of its electricity supply. In December 2023, the federal government and ENGIE signed the final agreement to extend the operation of the Tihange 3 and Doel 4 nuclear power plants for 10 years until 2035, which will keep 2 GW of nuclear power in the energy mix. Belgium's draft updated NECP mentions that this decision took into consideration both the effects on security of supply of higher gas prices felt after Russia's invasion of Ukraine and the unavailability of part of the French nuclear power generation in 2022. Other measures taken to ensure security of energy supply include the use of the Capacity Remuneration Mechanism (CRM) and the accelerated deployment of onshore and offshore renewable energy, including the development of 3.5 GW of offshore wind energy in the North Sea by 2030.

The installed renewable energy capacity increased by 15% in 2023, reaching more than 15 GW installed capacity, an evolution driven by the significant increase of solar

(more than 25%). The total installed solar capacity in 2023 was 8 549 MW ([67]). The permitting regime is favourable for self-consumers, as in most cases no planning permit is required for rooftop PV. The total wind capacity in Belgium for 2022 was 5 504 MW (an increase of 4%), out of which 3 242 onshore wind and 2 262 MW offshore wind ([68]). Belgium plans to develop an additional 3.5 GW of offshore wind by 2030 ([69]). This goal aligns with Belgium's non-binding agreement, set out in the non-binding goals of the EU Sea Basins agreements of January 2023.

Graph A7.3: **Belgium's installed renewable capacity (left) and electricity generation mix (right)**



"Other" includes renewable municipal waste, solid biofuels, liquid biofuels, and biogas.
Source: IRENA, Ember

In its updated draft NECP, Belgium submitted a proposed contribution to the EU renewable energy target of 21.7%, which is significantly below the one resulting from EU legislation (estimated at 33%, according to the formula set out in Annex II of the Regulation (EU) 2018/1999 on the Governance Regulation of the Energy Union and Climate Action).

Belgium made some steps in the implementation of reforms to accelerate the deployment of renewables. Flanders and Wallonia have adopted strategies to accelerate permit-granting for wind energy. Belgium has also taken measures to make more space available for wind energy and to accelerate appeal procedures. Flanders has integrated several permits in a single unified application process. In its REPowerEU chapter, Belgium proposed some additional reforms, including an obligation to install solar panels on certain buildings, and a reform to accelerate the energy transition.

Belgium's relatively low share of renewables in heating and cooling (10.4% in 2022) is mainly based on biomass use, with heat pumps covering slightly more than 13% of this share. The targets stated in the draft NECP appear rather unambitious, despite significant growth in heat pumps. The draft updated NECP shows a continued reliance on biomass as the first contributor to renewable heat.

Belgium demonstrated significant progress in its efforts towards reaching the 2030 EU targets for energy efficiency. In 2022, Belgium had a primary energy consumption of 45.2 Mtoe, a 7.2% decrease compared to 2021 and a 3.9% decrease compared to 2012. It had a final energy consumption of 33.4 Mtoe, a 6.8% decrease compared to 2021 and a 5.9% decrease compared to 2012. The best results came from the residential sector, which decreased its final energy consumption by 15%. However, they were triggered largely by the high gas and electricity prices, as well as by the rather mild temperatures compared to the previous year. The worst results came from the transport sector, which increased its final energy consumption by 3.7%.

Belgium has implemented a wide range of energy efficiency measures covering the main sectors, with support from several EU funds. However, schemes directly supporting energy efficiency in SMEs are rather limited. Support from the Recovery and Resilience Facility has been scaled up under the REPowerEU chapter, notably by (i) reinforcing measures on energy efficiency and incentivizing reductions in energy demand, while addressing energy poverty (increased pace of building renovation) and (ii) supporting zero-emission transport and the infrastructure for this, including railways. Under cohesion policy, almost 19% of the overall funding allocated to Belgium covers energy efficiency investment.

Most of the schemes on energy efficiency are still grant-based and the use of financial instruments is still very limited. However, Belgian authorities are working on the deployment of financial instruments targeting energy renovation of public buildings and infrastructure. In

([67]) IRENA report Renewable Energy Statistics 2024, the data might differ from the Eurostat data because a different methodology was used to calculate the capacity in AC and DC.

([68]) International Renewable Energy Agency (IRENA) report 2024

([69]) BE_SWD_2023_601_en.pdf (europa.eu)

addition, Flanders adopted several measures aimed at introducing new obligations for the building sector and industry.

Regarding buildings, Belgium needs to step up its efforts in the residential sector to achieve a meaningful contribution to its 2030 reduction target for energy consumption by buildings. While there was progress in terms of the primary energy consumption, in terms of final energy consumption there was no visible progress in the residential sector between 2021 and 2022, when using climate corrected data ([70]). Heating and cooling represent more than 85% of the country's residential final energy consumption, of which only 9% comes from renewables.

Approximately 60 000 heat pumps were sold in 2022, an increase of 118% on the previous year. Financial support for condensing gas boilers in buildings ended in 2023. There are several measures in place to support increased uptake of renewable energy in buildings, for instance through solar installations (PV and solar thermal) and heat pumps. Electricity in Belgium is 3.80 times more expensive than gas, meaning that end users save energy but pay more if they choose a heat pump for heating ([71]). Building renovation is an important part of the Belgian recovery and resilience plan (RRP), with investment of over EUR 1 billion in the energy-efficient renovation of buildings, including social housing. The low number of market surveillance activities on products covered by eco-design and energy labelling creates concerns about compliance levels.

Consumer empowerment in the electricity market is significant, with a growing number of prosumers and energy communities. But the deployment of smart meters is lagging in Brussels and Wallonia. Due to a favorable regulatory framework and high and volatile wholesale energy prices, the small-scale installed solar PV capacity increased by 14% in 2022, reaching approximately 7.5 GW of total installed solar PV capacity, in particular due to an increase in installed capacity in the residential segment. Only 22.4% of household consumers had smart meters in 2022 (EU average 80%). The Flanders region alone is on track to reach 80% of final customers by 2024. Belgium has transposed the EU rules on energy communities and prosumers, based on a number of enabling conditions, including:

- eased permitting requirements for smaller-scale solar PV;
- dedicated supply licensing regimes and a regulatory framework;
- ICT infrastructure and financial incentives (e.g. VAT exemptions in Flanders and reduced network tariffs in Brussels) for energy traded between peers and shared within multi-apartment buildings and energy communities.

Wallonia has introduced a feed-in tariff for small-scale renewable energy installations in 2024. There are currently more than a dozen energy communities operational in Belgium. An investment support programme for energy communities exists in Wallonia under the regional recovery and resilience plan. Switching rates are among the highest in the EU. In 2022 almost 100% of contracts held by household consumers in electricity were variable-price contracts.

Belgium remains dependent on imports from non-EU countries for most clean energy technologies. However, Belgium shows some positive developments in the battery and electrolyser supply chain, as well as a considerable foothold in the wind industry. Notably, Belgium is a strategic producer of offshore wind foundations and substations, with multiple factories in Flanders contributing to offshore projects all over Europe. Belgium has also been historically manufacturing wind rotor gearboxes in Lommel. Belgium is host to two electrolyser manufacturing plants, both supported by the Important Project of Common European Interest (IPCEI) Hy2Tech programme. One is operated by an American company in Oevel with an estimated capacity of 500 MW, while the other, situated in Seraing, is the stacking unit of a new transnational operation (with a second factory in France), managed by a Belgian firm. Both operators have announced plans to scale up their

([70]) Final energy consumption in households from Eurostat (data-tables of December 2023), climate-corrected by the Joint Research Centre with reference period 2005-2022.

([71]) Therefore, Belgium would benefit from analysing how taxation and network charges and levies affect the economics of decarbonised heating, and addressing any imbalances.

capacity to 1 GW each at the latest by 2030. Belgium has substantial potential for battery manufacturing, with one manufacturing plant located in Ninove, with the capacity to produce 10 000 units annually. It is operated by a Belgian company that aims to establish Belgium's first battery pack gigafactory (3 GWh) in Seneffe-Manage by mid-2025. Regarding solar PV, Belgium has been producing solar modules in Wallonia for an extended period, boasting a capacity of about 100 MW as of 2023. The landscape comprises a standard module producer and two firms specializing in building integrated photovoltaics (BIPV). One of these companies serves as the manufacturer for a pioneering offshore PV project in the North Sea, known as SeaVolt.

Belgium is making significant efforts in R&I for Energy Union priorities. In its draft updated NECP Belgium reported its national spending on research and innovation in specific climate and energy technologies, representing 0.32% of Belgium's GDP in 2021 and corresponding to a share of 10% in overall R&I spending (equal to 3.2% of GDP); mainly in nuclear safety, followed by smart systems, sustainable transport and efficient systems. The report details the split between public and private funds (25% from the public sector). Venture capital investment has also shown positive trends in recent years, with EUR 32.2 million of investment in climate tech firms in 2023. Belgium plans to build a new major nuclear research infrastructure, MYRRHA (Multipurpose Hybrid Research Reactor for High Tech Applications), with the ambition to remain a world-class R&D and innovation player in numerous related fields.

Table A7.1: **Key energy indicators**

		Belgium				EU			
		2019	2020	2021	2022	2019	2020	2021	2022
ENERGY DEPENDNCE	**Import Dependency [%]**	**77.6%**	**78.0%**	**70.8%**	**74.0%**	**60.5%**	**57.5%**	**55.5%**	**62.5%**
	of Solid fossil fuels	101.8%	102.1%	92.6%	99.5%	43.3%	35.8%	37.3%	45.8%
	of Oil and petroleum products	101.5%	102.7%	95.8%	100.6%	96.7%	96.8%	91.7%	97.7%
	of Natural Gas	101.8%	99.1%	99.9%	100.8%	89.7%	83.6%	83.6%	97.6%
	Dependency from Russian Fossil Fuels [%]								
	of Natural Gas	16.9%	14.1%	11.9%	12.1%	39.7%	41.3%	41.1%	21.0%
	of Crude Oil	32.0%	28.5%	26.7%	20.5%	28.8%	26.7%	26.4%	19.5%
	of Hard Coal	39.7%	38.9%	42.9%	24.5%	43.5%	49.1%	47.4%	21.5%

		2016	2017	2018	2019	2020	2021	2022
DIVERSIFICATION OF GAS SUPPLIES	**Gas Consumption (in bcm)**	**17.4**	**17.8**	**18.4**	**18.5**	**18.4**	**18.5**	**15.6**
	Gas Consumption year-on-year change [%]	1.2%	2.4%	3.0%	0.8%	-0.6%	0.4%	-15.6%
	Gas Imports - by type (in bcm)	**18.2**	**17.9**	**19.8**	**23.2**	**21.7**	**21.3**	**24.2**
	Gas imports - pipeline	17.2	16.7	17.3	16.5	17.0	17.1	12.9
	Gas imports - LNG	1.0	1.1	2.5	6.7	4.7	4.2	11.2
	Gas Imports - by main source supplier (in bcm) (1)							
	Norway	5.7	9.3	10.4	9.1	11.1	11.4	5.1
	Qatar	1.0	1.1	2.0	4.5	2.5	2.6	5.8
	Russia	-	1.6	2.5	3.9	3.0	2.5	2.9
	United States	-	-	-	0.2	0.6	0.1	1.9

		2019	2020	2021	2022	2023
	LNG Terminals - storage capacity m3 LNG					
	Number of LNG Terminals	1	1	1	1	1
	LNG Storage capacity (m3 LNG)	566,000	566,000	566,000	566,000	566,000
	Underground Storage					
	Number of storage facilities	1	1	1	1	1
	Technical Capacity (bcm)	0.8	0.8	0.8	0.8	0.8

		2016	2017	2018	2019	2020	2021	2022	2023
ELECTRICITY/ENERGY	**Gross Electricity Production (GWh) (2)**	**85,610**	**86,619**	**75,040**	**93,646**	**89,455**	**100,465**	**95,944**	**-**
	Combustible Fuels	31,558	32,615	33,171	34,497	35,277	30,667	30,773	-
	Nuclear	43,523	42,227	28,597	43,524	34,435	50,326	43,879	-
	Hydro	1,489	1,397	1,308	1,181	1,315	1,350	1,646	-
	Wind	5,420	6,521	7,574	9,755	12,819	11,998	12,353	-
	Solar	3,095	3,308	3,903	4,253	5,112	5,618	6,876	-
	Geothermal	0	0	0	0	0	0	0	-
	Other Sources	524	551	487	436	498	507	418	-
	Gross Electricity Production [%]								
	Combustible Fuels	36.9%	37.7%	44.2%	36.8%	39.4%	30.5%	32.1%	-
	Nuclear	50.8%	48.8%	38.1%	46.5%	38.5%	50.1%	45.7%	-
	Hydro	1.7%	1.6%	1.7%	1.3%	1.5%	1.3%	1.7%	-
	Wind	6.3%	7.5%	10.1%	10.4%	14.3%	11.9%	12.9%	-
	Solar	3.6%	3.8%	5.2%	4.5%	5.7%	5.6%	7.2%	-
	Geothermal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-
	Other Sources	0.6%	0.6%	0.6%	0.5%	0.6%	0.5%	0.4%	-
	Net Imports of Electricity (GWh)	**6,183**	**6,022**	**17,328**	**-1,855**	**-333**	**-7,877**	**-7,528**	**-**
	As a % of electricity available for final consumption	7.4%	7.2%	20.6%	-2.2%	-0.4%	-9.4%	-9.5%	-
	Electricity Interconnection [%]	-	**18.9%**	**9.5%**	**18.3%**	**14.2%**	**16.1%**	**14.8%**	**15.4%**
	Share of renewable energy consumption - by sector [%]								
	Electricity	15.8%	17.2%	18.9%	20.8%	25.1%	26.0%	29.1%	-
	Heating/cooling	8.2%	8.2%	8.3%	8.3%	8.4%	9.2%	10.4%	-
	Transport	6.0%	6.6%	6.7%	6.8%	11.0%	10.3%	10.4%	-
	Overall	8.7%	9.1%	9.5%	9.9%	13.0%	13.0%	13.8%	-

		2020	2021	2022	2023
CLEAN ENERGY	**VC investments in climate tech start-ups and scale-ups (EUR Mln)**	**35.76**	**20.85**	**237.14**	**32.18**
	as a % of total VC investment (3) in Belgium start-ups and scale-ups	3.3%	1.6%	10.0%	2.1%
	Research & Innovation spending in Energy Union R&i priorites				
	Public R&I (EUR mln)	291.3	179.7	-	-
	Public R&I (% GDP)	0.06%	0.04%	-	-
	Private R&I (EUR mln)	226.7	-	-	-
	Private R&I (% GDP)	0.05%	-	-	-

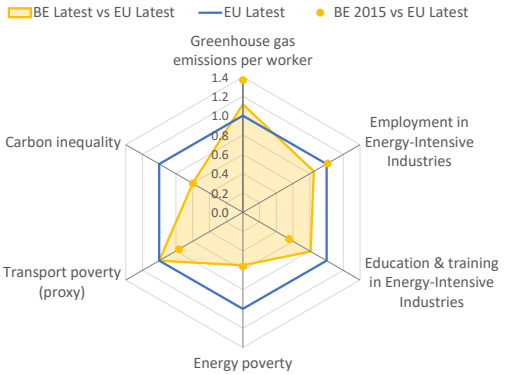
(1) The ranking of the main suppliers is based on the latest available figures (for 2022)
(2) Venture Capital investment includes Venture Capital deals (all stages), Small M&A deals and Private Equity (PE) growth deals (for companies that have previously been part of the portfolio of a VC investment firm or have received Angel or Seed funding).

Source: Eurostat, Gas Infrastructure Europe, JRC elaboration based on PitchBook data (03/2024), JRC SETIS (2024)

This Annex monitors Belgium's progress in ensuring a fair transition towards climate neutrality and environmental sustainability, particularly for workers and households in vulnerable situations. Belgium's green economy is expanding. Between 2015 and 2021, total jobs in the environmental goods and services sector grew by 20% (to around 78 000) (EU: 18.2%), reaching 2.2% of total employment (EU: 2.7%). Also between 2015 and 2022, the greenhouse gas emission intensity of Belgium's workforce (see Graph A8.1 and Table A8.1) fell from 19.6 to 16.0 tonnes per worker, above the EU average (14.3 tonnes per worker in 2022) ([72]), indicating a positive trend in the green transition. At the same time, job creation in the green sector could be stronger and the recent rise in energy poverty tackled, in order to contribute to a fair green transition in line with the Council Recommendation on ensuring a fair transition towards climate neutrality ([73]). Further supporting the uptake of green skills remains key to a fair transition and the implementation of REPowerEU. Belgium's recovery and resilience plan (RRP) includes several reforms and investments in support of a fair green transition ([74]), complementing its territorial just transition plans and actions supported by the European Social Fund Plus (ESF+).

Employment in Belgium's sectors most affected by the green transition is decreasing. In 2023, employment in energy-intensive industries ([75]) comprised 3% of total employment (3.5% in the EU), a fall from 2015 (3.6%). Employment in mining and quarrying has reached the same level as in 2015 (with around 3 700 workers in 2023), despite experiencing some changes in the preceding years. The job vacancy rate in construction (see Graph A8.2), a key sector for the green transition, is higher than the EU average (5.4% vs 3.6% in the EU in 2023). This is also reflected in the Eurobarometer on skills shortages, where 77% of small and medium-sized enterprises (SMEs) in the Belgian construction sector agreed that skills shortages are holding them back in general business activities ([76]). In the 2021-2027 ESF+ budget for Belgium, 15% (EUR 205 million) support developing green skills, jobs and the economy and 8% (EUR 112 million) to developing digital skills and jobs.

Graph A8.1: **Fair transition challenges in Belgium**



Source: Eurostat, EU Labour Force Survey, EMPL-JRC GD-AMEDI/AMEDI+ and DISCO(H) projects (see Table A8.1).

Upskilling and reskilling in energy-intensive industries slightly increased, but are still below the EU average, leaving skills shortages as bottlenecks in achieving a fair transition. In energy-intensive industries, workers' participation in education and training increased from 6.1% in 2015 to 8.8% in 2022, although it is still below the EU average (10.9%). In Belgium, 40% of SMEs think that the skills required for greening business activities are becoming even more important (EU: 42%) ([76]). In line with the EU renewable energy target, by 2030 about 4 199 additional skilled workers will be needed for the deployment of wind and solar energy, which may require an investment in skills of EUR 47.9-59.9 million ([77]). To address this challenge, specific investments under the RRP and the Just Transition Mechanism fund training to reskill workers in regions affected by the transition, together with policy measures at national level and flexibility mechanisms to encourage in-company training.

([72]) Workforce-related calculations are based on the EU Labour Force Survey. Note, in the 2023 country report for Belgium, such indicators were calculated based on employment statistics in the national accounts. This may result in limited comparability across the two reports.

([73]) The Council Recommendation of 16 June 2022 on ensuring a fair transition towards climate neutrality (2022/C 243/04) covers employment, skills, tax-benefit and social protection systems, essential services and housing.

([74]) See also the 2022 country report (Annex 6) and Annex 3 for an overview.

([75]) Mining and quarrying (NACE B), chemicals (C20), minerals (C23), metals (C24) and automotive (C29).

([76]) Eurobarometer on skills shortages, recruitment, and retention strategies in small and medium-sized enterprises.

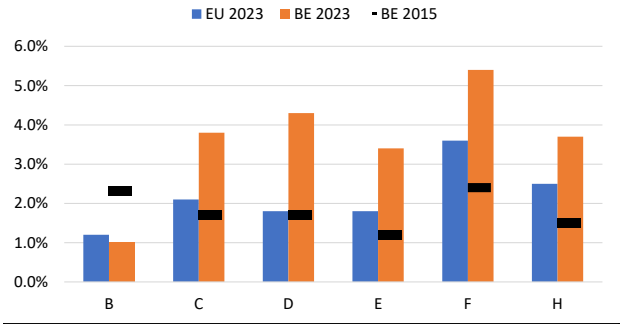
([77]) EMPL-JRC AMEDI project.

Table A8.1: **Key indicators for a fair transition in Belgium**

Indicator	Description	BE 2015	BE	EU
GHG per worker	Greenhouse gas emissions per worker – CO_2 equivalent tonnes	19.6	16.0 (2022)	14.3 (2022)
Employment EII	Employment share in energy-intensive industries, including mining and quarrying (NACE B), chemicals (C20), minerals (C23), metals (C24) and automotive (C29)	3.6%	3.0% (2023)	3.5% (2023)
Education & training EII	Adult participation in education and training (last 4 weeks) in energy-intensive industries	6.0%	8.8% (2023)	10.9% (2023)
Energy poverty	Share of the total population living in a household unable to keep its home adequately warm	5.2%	5.1% (2022)	9.3% (2022)
Transport poverty (proxy)	Estimated share of the AROP population that spends over 6% of expenditure on fuels for personal transport	28.4%	37.1% (2023)	37.1% (2023)
Carbon inequality	Ratio between the consumption footprint of the top 20% vs bottom 20% of the income distribution	1.6	1.6 (2021)	2.7 (2021)

Source: Eurostat (env_ac_ainah_r2, lfsa_egan2d, ilc_mdes01), EU Labour Force Survey (break in time series in 2021), EMPL-JRC GD-AMEDI/AMEDI+ and DISCO(H) projects.

Graph A8.2: **Job vacancy rate in mining and quarrying, and transformation sectors**



B - Mining and quarrying
C - Manufacturing
D - Electricity, gas, steam and air conditioning supply
E - Water supply; sewerage, waste management and remediation activities
F - Construction
H - Transportation and storage
Source: Eurostat jvs_a_rate_r2.

Energy poverty indicators had decreased steadily in previous years, but the spike in energy prices in 2022 almost brought the situation back to 2015 levels. The share of the population unable to keep their homes adequately warm decreased slightly from 5.2% in 2015 to 5.1% in 2022, well below the EU average (9.3%) ([78]). The indicator increased by 1.6 pps between 2021 and 2022 on the back of energy price increases due to supply constraints caused by the COVID-19 pandemic and Russia's war of aggression against Ukraine, despite the emergency measures implemented in Belgium. In particular, 12.0% of the population at risk of poverty (AROP) (EU: 20.1%) and 4.5% of lower middle-income households (in deciles 4-5) (EU: 11.6%) were unable to keep their homes adequately warm in 2022. Also, in January 2023, 37.1% of the population at risk of poverty spent a considerable share of their budget (more than 6%) on private transport fuels (EU: 37.1%) ([79]). Some RRP measures promote the renovation of all housing types, supporting also low-income households ([80]).

Despite being slightly below the EU average, environmental inequalities remain an issue. In 2021, the consumption footprint for 20% of the population with the highest income was 1.6 times higher than the footprint of the poorest 20% ([81]) (EU: 1.8). The average levels of air pollution in 2021 stood below the EU average (10.7 vs 11.4 µg/m^3 PM2.5), but still with 77% of the population living in regions exposed to critical levels of air pollution ([82]), leading to a significant impact on health, affecting vulnerable groups in particular, and around 5 100 premature deaths annually ([83]).

Belgium is making progress in the fair transition towards climate neutrality. It set up comprehensive research on the implications of the climate transition, a dedicated stakeholders' forum, and financial support for businesses contributing to climate and environmental objectives, particularly through the creation of quality jobs ([84]).

([78]) Energy poverty is a multi-dimensional concept. The indicator used focuses on an outcome of energy poverty. Further indicators are available at the Energy Poverty Advisory Hub.

([79]) Affordability of private transport fuels is one key dimension of transport poverty. The indicator has been developed in the context of the EMPL-JRC GD-AMEDI/AMEDI+ projects. Methodology explained in Economic and distributional effects of higher energy prices on households in the EU.

([80]) See the 2022 country report, Annexes 6 and 3.

([81]) Developed in the context of the EMPL-JRC DISCO(H) project. Methodology explained in Joint Research Centre, 2024. Carbon and environmental footprint inequality of household consumption in the EU. JRC137520. The EU average refers to EU27 without Italy (household income data not available for IT in the HBS)

([82]) Two times higher than the recommendations in the WHO Air Quality Guidelines (annual exposure of 5µg/m^3).

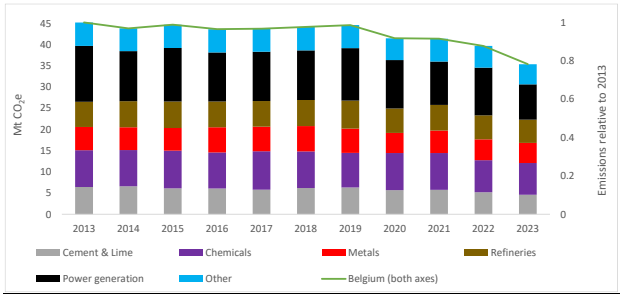
([83]) EEA- Air Quality Health Risk Assessment

([84]) Based on the monitoring review of the Council Recommendation on ensuring a fair transition towards climate neutrality, which took place in October 2023.

The green transition of industry and the built environment, in particular decarbonisation, resource efficiency and circularity, is essential to boost Belgium's competitiveness ([85]). In this regard, priorities for Belgium are the use of circular materials in industry, the built environment, and the uptake of circular business models.

Belgium's circular economy transition is on track to achieve the EU Circular Economy Action Plan goals, but more measures would be beneficial to reduce waste and phase out unsustainable disposal practices. The material footprint increased significantly in 2022, reaching 15.9 tonnes per capita, above the EU average. Total waste generation is highly above the EU average. Belgium's draft updated national energy and climate plan includes very good references to circular economy in the national objectives and targets. Further improving waste treatment and reducing dependence on incineration would help to reach the targets for 2030 set by the draft updated national energy and climate plan.

Graph A9.1: **ETS emissions by sector since 2013**



Source: European Commission

In 2023, the sectors covered by the EU emissions trading system (ETS) in Belgium ([86]) emitted 21% less greenhouse gases than in 2019. In 2023, only 23% of greenhouse gases emitted by Belgium's ETS installations came from power generation, much below the EU average of 57%. The chemical industry emitted more than a quarter (28%) of the total emissions from all industry sectors, refineries one fifth (20%), cement and lime production also nearly one fifth (17%), the metals industry emitted 18%, and 18% of the emissions came from other industries. Between 2019 and 2023, the power sector registered a significantly higher emissions reduction (33%) ([87]) than the industry sectors (16%). Between 2013 and 2023, greenhouse gas emissions declined by 37% in power generation and by 15% in the industry sectors, with larger reductions in the cement and line industry. This resulted in a 22% reduction overall.

Belgian industry is progressing in making more efficient use of resources, even though it remains more exposed to risk of supply chain disruptions than other Member States. Belgium achieved the EU's second-highest circular material use rate in 2022 but is one of the countries relying the most on imports. Material import dependence increased to 74.7% of materials used in 2022 – compared with an EU average of 22.4%. By contrast, resource productivity increased, reaching 3.3 purchasing power standards per kilogram (PPS/kg) in 2022, compared with 2.6 PPS/kg in 2017 ([88]), placing Belgium well above the EU average. Water abstraction for manufacturing purposes decreased to 18% of total water abstracted in Belgium in 2019. There is still room to make better use of circularity to drive the decarbonisation of industry.

There is still room for improving Belgian firms' uptake of circularity and environmentally sustainable approaches. Belgium has not been able to recover its previous levels of performance on circular material use rate ([89]), and the 2022 Eco-Innovation Scoreboard placed the country in the 'catching-up group'. As of 2023, Belgium totalled 65 EU Ecolabel licences and 3 754 products with the EU Ecolabel, showing an increase compared to the previous year. Support is available at federal and regional level to develop circular business models ([90]).

([85]) See also Annexes 6, 7 and 12.

([86]) This analysis excludes air travel. For more details and the data sources, see Weitzel, M; van der Vorst, C. (2024), Uneven progress in reducing emissions in the EU ETS, JRC Science for policy brief, JRC138215, Joint Research Centre.

([87]) This includes a steep decrease of 15% year-on-year in 2020, and a gradual rebound in the next 2 years.

([88]) Although the peak was in 2021 with 3.4 PPS/kg.

([89]) Circular material use rate decreased to 22,2% in 2022 from 23,7% in 2021.

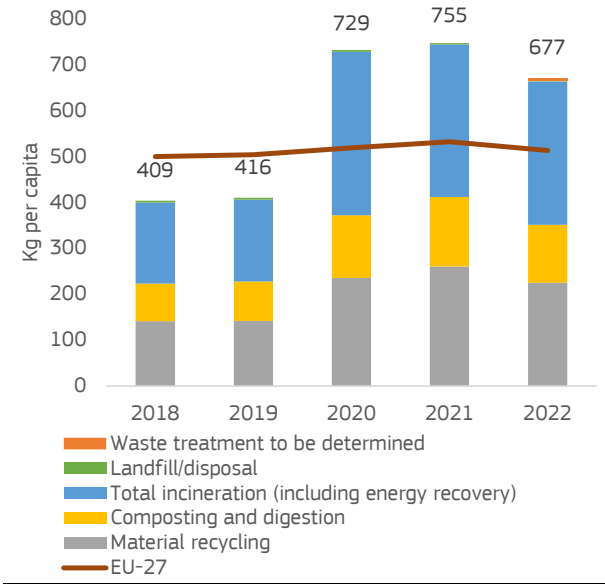
([90]) Eco-innovation country profile 2022 Belgium, Ecorys.

Table A9.1: **Circularity indicators**

	2018	2019	2020	2021	2022	2023	EU-27	Latest year
Industry								
Resource productivity (purchasing power standard (PPS) per kilogram)	2,8	2,8	3,0	3,4	3,3	-	2,5	2022
Circular material use rate (%)	20,8	20,7	23,0	23,7	22,2	-	11,5	2022
Eco-innovation index (2013=100)	90,5	91,2	93,4	94,4	99,8	-	121,5	2022
Recycling of plastic packaging (%)	42,4	47,3	44,7	49,2	-	-	40,7	2021
Cost of air emissions from industry (EUR bn)	14,8	14,1	13,2	13,5	-	-	352,7	2021
Built environment								
Recovery rate from construction and demolition waste (%)	97,0	-	99,0	95,8	-	-	89,0	2020
Soil sealing index (base year = 2006)	102,7	-	-	-	-	-	103,4	2018
Non-residential floor area (m^2 per capita)	23,1	23,3	23,4	-	-	-	18,0	2020
Waste backfilled (%)	-	-	45,0	-	958,4	-	9,9	2020

Source: Eurostat, European Environment Agency

Graph A9.2: **Treatment of municipal waste**



Source: Eurostat

While being among the best performers in the EU as regards waste recycling, Belgium is still highly reliant on incineration. With a municipal waste recycling rate of 55.5% in 2021, Belgium is on track to meet both the 2025 target for recycling and the 2035 target for landfilling. Despite the good performance in recycling, Belgium ranked second in the EU for incineration per capita in 2021 ([91]) and second for waste generation (755 kg per capita in 2022, compared with an EU average of 527 kg). After a peak in 2017 of 19, the number of patents on waste and recycling decreased to 6 in 2020.

The built environment system continues to exacerbate the depletion of resources, despite recent improvements. During the first 9 months of 2023, Belgium's building permits index stood at 101.1 on average, showing approximately stable construction activities compared to 2015 ([92]), while the population grew by 4.6%. Belgium's residential and non-residential floor areas per capita are larger than the EU average. In 2020, they measured 64.2 m2 per capita (EU average: 52.3 m^2) and 23.4 m^2 per capita (EU average: 19.4 m^2), respectively. In 2020, the three Belgian regions submitted long-term renovation strategies aiming to decarbonise the building stock. The plan for the Brussels Region extensively includes circular economy practices.

Belgium is on track to meet the Waste Framework Directive's targets for the construction sector. Between 2010 and 2020, waste generated from construction and demolition activities steadily increased, reaching 20.78 million tonnes, and waste generation per capita is the second highest in the EU. However, the proportion of backfilling was well above the EU average of 9.89% and reached 45.0% in 2020. Belgium successfully improved its construction and demolition waste recovery rate, which increased from 17% in 2010 to 99% in 2020. In 2021, 84% of the Belgian population was connected to at least secondary wastewater treatment, above the EU average of 81%.

([91]) Between 2019 and 2022, the use of this disposal method rose dramatically, from 178 to 332 kg of waste incinerated per capita (44% of total waste treated in 2021). The sudden peak relates to changes in statistical methodology extending the scope of reporting.

([92]) 2015=100.

Digital transformation is key to ensuring a resilient and competitive economy. In line with the Digital Decade Policy Programme, and in particular with the targets for digital transformation by 2030, this Annex describes Belgium's performance on digital skills, digital infrastructure/connectivity and the digitalisation of businesses and public services. Where relevant, it makes reference to progress on implementing the Recovery and Resilience Plan (RRP). Belgium allocates 27% of its total RRP allocation to digital objectives (EUR 1.25 billion) ([93]). Under Cohesion Policy, an additional EUR 0.3 billion (13% of the country's total Cohesion Policy funding) is allocated to the country's digital transformation ([94]).

The Digital Decade Policy Programme sets out a pathway for EU's successful digital transformation by 2030. Belgium's national roadmap outlines the actions it intends to take to reach the objectives and targets at national level. The 2023 report on the state of the Digital Decade highlighted the need to accelerate and deepen the collective efforts to reach the EU-wide targets and objectives ([95]). Among others, a digitally skilled population increases the development and adoption of digital technologies and leads to productivity gains and new business models. It also leads to higher inclusion and participation in an environment increasingly shaped by the digital transformation ([96]). Digital technologies, infrastructure and tools all play a role in addressing the current structural challenges, including strategic dependencies, cybersecurity and climate change.

Overall, Belgium has a mixed performance on digital skills, with some significant challenges remaining but some progress to note. Although the share of individuals employed as ICT specialists is above the EU average, demand for ICT specialists remains high; the share of enterprises reporting difficulties in recruiting ICT specialists is above the EU average (69% vs 63%). Furthermore, increasing the share of women among ICT specialists remains a challenge for Belgium, although it is on par with the EU average (19.4%). To address this challenge, Belgium has set up an inter-federal strategy on women in digital ([97]). The proportion of people with at least basic digital skills (59%) is above the EU average (56%), as measured by DESI in 2023, with an increase of 5 percentage points between 2021 and 2023. In Belgium's RRP, digital reskilling and upskilling measures and a focus on digital skills in lifelong learning should contribute to greater job mobility and labour market integration, and help address the shortage in digitally skilled workforce.

Belgium presents mixed results in terms of digital infrastructure/connectivity, but has progressed well since last year. It scores higher than the EU average in terms of very high capacity network (VHCN) coverage (96% of households were covered in 2023, compared to the EU average of 79%), thanks to its extensive cable network. However, it still lags significantly behind in terms of fibre deployment (25% of households were covered with fibre to the premises (FTTP) in 2023 compared to the EU average of 64%). The RRP includes measures to support the roll-out of fibre. Belgium's performance is also far below the EU average when it comes to overall 5G deployment, with a 40.4% coverage compared to the EU average of 89.3%. 5G assigned spectrum rose from 3% to 66% in 2023, nearing the EU average of 68%; this was a projected improvement following the allocation of 5G spectrum in the multiband spectrum auction.

Belgium performs most solidly on the digitalisation of businesses. It scores above the EU average in all the indicators and fares particularly well with regard to the share of enterprises using big data, cloud services, and

([93]) The share of financial allocations that contribute to digital objectives has been calculated using Annex VII to the Recovery and Resilience Facility Regulation.

([94]) This amount includes all investment specifically aimed at or substantially contributing to digital transformation in the 2021-2027 Cohesion Policy programming period. The source funds are the European Regional Development Fund, the Cohesion Fund, the European Social Fund Plus, and the Just Transition Fund.

([95]) European Commission (2023): Report on the State of the Digital Decade 2023, 2023 Report on the state of the Digital Decade | Shaping Europe's digital future (europa.eu).

([96]) See for example OECD (2019): OECD Economic Outlook, Digitalisation and productivity: A story of complementarities, OECD Economic Outlook, Volume 2019 Issue 1 | OECD iLibrary (oecd-ilibrary.org) and OECD (2019): Going Digital: Shaping Policies, Improving Lives – Summary, https://www.oecd.org/digital/going-digital-synthesis-summary.pdf.

([97]) 'Women in Digital' national and intersectoral strategy for 2020-2025 https://news.belgium.be/fr/plan-interfederal-et-intersectoriel-women-digital.

artificial intelligence (all above EU averages). 64% of Belgian enterprises have taken up at least one of these three technologies, 9 percentage points above the EU average for 2023. Furthermore, the share of Belgium's SMEs with at least a basic level of digital intensity is at 74.5%, well above the EU average of 58%. In 2022, 5.2% of enterprises in Belgium reported ICT service outage due to cyberattacks (e.g. ransomware attacks, denial of service attacks). Over the same year, 23.9% of enterprises developed or reviewed their ICT security policy within the previous 12 months. Belgium's RRP includes measures and action plans to strengthen the cyber resilience of businesses as well as society at large, such as with protections through spear warning systems to alert organisations when systems are affected, or awareness raising campaigns and personalised support to SMEs ('Cyber scan').

Belgium performs above EU average in relation to digital public services, both in public services for businesses and for citizens. The large share of digital investment

Table A10.1:**Key Digital Decade targets monitored by the Digital Economy and Society Index indicators**

	Belgium			EU	Digital Decade target by 2030 (EU)
	2022	2023	2024	2024	
Digital skills					
At least basic digital skills	**54%**	**54%**	**59%**	**56%**	**80%**
% individuals	2021	2021	2023	2023	2030
ICT specialists ([1])	**5.6%**	**5.6%**	**5.4%**	**4.8%**	**20 million**
% individuals in employment aged 15-74	2021	2022	2023	2023	2030
Digital infrastructure/connectivity					
Fixed very high capacity network (VHCN) coverage	**69%**	**78%**	**96%**	**79%**	**100%**
% households	2021	2022	2023	2023	2030
Fibre to the premises (FTTP) coverage ([2])	**10%**	**17%**	**25%**	**64%**	**-**
% households	2021	2022	2023	2023	
Overall 5G coverage	**4%**	**30%**	**40%**	**89%**	**100%**
% populated areas	2021	2022	2023	2023	2030
Digitalisation of businesses					
SMEs with at least a basic level of digital intensity	**65%**	**NA**	**75%**	**58%**	**90%**
% SMEs	2021		2023	2023	2030
Data analytics	**NA**	**NA**	**45%**	**33%**	**-**
% enterprises			2023	2023	
Cloud	**47%**	**47%**	**48%**	**39%**	**-**
% enterprises	2021	2021	2023	2023	
Artificial intelligence	**10%**	**10%**	**14%**	**8%**	**-**
% enterprises	2021	2021	2023	2023	
AI or cloud or data analytics ([3])	**NA**	**NA**	**64%**	**55%**	**75%**
% enterprises			2023	2023	2030
Digitalisation of public services					
Digital public services for citizens	**72**	**81**	**82**	**79**	**100**
Score (0 to 100)	2021	2022	2023	2023	2030
Digital public services for businesses	**81**	**88**	**92**	**85**	**100**
Score (0 to 100)	2021	2022	2023	2023	2030
Access to e-health records	**NA**	**85**	**100**	**79**	**100**
Score (0 to 100)		2022	2023	2023	2030

(1) The 20 million target represents about 10% of total employment.
(2) The fibre to the premises coverage indicator is included separately as its evolution will also be monitored separately and taken into consideration when interpreting VHCN coverage data in the Digital Decade.
(3) At least 75% of EU enterprises have taken up one or more of the following, in line with their business operations: (i) cloud computing services; (ii) big data; (iii) artificial intelligence.

Source: Digital Economy and Society Index

dedicated to this dimension in the Belgian RRP provides an opportunity to continue to improve these results. For electronic identification (eID), three schemes have been notified to the European Commission under the eIDAS Regulation. One of those widely used schemes (itsme) is provided by a private entity in collaboration with the government. On access to electronic health records, Belgium performs very well with a maximum score of 100 compared to an EU average of 79. To improve access for citizens and businesses, Belgium's RRP includes measures for the digital transformation of public administration at federal and regional level, and the justice and healthcare systems.

This Annex provides a general overview of the performance of Belgium's research and innovation (R&I) system, which is essential for delivering the twin transition and ensuring long-term competitiveness.

Belgium is a 'leader innovator' and its performance increased relative to the EU average. According to the 2023 edition of the European Innovation Scoreboard ([98]), its innovation performance increased by 14.1 percentage points since 2016, at a higher rate than the EU's (8.5pp). Its overall performance remains far above the EU average (125.8%). This growth was mainly achieved thanks to a very substantial increase in business enterprise expenditure on R&D (BERD), now the highest in the EU (2.53% in 2022).

The particularly good science base is a major asset, with world-class universities well-connected both internationally and to the business sector. The share of the country's international co-publications in its total number of publications has gradually increased, from 55.8% in 2010 to 70.8% in 2022, well above the EU average of 55.5%. The share of joint public-private publications has also increased over the last decade (11.3% in 2022 compared to 9.7% in 2010) and Belgium scores second in the EU in terms of public R&D financed by businesses as a percentage of GDP.

There is potential for strengthening the contribution of the Belgian R&I system to environmental sustainability, notably in the energy field. While the Belgian public science base has a good position in energy research (as shown by the share of most-cited publications in this field), the share of energy-related patents in total Belgian patent applications decreased by 3.2% annually in the last decade and is now less than half of the EU average. The ongoing implementation of the Belgian recovery and resilience plan (RRP) and ERDF programmes helps to mobilise R&I for the green transition. Key measures related to energy are implemented by the different regions under Repower EU, such as investments by the Flemish region in R&D relating to the production of innovative technologies in the field of solar energy, energy storage and incorporation into energy grids.

Shortages of skilled human resources hinder the Belgian economy's green and digital transitions. In 2021, the share of graduates in STEM (science, technology, engineering and mathematics) subjects was lower than the EU average of 13.2% (EU-27: 16.9%). The share of ICT graduates was 2.3%, one of the lowest in the EU (3.4%). Skills shortages, including in relation to the green and digital transitions, is a significant challenge for Belgium's competitiveness and position as innovation leader. The Belgian RRP contains several measures aimed at developing STEM green skills, such as investments by the French Community in equipment for a shared platform used by universities to contribute to the development of green skills related to complex energy systems. The recent 'green skills roadmap for Flanders' ([99]) drawn up under the Commission Technical Support Instrument highlights opportunities to enhance green skills with a view to benefiting further from the green transition as an engine of growth.

Business dynamism in the innovation ecosystem remains low. The business creation rate is still among the lowest in the EU and is accompanied by a low destruction rate. High-growth businesses account for only 5.75% of employment in Belgium, far below the EU average of 12.51%. This points to some weaknesses in the Belgian economy in generating new growing businesses that could accelerate the renewal of its economic fabric towards new growth areas. (See also Annex 12) While all three regions have a variety of measures in place to support entrepreneurship, there is less emphasis in their policies on scale-up and growth ([100]). However, in 2023 Belgium was one of the five Member States which invested in the European Tech Champions

([98]) European Innovation Scoreboard (EIS), country profile: Belgium 2023. Web page: https://ec.europa.eu/assets/rtd/eis/2023/ec_rtd_eis-country-profile-be.pdf The EIS provides a comparative analysis of innovation performance in EU countries, including the relative strengths and weaknesses of their national innovation systems (also compared to the EU average).

([99]) https://reform-support.ec.europa.eu/what-we-do/labour-market-social-protection-and-migration/green-skills-roadmap-flanders_en.

([100])Report on Science Technology and Innovation (BRISTI) 2021, page 192. Web page: FWB_rapport_2021_en.pdf (belspo.be).

Table A11.1:**Key innovation indicators**

Belgium	2010	2015	2020	2021	2022	EU average (1)
Key indicators						
R&D intensity (GERD as % of GDP)	2.06	2.43	3.43	3.43	3.43	2.24
Public expenditure on R&D as % of GDP	0.66	0.72	0.87	0.85	0.9	*0.73*
Business enterprise expenditure on R&D (BERD) as % of GDP	1.38	1.7	2.51	2.56	2.53	*1.48*
Quality of the R&I system						
Scientific publications of the country within the top 10% most cited publications worldwide as % of total publications of the country	13.1	13.7	11.67	:	:	*9.6*
PCT patent applications per billion GDP (in PPS)	3.8	3.3	3.38	:	:	*3.4*
Academia-business cooperation						
Public-private scientific co-publications as % of total publications	9.3	10.4	10.7	11.3	11.3	*7.6*
Public expenditure on R&D financed by business enterprise (national) as % of GDP	0.061	0.077	0.083	0.077	:	*0.054*
Human capital and skills availability						
New graduates in science & engineering per thousand pop. aged 25-34	11.9	12.1	13.1	13.2	:	*16.9*
Public support for business enterprise expenditure on R&D (BERD)						
Total public sector support for BERD as % of GDP	0.227	0.263	:	0.355	:	*0.204*
Business enterprise expenditure on R&D (BERD) financed by the public sector (national and abroad) as % of GDP	0.118	0.12	:	0.1244	:	*0.1*
Green innovation						
Share of environment-related patents in total patent applications filed under the Patent Cooperation Treaty (%)	13.9	12	:	:	:	*14.7*
Finance for innovation and economic renewal						
Venture capital (market statistics) as % of GDP	0.035	0.028	0.073	0.08	0.08	*0.085*
Employment share of high-growth enterprises measurd in employment (in %)	:	10.4	5.75	:	:	*12.51*

(1) EU average for the last available year or the year with the largest number of country data.
Source: Eurostat, OECD, DG JRC, Science-Metrix (Scopus database and EPO's Patent Statistical Database), Invest EU

Initiative (ETCI) which will back high-tech companies in their late-stage growth phase ([101]).

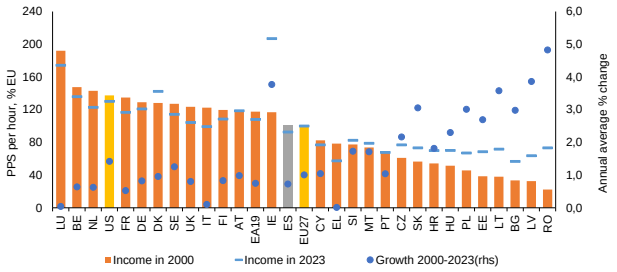
Differences persist across regions in terms of innovation performance. While Brussels and Flanders are among 'innovation leader' regions according to the Regional Innovation Scoreboard 2023, Wallonia is classified as a 'strong innovator'. A major difference in the innovation ecosystem of the three regions is public research intensity, which is much weaker in Wallonia (0.52%) than in the other two regions (Brussels: 0.76%, Flanders: 0.94%) ([102]). However, Wallonia's performance is clearly improving; the Regional Innovation Index shows a strong increase between 2014 and 2023, in line with the other regions. A driver of this increasing performance has been a widening of the innovation base, with more innovative small and medium-sized enterprises (SMEs).

([101])https://www.eib.org/en/events/european-tech-champions-initiative.

([102])Regional Innovation Scoreboard, country profile: Belgium 2023. Web page: https://ec.europa.eu/assets/rtd/ris/2023/ec_rtd_ris-regional-profiles-belgium.pdf.

Belgium's labour productivity level is high compared to the EU, although growth has been weaker compared to the EU average since the 2000s. As a result, hourly productivity in purchasing power standards (PPS) in Belgium declined from 147.6% of the EU aggregate in 2000 to 135.9% in 2023 (GDP per hour worked, in PPS). It remains higher than in neighbouring countries, where it was 121% in Germany, 116.8% in France and 122.8% in the Netherlands in 2023 (Graph A12.1). These developments have taken place amid muted total factor productivity growth on average.

Graph A12.1: **GDP per hour worked in PPS as percentage of the EU in 2023 vs growth rate 2000-2023**

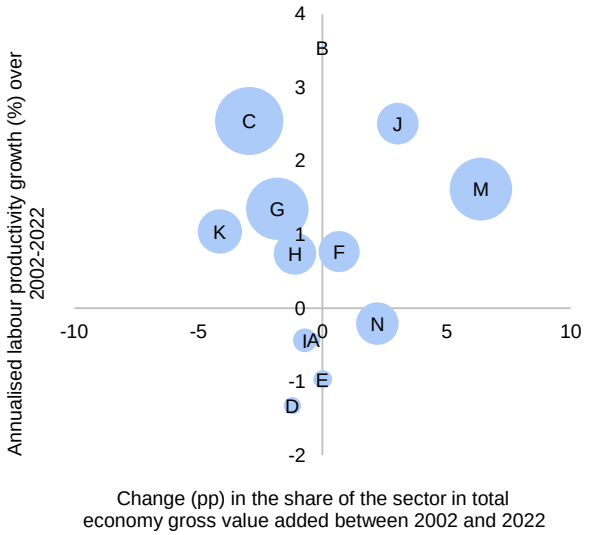


Source: Eurostat

Productivity dynamics in Belgium have been characterised by marked volatility in the aftermath of the COVID-19 pandemic. Productivity per hour worked has experienced significant fluctuations due to a reduction in the number of hours worked that was disproportionally concentrated in lower added value (contact intensive) jobs. This composition effect resulted in a notable temporary increase in aggregate productivity during the peak of the pandemic (3.3% in 2020), followed by a subsequent decline as economic activity resumed, with decreases of 0.9% in 2021 and 1.3% in 2022. In contrast, labour productivity per person closely mirrored the fluctuations in GDP as temporary job retention schemes proved effective in maintaining employment throughout the pandemic, declining in 2020 (-5.3%) and recovering in subsequent years (4.8% in 2021 and 0.9% in 2022).

Structural change across sectors has not supported Belgian labour productivity growth over the past two decades (see Graph A12.2). Over 2002-2021, across the sectors with high labour productivity, only the information and communication (J), construction (F), and professional and scientific services (M) sectors grew in size. The relative size in the economy of the manufacturing sector (C), where productivity is high, shrunk like other service sectors (wholesale and retail (G), finance and insurance (K) and transport (H)). As a result, the change in the sectoral breakdown of the economy has led to rather neutral labour productivity growth since 2000.

Graph A12.2: **Structural change (sector size and average productivity growth by sector)**



Source: Eurostat (nama_10_a64, nama_10_a64_e, nama_10_lp_a21)

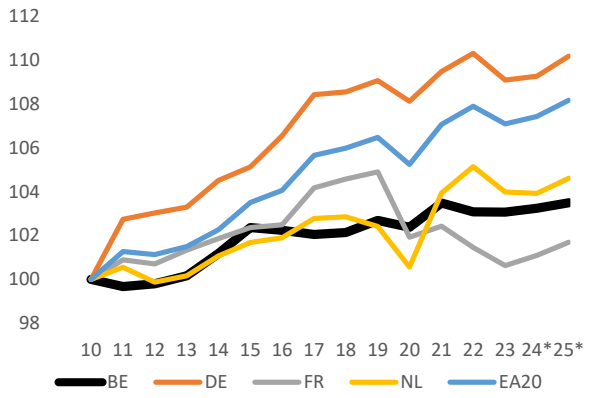
Differences in labour productivity across sectors are largely explained by differences in total factor productivity. Following the same trend, growth in total factor productivity has stagnated since 2015 (see Graph A12.3), despite comparatively strong innovation performance, bringing productivity levels below the EU average and lower than most neighbouring economies. For what concerns the industry, the real labour productivity per person in the sector declined in the last five years while the EU average showed a slight increase. It was below EU average in 2023 (see table A12.1).

Business investment increased in 2023, despite high interest rates. It reached 15.65% of GDP in 2022, above the EU average (13.56%) and some of its peer countries (Germany 12.45%) the Netherlands (10.78%) and France (14.78%) ([103]). According to the EIB Investment

([103])Eurostat: Investment share of GDP by institutional sectors [sdg_08_11]

Survey 2023 ([104]), in the face of decelerating economic growth and monetary policy tightening, firms in Belgium remained relatively positive about their investment intentions in 2023. A larger share of firms expects to increase rather than decrease investment. Optimism was down slightly in certain sectors at the beginning of 2024 ([105]), but 94% of Belgian firms indicated that they had invested in the previous year, which was above the EU average of 85% ([106]). Tax incentives in the R&D sector favour investment in this domain (see Annex 11). Firms are already heavily investing in digitalisation and automation in response to higher wage costs and labour shortages. Belgium is among the 17 Member States that became part of the unitary patent system launched in June 2023. It enables simple patent protection in Europe, with a single procedure for the registration of patents and centralised litigation.

Graph A12.3: **Total factor productivity index 2010=100**



Source: Ameco

By comparison, public investment remains comparatively low. At 2.73% of GDP in 2022, public investment in Belgium lies below the EU average of 3.26% ([107]). The National Council for Productivity predicts little improvement in productivity in the short term. It advocates sufficient public investment, boosting innovation and ensuring that a more skilled workforce is available to reverse the situation ([108]). The federal government set up a study committee on public investment in September 2023. It will centralise and develop expertise in public investment at federal level and advise the government on developing its investment policy.

Main long-term barriers to investment remain energy costs, the availability of skilled staff and business regulations. The EIB Investment Survey 2023 reports that the most frequently mentioned long-term impediments to Belgian firms' investment are energy costs (82%), uncertainty about the future (69%), the availability of skilled staff (68%) and business regulations (54%). These are also the main barriers for firms across the EU.

Belgium benefits from a highly skilled workforce, but the share of STEM graduates is low. The number of 20- to 29-year-olds with higher education qualifications in science, mathematics, IT, engineering, the processing industry, and production per 1 000 inhabitants increased from 14.0 in 2018 to 16.4 in 2021. However, Belgium remains well below the EU-27 average (19.7 in 2018 to 21.9 in 2021) (see Annex 14). The OECD's recent Programme for International Student Assessment (PISA) results show a decline in the number of overachievers and an increase in underachievers overall, but the numbers are better than the EU average (See Annex 15).

Disincentives to work remain high. Belgium had the highest job vacancy rate in the EU in 2023, at 5.55% against an EU average of 2.54%. These vacancy rates mainly affect part-time and low-skilled jobs. According to the National Bank projections, growth will be increasingly held back by labour shortages in the short term ([109]). Furthermore, Belgium has the second highest low wage unemployment trap in the EU ([110]) which discourages low qualified workers from working. Belgium has one of the lowest employment rates

([104])EIB Investment Survey 2023 – Belgium overview, EIBIS, January 2024

([105])Opinion surveys | nbb.be

([106])EIB Investment Survey 2023 – Belgium overview, EIBIS, January 2024

([107])Eurostat: Investment share of GDP by institutional sectors [sdg_08_11]

([108])National Productivity Board – Annual report 2023.

([109])Economic projections for Belgium – Autumn 2023, National Bank of Belgium, December 2023.

([110])Tax rate on low wage earners – Unemployment trap [earn_nt_unemtrp]

of the EU ([111]) (see also Annex 14, Employment, skills, and social policy challenges).

Belgium's business environment rebounded after the pandemic, but its dynamism is lower than most EU countries on average. The enterprise birth rate in Belgium increased markedly in the last 2 years, up 4.1% in 2021 and 4.5% in 2022, much higher than the 3.2% average increase over the last 10 years ([112]). However, the enterprise birth rate among active enterprises was one of the lowest in the EU in 2021, and so was the percentage of enterprise deaths among active enterprises ([113]). The low death rate in pre-pandemic years points to the insufficient closure of structurally unviable companies. The COVID-19 emergency support measures and the suspension of bankruptcy filings led to a pause in business bankruptcies in 2020-21 ([114]), ([115]). The share of high-growth enterprises (average annual growth of 10% or more over the last 3 years) is also lower in Belgium than the EU-27 average (5.66% compared to 9.18% in 2021 ([116])). Belgian public administration scores above the EU average on overall perceived government effectiveness, but coordination between the various levels of government continues to be a significant challenge (See Annex 13).

Belgium's high services trade restrictions may play a role in the low business dynamism. The country shows one of the highest services trade restrictiveness indices (STRI) within the European Economic Area (EEA). Belgium ranks worst in the intra EEA STRI index for architecture, and second worst for courier services. It is also in the top three most restrictive countries for telecoms, logistics (customs brokerage and freight forwarding), air transport. It also ranks high on service restrictions for construction, commercial banking, accounting services and to a lesser extent engineering services. The arrival of a fourth player in the telecoms market in summer 2024 may improve competition in this sector. According to the IMF, reforms in Belgium's business environment could increase total factor productivity by about 3.5% ([117]).

Regulated professions remain one of the problematic areas of the single market for Belgium. On regulated professions, most regulatory burdens pointed out in the 2021 Communication ([118]) remain. Architects, accountants, lawyers, estate agents and tourist guides (in Wallonia) are more regulated than the EU average. Restrictions such as the proportionality of shareholding or voting rights for estate agents and architects remain. Lawyers in Belgium are subject to incompatibility rules and multidisciplinary restrictions that could affect the potential of this sector to innovate and roll out digital solutions and new business models.

Belgium is a net importer of energy sources and raw materials, and energy intensive industries are particularly affected. Belgium is still very dependent on fossil fuels, which accounted for 68.1% of its primary energy consumption and made up 74% of its gross available energy in 2022 compared to 70.9% in the EU (Eurostat). Belgium is a net importer of all critical raw materials and ranks among the lowest in the mining contribution index ([119]). It is a main provider of arsenic albeit in the processing stage (67% of EU supplies) ([120]).

Belgium developed a national security strategy for the first time at the beginning of 2022. Achieving economic open strategic autonomy is one of the government objectives ([121]). By identifying strategic sectors for

([111]) Employment and activity by sex and age – annual data [LFSI_EMP_A]

([112]) https://statbel.fgov.be/en/news/almost-127000-enterprises-created-2022

([113]) Visualisations – Eurostat (europa.eu)

([114]) A study for Flanders found strong aggregate productivity growth in 2020 due to COVID-19, mostly driven by surviving firms (and to a lesser extent by a positive net entry effect), despite reduced creative destruction compared to normal times. See Konings J., Magerman G., and Van Esbroeck D., (2022), 'The Impact of Covid Rescue Policies on Productivity Growth and Reallocation', mimeo.

([115]) OECD working paper (2017). McGowan, Andrews and Millot. The Walking Dead? Zombie Firms and Productivity Performance in OECD Countries.

([116]) High-growth enterprises and related employment by NACE Rev. 2 activity [bd_hg__custom_10014612].

([117]) IMF Article IV Consultation, December 2023.

([118]) Communication on updating the reform recommendations for regulation in professional services, COM(2021)385.

([119]) ICMM – Role of Mining in National Economies: Mining Contribution Index (6th edition).

([120]) Microsoft Word -SCRREEN2_factsheets_ARSENIC.docx

([121]) A strategy to make Belgium more resilient | FPS Foreign Affairs – Foreign Trade and Development Cooperation 4/02/2022.

its own economy, analysing their vulnerabilities, and designating those responsible for stockpiling in strategic sectors, companies can improve their own resilience. Belgian authorities also agreed on the creation of an Interfederal Screening Committee in 2022, aimed at establishing a mechanism for screening foreign direct investments. It brings together all the federated entities of the country alongside the federal government. The Belgian sovereign fund, the Federal Participation and Investment Company (SFPIM) has drawn up a list of Belgian companies, or companies active in Belgium, of strategic interest for the country's economy. SFPIM is trying to take stakes in some of them to anchor them in the country.

Belgian firms have proven resilient to the energy crisis and climate change. State aid during the 2022 energy crisis was low compared with neighbouring countries, and Belgian firms quickly adapted their strategy to factor in skyrocketing energy prices. Belgium has the highest share of firms that have taken measures to reduce their greenhouse gas emissions. Despite this, according to the 2023 EIB Business Survey, only 20% of firms believe climate change will have a major impact on their functioning while the majority believes it will only have a minor impact or no impact at all ([122]). Around 20% see climate change as an opportunity.

Access to finance has deteriorated slightly for Belgian businesses. While access to finance remains easier in Belgium than the EU average, the number of loans rejected increased in 2023 ([123]). This increase is linked to the rise in interest rates. Belgium scored better than most of the other EU Member States in the EIF SME Access to Finance Index in 2023 (See Table A12.1).

On late payments, the payment delays between businesses are on a par with the EU average. Only 45% of Belgian businesses are concerned about customers' ability to pay on time, 14 points lower than the EU average of 59%. The share of small and medium-sized enterprises (SMEs) experiencing late payments in the past 6 months was 49.81%, slightly worse than the EU average (48.68%).

Belgium is well integrated into the single market but could perform better on implementation of single market regulation. In 2022, intra-EU imports and intra-EU exports made up 61.3% of Belgium's GDP, one of the highest shares in the EU compared to the 2022 EU average of 46%. But Belgium performs poorly when it comes to transposing EU directives, having a deficit of 1.6% and ranking 25th out of 27 Member States (EU average 0.7%). It ranks 14th on conformity, with 1.2% of directives being wrongly transposed (EU average 1.1%). Overall, the country is an average performer on public procurement, with 26% of contracts awarded after receiving only single bids in 2023, which constitutes a slight improvement compared with 2022 (24%). Belgium solved 80.6% of the SOLVIT cases (62) it handled as lead centre, below the EU average of 88.3% ([124]).

Belgium is in the stage of technical readiness for the single market/cross-border automated exchange of evidence, the 'once-only' technical system (OOTS) ([125]). As part of the Single Digital Gateway Regulation ([126]), the system will enable the automated exchange of evidence between Member States' relevant authorities, improving online access to information, administrative procedures, and assistance within the EU. The onboarding of the Belgian competent authorities is crucial for the system to function smoothly and to reduce administrative burden.

([122])EIB Investment Survey: European Union overview

([123])SAFE survey.

([124])Country data: Belgium | Single Market Scoreboard (europa.eu)

([125])Implementing Regulation (EU) 2022/1463.

([126])Regulation (EU) 2018/1724.

Table A12.1:**Industry and the Single Market**

Belgium							
POLICY AREA	**INDICATOR NAME**	**2019**	**2020**	**2021**	**2022**	**2023**	**EU27 average***
HEADLINE INDICATORS							
Economic Structure	Net Private investment, level of private capital stock, net of depreciation, % GDP[1]	5,2	3,6	4,2	3,9	4,3	**3,8**
	Net Public investment, level of public capital stock, net of depreciation, % GDP[1]	0,4	0,5	0,5	0,4	0,5	**1,2**
	Real labour productivity per person in industry (% yoy)[2]	3,7	-2,7	2,1	-0,6	-3,9	**-1,24**
Cost competitiveness	Nominal unit labour cost in industry (% yoy)[2]	-1,5	-0,6	4,3	6,9	-	**9,83**
SINGLE MARKET							
Single Market integration	EU Trade integration, % (Average intra-EU imports + average intra EU exports)/GDP[2]	53,4	51,0	56,9	61,3	57,4	**42,9**
Compliance	Transposition deficit, % of all directives not transposed[3]	0,8	1,5	2,8	2,3	1,6	**0,7**
	Conformity deficit, % of all directives transposed incorrectly[3]	0,9	1,1	1,2	1,1	1,2	**1,1**
	SOLVIT, % resolution rate per country[3]	81,9	89,8	91,2	88,2	81,0	**88,3**
	Number of pending infringement proceedings[3]	31	28	38	32	31	**25,9**
Restrictions	EEA Services Trade Restrictiveness Index[4]	0,06	0,06	0,06	0,06	0,06	**0,05**
Public procurement	Single bids, % of total contractors[3]	21	21	22	24	26	**28,6**
	Direct Awards, %[3]	1	2	2	2	2	**8,1**
ECONOMIC STRUCTURE							
Shortages	Material Shortage (industry), firms facing constraints, %[5]	6,8	8,6	19,4	33,6	20,8	**17,2**
	Labour Shortage using survey data (industry), firms facing constraints, %[5]	11,4	12,2	16,2	24,3	15,7	**23,3**
	Vacancy rate (business economy), % of vacant posts to all available ones (vacant + occupied)[2]	4,2	3,7	5,3	5,9	5,5	**2,5**
Strategic dependencies	Concentration in selected raw materials, Import concentration index based on a basket of critical raw materials[6]	0,18	0,17	0,17	0,19	0,21	**0,22**
	Installed renewables electricity capacity, % of total electricity produced[2]	41,4	45,4	47,2	50,7	-	**53**
BUSINESS ENVIRONMENT - SMEs							
Investment obstacles	Impact of regulation on long-term investment, % of firms reporting business regulation as major obstacle[7]	25,5	25,7	19,4	21,0	7,0	**22,2**
Business demography	Bankruptcies, Index (2015=100)[2]	108,5	73,8	66,7	94,5	104,8	**105,6**
	Business registrations, Index (2015=100)[2]	126,2	123,3	138,5	123,7	116,2	**120,2**
Late payments	Payment gap - corporates B2B, difference in days between offered and actual payment[8]	-	2	12	12	15	**15**
	Payment gap - public sector, difference in days between offered and actual payment[8]	-	6	12	16	18	**16**
	Share of SMEs experiencing late payments in past 6 months, %[9]	43,8	42,0	42,4	50,0	49,8	**48,7**
Access to finance	EIF Access to finance index - Loan, Composite: SME external financing over last 6 months, index values between 0 and 1[10]	0,73	0,60	0,67	0,59	-	**0,49**
	EIF Access to finance index - Equity, Composite: VC/GDP, IPO/GDP, SMEs using equity, index values between 0 and 1[10]	0,14	0,29	0,27	0,13	-	**0,17**

Source: (1) AMECO, (2) Eurostat, (3) Single Market Scoreboard, (4) OECD, (5) ECFIN BCS, (6) COMEXT and Commission calculations, (7) EIB Investment Survey, (8) Intrum Payment Report, (9) SAFE survey, (10) EIF SME Access to Finance Index
* Own Commission calculations for the EU27 average

Belgium's public administration is essential for the economy's competitiveness by, in particular, shaping the conditions for the twin transition and creating a favourable business environment. The country scores above the EU average on overall perceived government effectiveness although there has been a slight decrease in recent years ([127]). Coordination between the different levels of government continues to be a significant challenge (see Annex 12), leading to, for example, slow progress with the sustainable development goals. In line with the recovery and resilience plan's (RRP) priority to strengthen cybersecurity and the provision of digital public services, Belgium launched a range of digital services related to, for example, civil status registers ([128]), criminal proceedings ([129]), setting up a company or a non-profit organisation, and collective debt settlement.

The Belgian federal government has good evaluation capacity in several line ministries and well-respected suppliers of evaluations. The federal government's efforts to strengthen policy evaluation still need to tackle weaknesses in planning and coordination ([130]). To improve coordination between the regional government and municipalities, the Flemish region published a study on how to strengthen local governance to regroup administrative design and coordination ([131]).

A set of new measures aim to ease access to the Belgian federal public administration. These include a new competence model and more flexibility on educational qualifications, allowing final-year students to apply. The recruitment process has been also adapted, aiming to facilitate access to the civil service by applicants with disabilities ([132]). To improve crisis management, a 'crisis pool' of civil servants from all grades has been set up. The staff in this pool will be able to volunteer for up to 4 weeks a year in crisis response roles. However, the participation of civil servants in adult learning is lower than the EU average (Table A13.1). Gender parity in senior civil service management positions has been improving. There was a sharp increase in the number of women in such positions in 2023 although it remains below the EU average for all levels of administrators (Graph A13.1).

Belgium performs above the EU average on e-government. A range of measures (JustConsult, JustAct, JustRestart) are expected to further boost the overall maturity of digital public administration services at federal level. These will be complemented by the Flemish digital strategy and the digital Wallonia strategy. Moreover, Belgium scores above the EU average for e-government users. The Smart Nation initiative launched in 2023 aims to further improve the public's digital skills and those of civil servants. However, despite recent improvements, Belgium is less advanced than most other Member States in providing open government data (Graph A13.1).

To help address fiscal challenges, the independent fiscal institution could be strengthened. A lack of financial and human resources has prevented Belgium's High Council of Finance (HCF) from fully monitoring compliance with fiscal rules. The government also plays a large role in nominating the members of HCF and staffing of its secretariat. Belgium is also less advanced on fiscal structural indicators measuring its national medium-term budgetary framework and the strength of its fiscal rules (Table A13.1).

There is still no full overview of the efficiency of the justice system due to the continued lack of data on court proceedings ([133]). However, there are ongoing efforts to identify judicial backlogs. The limited data available show that the estimated time to resolve administrative cases at first instance has increased (from 235 days in 2021 to 288 days in 2022). Despite significant investments and initiatives, there are still structural human and financial resource deficiencies. Several steps have been taken to significantly increase the level of digitalisation of the justice system by 2026, in particular by

([127])Worldwide governance indicators, 2022 data.

([128])Civil status registers | Belgium.be

([129])Via the Just-on-web portal.

([130])OECD (2022) Improving decision making through policy evaluation in Belgium. Paris: OECD.

([131])Steunpunt Bestuurlijke Vernieuwing (2023) Toekomstvisie op het lokaal en binnenlands bestuur in Vlaanderen. https://www.steunpuntbestuurlijkevernieuwing.be/toekomstvisie-vlaanderen/kopie-van-toekomstvisie-vlaanderen.

([132])Ministerraad: aanwerving van personen met een handicap | BOSA (belgium.be).

([133])For more details, see the 2024 EU Justice Scoreboard and the Commission's 2024 Rule of Law Report (forthcoming).

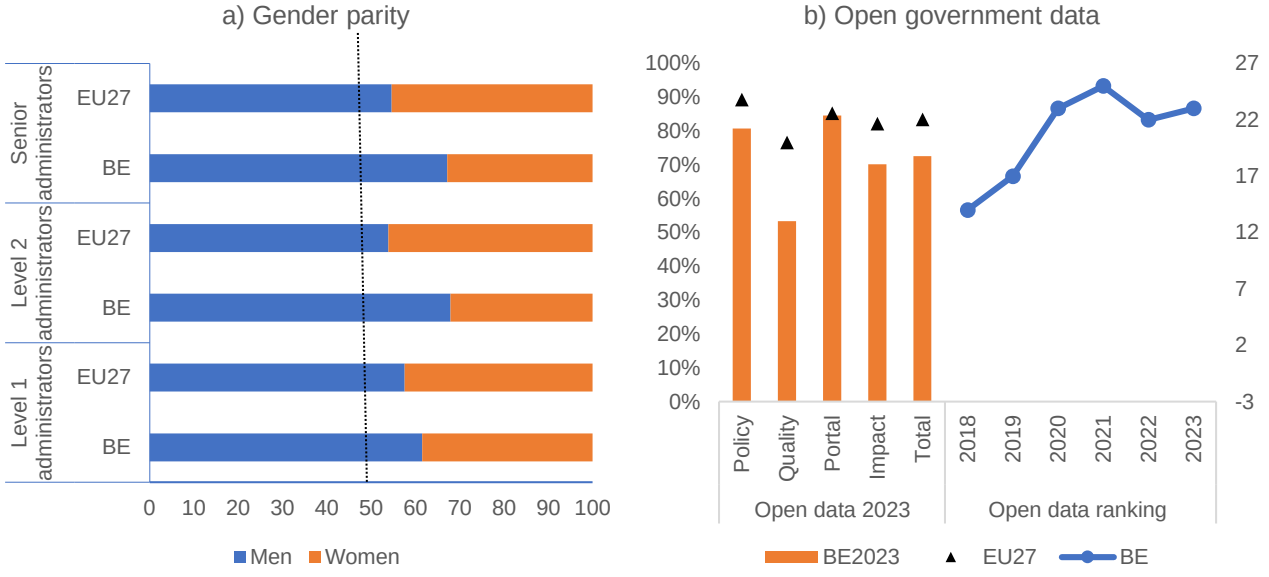
allowing for the electronic submission of documents. On judicial independence, no systemic deficiencies have been reported.

Table A13.1:**Public administration indicators**

BE	Indicator ([1])	2019	2020	2021	2022	2023	EU-27([2])
E-government and open government data							
1	Share of internet users within the last year that used a public authority website or app	n/a	n/a	n/a	88.1	85.9	75.0
2	E-government benchmark overall score ([3])	n/a	71.7	74.1	77.5	77.9	75.8
3	Open data and portal maturity index	0.6	0.6	0.6	0.7	0.7	0.8
Educational attainment level, adult learning, gender parity and ageing							
4	Share of public administration employees with higher education (levels 5-8, %)	46.6	48.0	53.0 (b)	55.5	52.8	52.9
5	Participation rate of public administration employees in adult learning (%)	8.5	7.8	11.4 (b)	11.4	12.9	17.9
6	Gender parity in senior civil service positions ([4])	57.2	55.2	49.4	48.6	34.4	9.2
7	Ratio of 25-49 to 50-64 year olds in NACE sector O	1.6	1.7	1.7 (b)	1.7	1.7	1.5
Public financial management							
8	Medium-term budgetary framework index	0.7	0.7	0.7	0.7	n/a	0.7
9	Strength of fiscal rules index	1.2	1.2	1.2	1.2	n/a	1.4
Evidence-based policy making							
10	Regulatory governance	n/a	n/a	1.82	n/a	n/a	1.7

([1]) High values denote a good performance, except for indicator # 6. ([2]) 2023 value. If unavailable, the latest value available is shown. ([3]) Measures the user centricity (including for cross-border services) and transparency of digital public services as well as the existence of key enablers for the provision of those services. ([4]) Defined as the absolute value of the difference between the percentage of men and women in senior civil service positions.
Flags: (b) break in time series; (d) definition differs; (u) low reliability.
Source: E-government activities of individuals via websites, Eurostat (# 1); E-government benchmark report (# 2); Open data maturity report (# 3); Labour Force Survey, Eurostat (# 4, 5, 7); European Institute for Gender Equality (# 6); Fiscal Governance Database (# 8, 9); OECD Indicators of Regulatory Policy and Governance (# 10).

Graph A13.1: **a) Share of women and men in management positions; b) open government data maturity indicator: 2023 scores (in % of the total maximum score); country ranking, overall score (right side)**



(1) 2023 data; (2) Open government data: on the right, low values denote good performance.
Source: European Institute for Gender Equality (chart a) and Open Data Maturity | data.europa.eu (chart b).

ANNEX 14: EMPLOYMENT, SKILLS AND SOCIAL POLICY CHALLENGES IN LIGHT OF THE EUROPEAN PILLAR OF SOCIAL RIGHTS

The European Pillar of Social Rights is the compass for upward convergence towards better working and living conditions in the EU. This Annex provides an overview of Belgium's progress in implementing the Pillar's 20 principles and the EU headline and national targets for 2030 on employment, skills and poverty reduction.

Table A14.1:**Social Scoreboard for Belgium**

Policy area	Headline indicator	
Equal opportunities and access to the labour market	Adult participation in learning (during the last 12 months, excl. guided on the job training, % of the population aged 25-64, 2022)	34.9
	Early leavers from education and training (% of the population aged 18-24, 2023)	6.2
	Share of individuals who have basic or above basic overall digital skills (% of the population aged 16-74, 2023)	59.4
	Young people not in employment, education or training (% of the population aged 15-29, 2023)	9.6
	Gender employment gap (percentage points, population aged 20-64, 2023)	7.6
	Income quintile ratio (S80/S20, 2022)	3.6
Dynamic labour markets and fair working conditions	Employment rate (% of the population aged 20-64, 2023)	72.1
	Unemployment rate (% of the active population aged 15-74, 2023)	5.5
	Long term unemployment (% of the active population aged 15-74, 2023)	2.2
	Gross disposable household income (GDHI) per capita growth (index, 2008=100, 2022)	102.9
Social protection and inclusion	At risk of poverty or social exclusion (AROPE) rate (% of the total population, 2022)	18.7
	At risk of poverty or social exclusion (AROPE) rate for children (% of the population aged 0-17, 2022)	19.6
	Impact of social transfers (other than pensions) on poverty reduction (% reduction of AROP, 2022)	48.84
	Disability employment gap (percentage points, population aged 20-64, 2022)	35.3
	Housing cost overburden (% of the total population, 2022)	7.7
	Children aged less than 3 years in formal childcare (% of the under 3-years-old population, 2022)	52.7
	Self-reported unmet need for medical care (% of the population aged 16+, 2022)	1

Update of 25 April 2024. Members States are categorised based on the Social Scoreboard according to a methodology agreed with the EMCO and SPC Committees. Please consult the Annex of the Joint Employment Report 2024 for details on the methodology.
Source: Eurostat.

After a strong post-pandemic recovery, the Belgian labour market stabilised in 2023 in line with economic activity. With real GDP growth slowing down to 1.4% in 2023, the employment rate (20-64 age group) reached 72.1% in 2023, still below the EU average (75.4%) and the 2030 national target of 80%. Despite a high vacancy rate and a historically low unemployment rate, employment growth continues to be held back by an overall low and stagnating activity rate among 20-64 year-olds (76.1% vs 80% in the EU in 2023), as there are still significant gaps in activity and employment between regions and for women and certain disadvantaged groups. The employment rate among 20–64-year-olds in 2023 was 66.5% in the Brussels Capital Region, 65.5% in Wallonia and 76.8% in Flanders, whereas the activity rate (20-64-years-old) was respectively 74.3%, 71.1% and 79.2%. In 2023, Belgium started implementing the 'Jobs Deal' from 2022 with measures to boost employment. These include measures to help dismissed employees to find work or training and greater flexibility on night work in e-commerce, as well as measures to improve work-life balance, such as the possibility to request a 4-day working week, an alternating work schedule, and the right to disconnect. However, with some of the highest unemployment and low-wage employment traps in the EU, and despite existing regional initiatives, still more and better targeted policy action is warranted, in particular to tackle the tax and benefits disincentives to work. Although the 2022 tax reform that would increase financial work incentives in the tax system failed to be adopted, its blueprint can be used as a basis for further discussions in the future.

Further activating underrepresented groups is needed for Belgium to reach the 2030 national employment target of 80%. In 2023, the employment rates of older workers (55-64 age group: 57.8%), people with a low level of education (46.8%), people born outside the EU (59.0%, up 6.7 pps since 2020), and in particular women born outside the EU (48.9%, also up 6.7 pps since 2020), were still significantly lower than the overall employment rate of 72.1%. For people born in Belgium with parents born outside the EU, the employment rate is lower than for those with Belgian-born parents (FOD WASO & Unia, 2022). Under the Belgian RRP, the Flemish Community enhanced the inclusiveness of its labour market by end 2023 whereas a federal reform is planned in 2024 to tackle discrimination in the labour market through well-monitored testing. Despite a decrease (33.6 pps in 2023 vs 38 pps in 2021), the employment gap between persons with and without disabilities remains one of the highest in the EU (21.4 pps in 2022). Several federal and regional measures have been taken since 2022 to improve the reintegration of workers on long-term sick leave, the number of whom rose significantly between 2013 and 2021 (from 4.5% of the working-age population to 6.7%, according to national statistics).

The Belgian labour market is confronted with significant labour shortages and skills

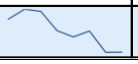
mismatches, which are both among the highest in the EU. In 2023, the vacancy rate remained high at 4.6%. There are significant shortages in both low-skilled and high-skilled occupations in all regions, much of which is linked to the low number of graduates in science, technology, engineering and mathematics (see Annex 15). Reforms are currently ongoing to address concerns about the attractiveness and labour market relevance of vocational education and training. The federal bodies have introduced financial incentives to encourage people to take jobs in sectors with shortages. Also, a recently implemented measure under the RRP allows long-term unemployed people to receive a partial unemployment benefit during the first 3 months of work in a profession with shortages.

Low skill levels are a major impediment to getting more people into work and to greater competitiveness, while the limited participation in adult education of people with a low level of education poses a serious issue in the context of the twin transitions. The share of adults (aged 25-64) participating in learning activities in the previous 12 months was 34.9% in 2022, below the EU average of 39.5% and 4.5 pps less compared to 2016. It is still far from Belgium's national target of at least 60.9% by 2030. The rate is particularly low among people with a low level of qualifications (12.5% vs 18.4% in the EU). Together with labour shortages and other challenges, this undermines Belgium's potential to increase its economic competitiveness (see Annex 20). The RRP includes reforms introducing an individual right of 5 days of training per year for employees and setting up individual learning accounts, while the European Social Fund Plus (ESF+) strongly supports training activities targeted at disadvantaged groups in every region.

Social transfers are highly effective in reducing poverty, and income inequality is low. During the energy crisis, the automatic indexation of wages and benefits protected households' purchasing power relatively well (Capeau et al., 2022). The share of people at risk of poverty or social exclusion (AROPE) fell to 18.8% in 2021 and remained around that level in 2022 and 2023 (EU: 21.6% in 2022), although there are significant regional disparities (Flanders: 12.2%, Wallonia: 24%, Brussels Capital Region: 37.6%). At the same time, the share of people living in quasi-jobless households is among the highest in the EU, at 10.5% in 2023, here also with important regional disparities. The depth of poverty, while still below the EU average, increased by 3 pps in 2022. Belgium is nevertheless one of the highest performers for the impact of its social transfers in reducing poverty.

The overall good social outcomes hide uneven opportunities between groups based on socio-economic, migrant and parental backgrounds. People with a vulnerable socio-demographic profile have persistently low incomes and a difficult upward economic and social mobility in Belgium ([134]). Inequalities of opportunities for young people are reflected in the large and increasing difference between the AROPE rates of children under 6 years of age of highly educated parents (7.2%) and those of parents with a low level of education. (84.4%). This gap increased from 67.7 pps in 2021 to 77.2 pps in 2022 (EU: 55.5 pps in 2022). There are also significant inequalities in educational outcomes linked to socio-economic and migrant background (see the OECD PISA data in Annex 15). In addition, the AROPE gap between persons with and without disabilities increased and was one of the biggest in the EU in 2022 (at 20.3 pps vs the EU average of 10.5 pps). While the implementation of the European Child Guarantee is ongoing, as described in the Belgian progress report, the RRP and the ESF+ finance better support for active inclusion and inclusive education. They will also help Belgium reach its national target of 279 000 fewer people at risk of poverty or social exclusion by 2030 (from 2019), of which 93 000 children, which is showing good progress.

Table A14.2:**Situation of Belgium on 2030 employment, skills and poverty reduction targets**

Indicators	Latest data	Trend (2016-2023)	2030 target	EU target
Employment (%)	72.1 (2023)		80	78
Adult learning[1] (%)	34.9 (2022)		60.9	60
Poverty reduction[2] (thousands)	-116 (2023)		-279	-15 000

(1) Adult Education Survey, adults in learning in the past 12 months, special extraction excluding guided on-the-job training.
(2) Change in the number of persons at risk of poverty or social exclusion (AROPE), reference year 2019.
Source: Eurostat, DG EMPL.

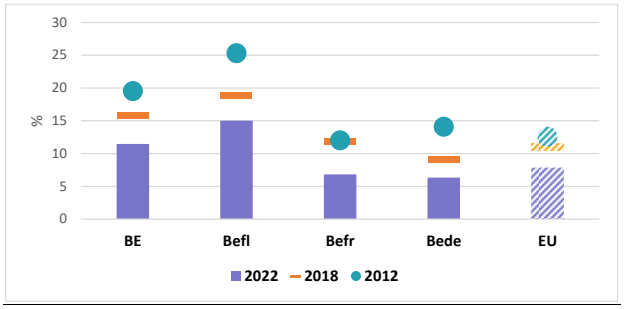
([134])OECD, Economic Surveys : Belgium 2022.

This Annex outlines the main challenges of Belgium's education and training system based on the 2023 Education and Training Monitor and the 2022 OECD Programme for International Student Assessment (PISA) results.

Underachievement in basic skills as measured in the PISA study has increased, especially among disadvantaged pupils. The latest PISA results ([135]) show a long-term deterioration in performance in reading, mathematics and science among 15-year-olds. ([136]) The underachievement rate of students from the bottom quarter of the socio-economic distribution increased by 9.2 pps since 2018, reaching 45.8% in mathematics (EU: 48%, BEfl: 41.4%, BEfr: 51.1%, BEde: 35.6%), while the rate for advantaged pupils remains the lowest in the EU (EU: 10.9%, BE: 6.2%, BEfl: 6.1%, BEfr: 6.2%, BEde: 8.5%). Migrant background is also a key determinant of performance. Almost half of all foreign-born students (45.1%) underachieve in mathematics, in contrast to one in five students (19.4%) without a migrant background, representing a gap of 25.7 pps. While Belgium ranked first in the EU in terms of the proportion of top performers in mathematics in 2012 (BE: 19.5%), it experienced a sharp decline over 10 years (11.5% in 2022, BEfl: 15%, BEfr: 6.9%, BEde: 6.4%). Increasing underachievement and declining top performance negatively influence the skill set of the future workforce.

Teacher shortages are becoming acute across the communities. Among the schools participating in the 2022 PISA study, the percentage of students in schools whose principal reported that the school's capacity to provide instruction is hindered by a lack of teaching staff to some extent or a lot was 80.1% (vs 33.9% in 2012) – the highest in the EU. Many teachers leave the profession prematurely, and the situation is aggravated by high rates of absenteeism. Novice teachers face difficulties in securing long-term contracts, and schools often struggle to find replacements for absent teachers during the school year. Demographic growth and education policies introducing additional language requirements (Language Action Plan in BEfl and earlier second language instruction in BEfr) generate a higher need for specific teacher profiles. However, the number of new graduates of teacher training programmes does not match the demand ([137]). Immediate teacher shortages are addressed via replacement pools and platforms. The communities are also developing long-term solutions, such as introducing flexible and alternative career pathways, increasing job security, strengthening the mentoring of novice teachers, and reforming initial teacher education and training to improve retention.

Graph A15.1: **Top performance rates in mathematics by community, PISA 2012, 2018 and 2022**



Source: OECD (2023).

While participation in early childhood education and care is high, challenges of equal access persist. Participation in early childhood education and care among children aged between 3 and the start of compulsory school age is one of the highest in the EU (97.6% in 2021), similarly for the participation of children under 3 in formal childcare (52.7%). However, Flanders and the Brussels-Capital Region experience significant shortages of childcare places and a lack of qualified staff.

Pupils' background and characteristics continue to influence school success. Pupils who are older than their peers due to grade repetition or delayed entry into education fare

([135])OECD (2023), PISA 2022 Results (Volume I): The State of Learning and Equity in Education, PISA, OECD Publishing, Paris.

([136])The average performance in BEfl declined sharply in all three domains, while in BEfr the drop is more moderate in reading and in science compared with 2018. BEde declined in mathematics and reading and maintained its performance in science.

([137])In BEfr, the number of students entering initial teacher education dropped by 10% between 2019-2020 and 2020-2021, while in BEfl, annual enrolments for primary and early childhood education programmes decreased by 31.4% and 24.2% between 2014-2015 and 2021-2022.

Table A15.1:**EU-level targets and other contextual indicators under the European Education Area strategic framework**

				2012		2018		2023	
Indicator			Target	Belgium	EU-27	Belgium	EU-27	Belgium	EU-27
[1]Participation in early childhood education (age 3+)			96%	98.3% 2013	91.8% 2013	98.4% d	92.2%	97.6% 2021	92.5% 2021,d
[2]Low-achieving 15-year-olds in:		Reading	< 15%	16.1%	18.0%	21.3%	22.5%	25.3% 2022	26.2% 2022
		Mathematics	< 15%	19.0%	22.1%	19.7%	22.9%	25.0% 2022	29.5% 2022
		Science	< 15%	17.7%	16.8%	20.0%	22.3%	22.4% 2022	24.2% 2022
Early leavers from education and training (age 18-24)	[3]Total		< 9 %	12.0%	12.6%	8.6%	10.5%	6.2%	9.5%
	[3] By gender	Men		14.4%	14.5%	10.6%	12.1%	7.9%	11.3%
		Women		9.5%	10.6%	6.5%	8.7%	4.4%	7.7%
	[4] By degree of urbanisation	Cities		16.2% b	11.2%	11.8%	9.4%	7.2%	8.6%
		Rural areas		9.9% b	14.0%	6.5%	11.0%	6.1%	9.9%
	[5] By country of birth	Native		10.6%	11.3%	7.2%	9.2%	5.8%	8.2%
		EU-born		17.9%	26.2%	18.4%	22.4%	7.0% u	21.0%
		Non EU-born		25.6%	30.1%	18.9%	23.0%	10.5%	21.6%
[6]Socio-economic gap (percentage points)				:	:	31.9	29.5	39.6 2022	37.2 2022
[7]Exposure of VET graduates to work-based learning			≥ 60% (2025)	:	:	:	:	44.8%	64.5%
Tertiary educational attainment (age 25-34)	[8]Total		45%	43.0%	34.1%	47.4%	38.7%	50.0%	43.1%
	[8] By gender	Men		35.9%	29.1%	40.6%	33.3%	42.6%	37.6%
		Women		50.1%	39.2%	54.2%	44.2%	57.3%	48.8%
	[9] By degree of urbanisation	Cities		44.3% b	43.5%	51.2%	49.0%	52.2%	53.3%
		Rural areas		42.6% b	24.8%	46.6%	27.7%	47.1%	31.7%
	[10] By country of birth	Native		45.7%	35.4%	49.1%	39.7%	52.3%	44.2%
		EU-born		45.4%	29.3%	52.5%	36.7%	48.7%	40.2%
		Non EU-born		25.2%	24.2%	34.0%	31.0%	38.3%	37.1%
[11]Participation in adult learning (age 25-64)			≥ 47% (2025)	:	:	39.4% 2016	37.4% 2016	34.9% 2022	39.5% 2022
[12]Share of school teachers (ISCED 1-3) who are 55 years or over				13.0% 2013	22.7% 2013	16.1%	23.8%	17.2% 2021	24.5% 2021

Notes: b = break in time series; d = definition differs; e = estimated; p = provisional; u = low reliability; : = data not available.
Source: 1,3,4,5,7,8,9,10,12=Eurostat; 11= Eurostat, Adult Education Survey; 2,6=OECD, PISA.

significantly worse in reading ([138]) and in mathematics ([139]) compared with those who are on track with their schooling. The French Community government has committed to limit the occurrence of repetition and delay, and, with support of the Recovery and Resilience Facility, it is preparing a strategy to combat early school leaving. However, only 60.67% of students in secondary education were 'on time' with their studies in 2020-2021 ([140]). Across Belgium, the percentage of students who self-reported repeating a year at least once in primary or secondary education was 26.5% in the PISA study, the highest in the EU; the proportion among disadvantaged students reached 46.7% ([141]).

Participation in tertiary education is among the highest in the EU, but qualifications in certain fields with high labour market relevance are lacking. The share of young people aged between 25 and 34 holding a tertiary education degree was 50% in 2023, well above the EU-level target of 45%. At the same time, the share of new students enrolling in science, technology, engineering and mathematics programmes was only 20.7% in 2021, one of the lowest in the EU (28.1%). The share of ICT graduates (2.8% vs EU 4.2%) and the share of women among total ICT entrants (10.5% vs EU 20%) is one of the lowest in the EU, despite high demand for ICT professionals (see Annex 10).

([138])Schillings, Patricia; André, Marine and Dupont, Virginie (2023), PIRLS 2021: Synthesis note, Fédération Wallonie-Bruxelles and Université de Liège.

([139])OECD (2023), PISA 2022 Results (Volume II): Learning During – and From – Disruption, PISA, OECD Publishing, Paris.

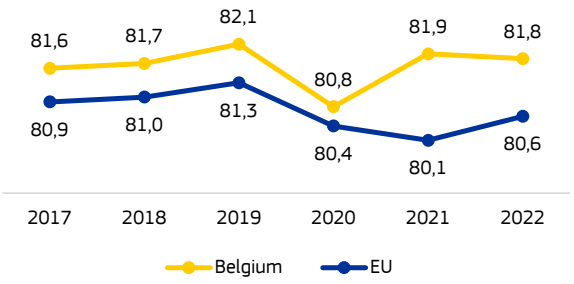
([140])Les chiffres clés dans la Fédération Wallonie-Bruxelles, https://statistiques.cfwb.be/.

([141])OECD (2023), PISA 2022 Results (Volume I): The State of Learning and Equity in Education, PISA, OECD Publishing, Paris.

A healthy population and an effective, accessible and resilient health system are prerequisites for a sustainable economy and society. This Annex provides a snapshot of population health and the health system in Belgium.

Life expectancy at birth in Belgium was slightly higher than the EU average both before and during the COVID-19 pandemic (see Graph A16.1). There was a significant decline in life expectancy in Belgium with the onset of the COVID-19 pandemic in 2020. Life expectancy rebounded strongly in 2021, almost to the pre-pandemic level, but it fell slightly, by 0.1 years, in 2022 despite a decline in mortality from COVID-19 in 2022 compared to 2021 ([142]). Belgium has fared comparatively well in avoiding deaths from treatable causes (see Table A16.1). In 2021, the leading causes of death were cancer and diseases of the circulatory system ('cardiovascular diseases'), followed by COVID-19.

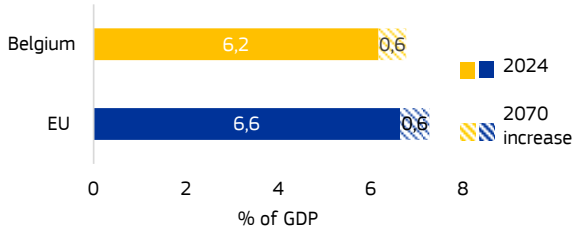
Graph A16.1: **Life expectancy at birth, years**



Source: Eurostat

Health spending relative to GDP in Belgium was in line with the EU average in 2021. Spending per capita on inpatient care is above the EU average, whereas spending on outpatient care, on disease prevention and on pharmaceuticals and medical devices is below. In 2021, total healthcare spending was 10.9% of GDP. This was slightly down from 11.2% in 2020, as the rebound in GDP outpaced the growth in health spending. Provisional data from the OECD suggest that in 2022 total healthcare spending remained at 10.9% of GDP. Publicly funded health expenditure as a proportion of total health spending in Belgium (77.6% in 2021) is slightly below the EU average and the proportion of out-of-pocket payments for healthcare in Belgium (17.9%) is higher than the average level across the EU (14.5%). Based on the age profile of the Belgian population, public expenditure on health is projected to increase by 0.6 percentage points (pps) of GDP by 2070, in line with the increase for the EU overall (see Graph A16.2 and Annex 21).

Graph A16.2: **Projected increase in public expenditure on healthcare over 2024-2070**



Baseline scenario
Source: European Commission / EPC (2024)

Spending on prevention in Belgium amounted to 3.1% of total healthcare spending in 2021, compared to 6.0% for the EU overall. Between 2019 and 2021, spending on prevention in Belgium almost doubled, closely following the trend across the EU. The increase in spending on preventive care in 2021 in Belgium was mainly due to an elevenfold increase in spending in immunisation programmes, and a 67% increase in spending in information, education, and counselling programmes.

Belgium faces challenges with shortages of health professionals and disparities in access to health services. While the proportion of Belgian population that reported unmet needs for medical care in 2022 was below the EU average, those unmet needs were disproportionately concentrated among individuals in the lowest income quintile. As a result, Belgium had one of the widest income-related gaps in unmet needs for medical care among western EU countries. The government has taken some measures to alleviate financial barriers to healthcare access for the most economically disadvantaged sections of the population. For example, since 2022 patients have been able to pay only the 'out-of-pocket payment' rather than paying for the entire cost of the service and then having to seek retrospective reimbursement. There are shortages of health

([142]) Based on data provided directly by Member States to the European Centre for Disease Prevention and Control, under the European Surveillance System.

Table A16.1:**Key health indicators**

	2018	2019	2020	2021	2022	EU average (latest year)
Treatable mortality per 100 000 population (mortality avoidable through optimal quality healthcare)	69,9	65,2	62,7	61,6	NA	93.3 (2021)
Cancer mortality per 100 000 population	231,0	229,3	223,2	220,1	NA	235.4 (2021)
Current expenditure on health, % GDP	10,9	10,8	11,2	10,9	NA	10.9 (2021)
Public share of health expenditure, % of current health expenditure	76,6	75,3	77,9	77,6	NA	81.1 (2021)
Spending on prevention, % of current health expenditure	1,5	1,6	2,1	3,1	NA	6.0 (2021)
Available hospital beds per 100 000 population	562	557	553	549	547	525 (2021)
Doctors per 1 000 population	3,1	3,2	3,2	3,2	NA	4.1 (2021)*
Nurses per 1 000 population	11.1**	11.1**	11.1**	11.1**	NA	7.9 (2021)
Total consumption of antibacterials for systemic use, daily defined dose per 1 000 inhabitants per day ***	22,3	21,4	16,7	17,4	20,4	19.4 (2022)

Note: The EU average is weighted for all indicators except for doctors and nurses per 1 000 population, for which the EU simple average is used. Doctors' density data refer to practising doctors in all countries except Greece, Portugal (licensed to practise) and Slovakia (professionally active). Nurses' density data refer to practising nurses in all countries except Ireland, France, Portugal, Slovakia (professionally active) and Greece (hospital only).

Source: Eurostat Database; except: * OECD, ** Joint Questionnaire on non-monetary healthcare statistics, *** ECDC, **** Council Recommendation on stepping up EU actions to combat antimicrobial resistance in a One Health approach.

professionals, which undermine the accessibility of healthcare services. For example, a lack of adequate resources is leading to long waiting times for mental health services, which is reported as the most frequent barrier in this regard ([143]). Stressful working conditions and limited career prospects are among the main factors that reduce the attractiveness of health professions and contribute to shortages. The number of practising doctors (3.2) per 1 000 populations in Belgium in 2021 was below the EU average (4.1). This, and the high proportion of active doctors aged 55 or above (42.6%), raise concerns about the long-term accessibility of health services.

To increase the supply of doctors, the number of students admitted to medical schools has been increased in recent years. The number of nurses has also increased over the past years and reached 11.1 per 1 000 population in 2021, well above the EU average (7.9 in 2021). Despite this, there are shortages of nurses, with the deficit estimated at over 20 000 ([144]). In 2022, more than 80% of hospitals reported having to close beds due to staff shortages, including of nurses. The government has taken measures to increase the attractiveness of the nursing profession and improve the working conditions of nurses, to boost the number of practising nurses over time. Since 2020, public investment has been directed towards increasing nurses' pay (especially in hospitals) and recruiting additional staff. Salaries for new entrants to the healthcare sector have been increased and the salary grid system for nurses has been revised to ensure that pay reflects actual responsibilities rather than solely qualifications.

In its recovery and resilience plan, Belgium plans to invest EUR 93.6 million (1.77% of the plan's total value) in healthcare. The investments are in digital health services and health data, nuclear medicine for cancer treatment, and health research and innovation. More specifically, investment in digital health and health data is targeted at developing standardised care sets for patient data collection and storage, extending the e-prescription system, creating an integrated tracking system for medicine consumption, operationalising teleconsultations, and providing digital tools for integrated care teams among other things. Belgium has adopted legislation to set up a Health Data Authority, in line with the European Commission's proposal for a European Health Data Space. Complementary investments are planned under the cohesion policy funds for 2021-2027. Belgium plans to invest around EUR 31 million from the European Social Fund Plus towards improving the accessibility, quality and resilience of the health system ([145]).

([143])https://europa.eu/eurobarometer/surveys/detail/3032

([144])OECD/European Observatory on Health Systems and Policies (2023), *Belgium: Country Health Profile 2023, State of Health in the EU*, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels.

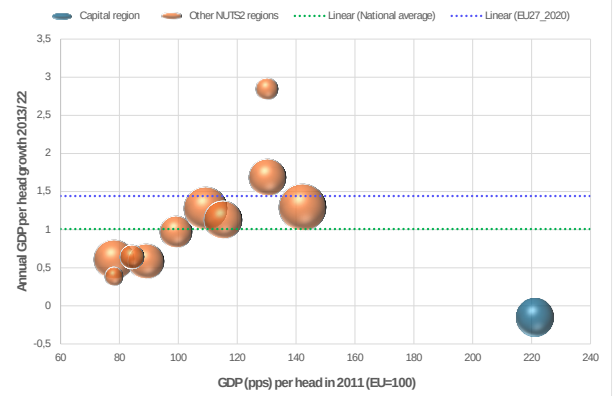
([145])The EU cohesion policy data reflect the status as of 13 May 2024.

Annex 17 showcases the economic and social regional dynamics in Belgium. It provides an analysis of economic, social and territorial cohesion in the Belgian regions and assesses emerging investment and subnational reform needs to boost economic growth, social development and competitiveness in the country.

Overview of economic and social performance at regional level

Regional and intra-regional disparities in terms of economic and social development remain high. In 2022, the GDP per capita of the Brussels-Capital Region was 196% of the EU average (100%) while several other provinces, such as Hainaut (74%) Luxembourg (72%), Liège (85%), Namur (79%) and Limburg (97%) lag behind. In contrast, Antwerpen (142%) and Brabant-Wallon (152%) continued their strong economic performance.

Graph A17.1: **GDP per capita (2011) and annual GDP per capita growth (2013-2022)**



Source: DG REGIO calculations based on JRC (ARDECO) and Eurostat data

Belgium continues to show major disparities in terms of GDP growth per capita within the country. Average annual real GDP growth per capita in Belgium was 1 % between 2013 and 2022, standing below the EU average (1.44%). In the Flemish provinces, real GDP growth per capita varied between 0.98% and 1.69%. Four provinces in Wallonia (Hainaut, Liège, Luxembourg, Namur) recorded slower per capita growth of between 0.39% and 0.64%. In contrast, Brabant-Wallon is the fastest growing province in Belgium, with average GDP per capita growth of 2.85%, standing well above the EU average. The Brussels-Capital Region recorded negative GDP per capita growth (-0.15%), partly due to the rising population. Brussels and its commuting zone, Liège and Luxembourg are in a development trap, as these regions have experienced a long period (>16 years) of below-average growth in GDP, productivity and employment.

Belgium's overall productivity growth has recovered but remains below the EU average. Belgium's labour productivity in 2022 increased by 4%, reaching 130% of the EU average, with the highest labour productivity values observed in Brussels-Capital, Brabant-Wallon and Vlaams-Brabant.

Labour market performance is generally better in Flanders. High discrepancies between both employment and unemployment rates of high, medium and low-skilled workers remain. The Belgian unemployment rate was 5.5% in 2023. Unemployment in the Flemish provinces (3.3%) is systematically lower whereas in the Walloon provinces it is higher (8.2%). Unemployment in the Brussels-Capital Region is the highest, at 10.3% of the active population. There is scope to further supporting voluntary labour mobility across sectors and regions to alleviate labour shortages. A study, requested by the Government of Flanders, has outlined the opportunities and barriers for interregional mobility based on specific zones in Wallonia and Flanders.

The level of educational attainment is lower in the Walloon provinces (in the Hainaut in particular) and the Brussels-Capital Region. In the Walloon provinces, the proportion of the population with a high level of education is lower and life expectancy is also lower than the Belgian average. In the Brussels-Capital Region, a higher proportion of the population (38.8%) is either at-risk-of-poverty or severely materially and socially deprived. These figures are lower in Wallonia (25.8%) and much lower in Flanders (11.2 %).

While the regional competitiveness index (RCI) in all Belgian provinces is above the EU average, the environment for firms and residents is less attractive in some Walloon provinces. The challenge of skills mismatches and skills shortages prevails in certain sectors. Belgian enterprises are expected to face a growing number of hard-to-fill vacancies due to adverse demographic trends and the industrial and green transition. In 2022, Belgian companies had 205 000 job vacancies, corresponding to a job vacancy rate of 4.8%. The regional breakdown of the

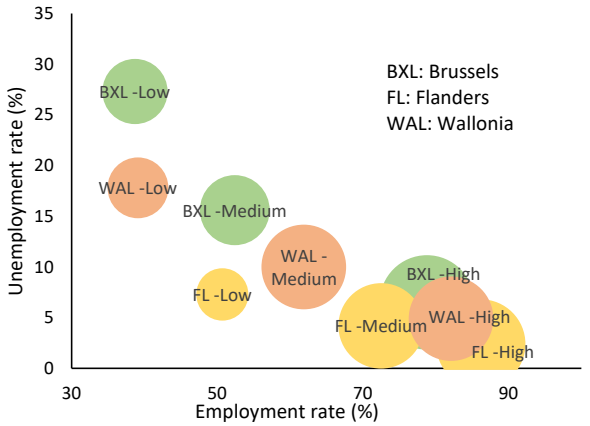
Table A17.1:**Selected indicators at regional level in Belgium**

Region	GDP per head(PPS)	Productivity (GVA (PPS) per person employed)	GDP per head growth	Unemployment rate	Employment in knowledge-intensive services	Employment in high-technology sectors	Regional competitiveness index (RCI)
	EU-27 = 100, 2022	EU-27 = 100, 2022	Average % change on the preceding year, 2013-2022	% of active population, 2023	% of total employment, 2022	% of total employment, 2022	EU-27 = 100, 2022
European Union	100	100	1.44	6.1	40.8	4.9	100.0
Belgique/België	120	130	1.01	5.5	50.3	5.8	125.7
Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest	196.0	157.7	-0.15	10.6	47.8	6.9	136.3
Vlaams Gewest	124.0	131.7	1.3	3.3	49.0	5.4	131.1
Région wallonne	87.0	112.3	1.0	8.2	54.0	6.1	112.4
Prov. Antwerpen	142.0	144.6	1.3	3.6	48.5	5.8	133.9
Prov. Limburg (BE)	97.0	109.9	1.0	3.2	46.8	4.4	125.8
Prov. Oost-Vlaanderen	112.0	123.3	1.3	2.9	51.1	5.7	134.6
Prov. Vlaams-Brabant	136.0	151.3	1.7	4.2	56.1	7.9	136.3
Prov. West-Vlaanderen	116.0	118.1	1.1	2.8	42.0	2.9	121.2
Prov. Brabant Wallon	152.0	168.7	2.9	5.7	61.5	11.1	136.3
Prov. Hainaut	74.0	102.0	0.6	9.3	50.8	5.1	107.6
Prov. Liège	85.0	108.1	0.6	9.1	53.4	5.3	111.7
Prov. Luxembourg (BE)	72.0	97.4	0.4	6.5	52.4	4.5	104.9
Prov. Namur	79.0	102.3	0.6	6.6	57.0	7.0	111.4

Source: Eurostat, EDGAR database

vacancies is 67% in Flanders, 20% in Wallonia and 13% in Brussels.

Graph A17.2: **Employment and unemployment rates by region and by education level, 2022**



Note: Bubble size corresponds to the size of the working age population with a given level of educational attainment relative to the total working age population in the region.
Source: European Commission

While Belgium outperformed the EU average for innovation, regional disparities remain. Belgium invested 3.42% of its GDP in R&D in 2021 (1.1% more than the EU average) and some provinces, such as Brabant-Wallon and Vlaams-Brabant excel in knowledge-intensive and high-tech sectors and boast high employment rates in these sectors. Brabant-Wallon ranks top of all NUTS2 regions in the EU-27 with leading knowledge-intensive and high-tech sectors. The number of patent applications is high, particularly in biotechnology and ICT: Brabant-Wallon (85 biotechnology patent applications per million inhabitants) and Vlaams-Brabant (122 ICT patent applications per million inhabitants) are among the top regions in the EU. However, the provinces of Limburg, West-Vlaanderen, Hainaut, Luxembourg and Namur invest less than 2% of their GDP in R&D.

The performance of rail passenger transport (share of population in a 120-km radius that can be reached within 1h30) is below the EU average (15.7%) in most provinces and the infrastructure for clean mobility (electric charging points) differs across provinces. Particularly in Limburg (3.8%) and the province of Luxembourg (4.1%), the performance of rail passenger transport is rather low. Moreover, the average of 82.5 charging points for electric vehicles per million inhabitants is well below the EU average of 120. Wallonia performs poorly with only 48 charging points per million inhabitants.

Also cycling infrastructure is less developed in Wallonia: the ratio of separate cycling infrastructure to main roads is the highest in the province of Antwerpen (93.8) and the lowest in the province of Luxembourg (7.3). The Brussels-Capital Region scores average with a ratio of 40.3.

All Belgian provinces have reduced the emissions of greenhouse gas between 1990 and 2022 but climate transition affects Belgian provinces differently. In Hainaut, emissions per capita remain high, five times higher than in the Brussels-Capital Region, due to its high industrial emission intensity.

Investment and subnational needs ahead

The investment strategy agreed in the cohesion policy programmes adopted in 2022 and 2023 remains valid for the current economic and social situation. Nevertheless, Belgium is invited to reflect on the following issues.

Effective actions supporting a comprehensive regional skills strategy and voluntary labour mobility to reduce disparities in the labour market remains necessary. A relationship between skill mismatches and unemployment levels across the EU has been proven. Evidence show that skill mismatches may lead to lower innovation and competitiveness. Several occupations have been identified as mismatch priority occupations for Belgium, they are either in shortage or surplus. An assessment of skills mismatch trends is essential especially in the light of the industrial and green transition.

Innovation, R&D and the green transition merit specific attention. Alleviating the differences in terms of innovation, notably R&D intensity, that persist between provinces could help address the difference in competitiveness across provinces. Continuing investments in the uptake of renewables energies and smart energy systems, energy efficiency in all sectors as well as in climate change adaptation, net-zero technologies and sustainable mobility would help regions to green their economy. Belgium could also benefit from the opportunities of the Strategic Technologies for Europe Platform (STEP) to boost investments in critical technologies to support industry transformation.

The financial sector appears relatively sound and quite profitable. Bank solvency is satisfactory, with a relatively stable average capital-adequacy ratio of 19.8% in Q3-2023 (vs 19.6% in the EU). Credit quality is strong, even though the non-performing-loan ratio slightly increased from a record low of 1.4% in Q2-2022 to 1.5% in Q3-2023 (vs 1.8% in Q3-2023 in the EU). Low credit losses are partly due to government measures and, for households, automatic wage indexation, against a backdrop of strong labour market performance. However, some credit losses could materialise in the future in the current context of higher interest rates. With return on equity of 11.9% in the first 9 months of 2023, Belgian banks are profitable, and perform better, on average, than their EU peers (which had return on equity of 9.9% in the same period), thanks to an increase in interest income and continuously low credit-loss provisions. Funding from the ECB dropped from a peak of 8.8% in April 2021 to 0.8% in December 2023, a trend which is common to many euro area Member States. Funding from depositors remains comfortable, with a loan-to-deposit ratio of 85.4% in September 2023 (vs 93.3% in the EU).

Belgium's financial system has withstood the rise in risk-free interest rates and the turmoil in financial markets of March 2023, but continues to face significant challenges. Sound management of interest-rate risk has allowed Belgian banks to benefit from the general rise in interest rates after a long period of low – or even negative – interest rates. The earlier period of low rates was indeed a major challenge for the profitability of traditional banking and life insurers offering contracts with a guaranteed return. However, banks' interest income and general performance in the future will depend on several factors. More volatile depositor behaviour or a further increase in political pressure on banks to raise interest rates on deposits could have a significant impact on banks' funding costs and profitability. Likewise, sudden exogeneous events – like the failure of Credit Suisse – can quickly drive up the cost of market funding as these events prompt investors to demand a higher risk premium on top of the risk-free interest rate. In addition, maintaining the current strong financial position of Belgian financial institutions will also require banks to continue to deal in an appropriate way with the structural challenges and opportunities stemming from digitalisation and the drive for cost effectiveness. These challenges could put renewed pressure on the profitability and business models of Belgian banks in the future. Finally, it remains a weakness that contributions to the Belgian Deposit Guarantee Scheme are not invested in a segregated and diversified portfolio of low-risk assets.

Credit growth has slowed down due to less attractive lending conditions, but remains stronger than in the rest of the euro area. Due to the rise in interest rates, year-on-year credit growth in Belgium has significantly slowed down since September 2022 to reach 3.9% in December 2023 (vs 0.4% in the euro area) for lending to non-financial corporations and 2.4% (vs 0.3% in the euro area) for lending to households. Interest rates on new loans to households and SMEs have soared by about 3.5 percentage points to levels unseen since the global financial crisis. In October 2023, interest rates on new loans to Belgian households for house purchases at floating rates reached 5.4% (vs 4.8% in the euro area), while interest rates on new loans to SMEs reached 5.5%, in line with the 5.6% observed on average in the euro area.

The vulnerabilities of the residential real-estate market have somewhat decreased. The risks in the residential real-estate market remain significant but have somewhat abated since interest rates have begun to rise. Housing loans represent a substantial share of total bank assets and have continued growing. They are secured by relatively low capital buffers due to relatively low microprudential risk weights applied by banks applying the internal ratings-based approach to these exposures ([146]). House prices have significantly fallen in real terms since Q2-2022, which reduces the risk of further significant corrections in the future. Household indebtedness remains high, but the credit quality of the portfolio of mortgages held by banks has significantly improved thanks to borrower-based measures in force since January 2020. In view of the decreasing but persisting risks, the National Bank of Belgium has decided to reduce its sectoral Systemic Risk Buffer from 9% to 6% and to

([146])Notification by the National Bank of Belgium on Systemic Risk Buffer (SyRB), 11/01/2022, ESRB notification.

Table A18.1:**Financial soundness indicators**

	2017	2018	2019	2020	2021	2022	2023	EU	Median
Total assets of the banking sector (% of GDP)	229.2	217.8	215.1	241.8	228.6	230.3	223.6	257.0	184.6
Share (total assets) of the five largest banks (%)	68.8	73.4	74.0	75.3	75.7	71.5	-	-	69.6
Share (total assets) of domestic credit institutions (%)[1]	50.9	50.3	49.6	50.6	52.2	52.9	52.3	-	62.9
NFC credit growth (year-on-year % change)	6.4	9.5	7.5	2.0	2.8	6.6	3.9	-	2.4
HH credit growth (year-on-year % change)	5.2	5.7	7.0	4.7	6.6	6.3	2.4	-	1.4
Financial soundness indicators:[1]									
- non-performing loans (% of total loans)	2.7	2.3	2.1	2.1	1.6	1.5	1.5	1.8	1.8
- capital adequacy ratio (%)	19.0	18.8	18.7	20.3	20.4	20.1	19.8	19.6	20.1
- return on equity (%)[2]	8.8	8.2	8.6	5.9	9.9	9.9	11.9	9.9	13.2
Cost-to-income ratio (%)[1]	58.2	61.2	59.5	56.7	56.3	56.4	54.7	52.8	44.9
Loan-to-deposit ratio (%)[1]	90.2	93.2	93.4	79.0	79.3	83.5	85.4	93.3	80.2
Central bank liquidity as % of liabilities	2.9	2.7	2.2	8.4	8.6	4.5	0.8	-	0.7
Private sector debt (% of GDP)	185.5	180.3	178.5	182.8	172.4	161.4	-	133.0	118.4
Long-term interest rate spread versus Bund (basis points)	40.5	39.8	44.6	36.2	35.9	59.1	65.5	107.7	104.2
Market funding ratio (%)	65.0	63.7	62.6	62.3	61.0	58.9	-	50.8	39.8
Green bonds outstanding to all bonds (%)[3]	-	-	-	1.5	2.1	2.9	3.3	4.0	2.7

1-3 **4-10** **11-17** **18-24** **24-27** Colours indicate performance ranking among 27 EU Member States.

(1) Last data: Q3-2023.
(2) Data are annualised.
(3) Data available for EA countries only, EU average refers to EA area.
Source: ECB, Eurostat.

increase the countercyclical capital buffer in two stages from 0% to 1% as of 1 October 2024. While smaller in magnitude, banks' commercial real-estate exposures are also significant. They are especially sizeable for insurers, where they represent nearly 10% of their total assets. The commercial property market continues to be characterised by strong polarisation between prime and non-prime segments. Against a backdrop of weak economic growth, these non-prime exposures could lead to an increase in credit losses in the future.

Belgium's tax system is not neutral towards investment choices. Some features of the tax system distort investment choices and lead to overinvestment in certain assets. Favourable taxation of immovable property is a case in point, since: (i) the 'notional' cadastral value applied often underestimates the actual rental income that such a property could achieve; and (ii) interest on loans for secondary residences are tax deductible. In Wallonia, homeowners continue to benefit from favourable tax treatment for their mortgage payments ('chèque habitat'). In the area of pensions, some tax incentives favour specific schemes, creating obstacles to the better allocation of capital. The tax on securities accounts introduces a bias against investment in securities. It is worth noting that one of the rare features that aimed at making the tax system more neutral was abrogated in December 2022. Up until that date, Belgium was one of the few Member States (along with Cyprus, Malta, Italy, Poland, and Portugal) with a notional interest-deduction scheme aimed at reducing the debt-equity bias, although the magnitude of the notional interest rate was so low that the scheme was largely ineffective. Further to a decision from December 2022, this interest-deduction scheme will now disappear entirely as of 2024.

Sustainable finance is beginning to grow. Even though the absolute amounts remain modest, EUR 4.5 billion in public green bonds were issued in 2022 after 3 years without any issuance. The issuance of private green bonds, however, has shrunk, almost halving from EUR 3.0 billion in 2021 to EUR 1.7 billion in 2022. During the first quarter of 2023, environmental, social and governance (ESG) funds benefited from positive net inflows amounting to EUR 4 billion, while non-ESG funds witnessed net outflows amounting to EUR 1.4 billion, which seems to indicate increasing investor interest and participation in ESG funds.

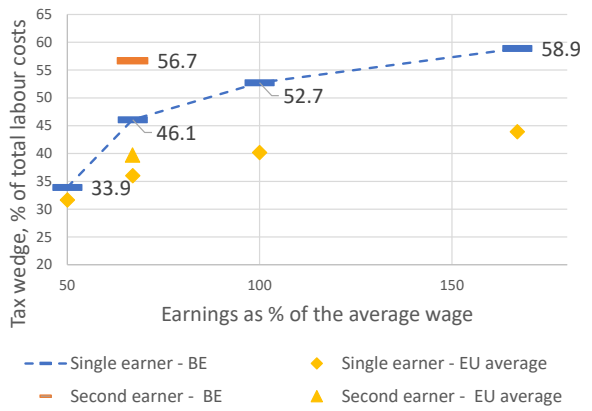
The insurance sector currently appears sound as a whole, but vulnerabilities exist. After an increase from 207% in Q4-2021 to 227% in Q2-2022, insurers' solvency ratio fell back to 211% in Q2-2023. This ratio remains more than twice the regulatory requirement, but below the EEA average (261%). In 2022, Belgian insurers performed well, with net profit of EUR 3.7 billion, corresponding to a return on equity of 16%. Insurers (and especially life insurers) have benefited from the rise in risk-free rates which drove down the value of their liabilities. However, they have suffered (especially non-life insurers) from the rise in inflation. Like elsewhere, unexpectedly high inflation in Belgium may reduce profitability for the non-life business of Belgian insurers, especially for long-tail

business. The fact that wages are automatically indexed in Belgium is an aggravating factor, since it leads to a rapid increase in the cost of claims. Insurers have put measures in place to absorb this kind of shock as much as possible, such as: (i) the indexation of premiums (to compensate for inflation in claims); (ii) targeted inflation hedges (investment in inflation-linked bonds and/or inflation derivatives); and/or (iii) reinsurance treaties to cede the inflation risk to third parties.

This Annex provides an indicator-based overview of Belgium's tax system. It includes information on the tax structure (the types of tax that Belgium derives most of its revenue from), the tax burden on workers, and the progressivity and redistributive effects of the tax system. It also provides information on tax collection and compliance.

The overall tax burden in Belgium is high and the tax structure relies to a large extent on labour taxes. Belgium's tax revenue as a percentage of GDP was above the EU aggregate in 2022 (see Table A.19.1). Revenue from labour taxes is high in Belgium when expressed as a percentage of GDP. This risks running counter to the objective of increasing employment. On the other hand, revenues from consumption taxes, recurrent immovable property taxes and environmental taxes, which are among the taxes least detrimental to growth, were close to the EU aggregate (expressed as a percentage of GDP). This suggests that there is scope to shift the tax burden away from labour to other tax bases because there may be limited scope to reduce tax revenue in the short run given the high public deficit and large public debt-to-GDP ratio.

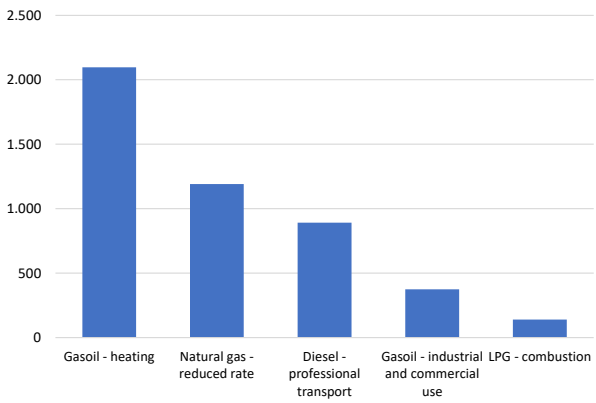
Graph A19.1: **Tax wedge for single and second earners as a % of total labour costs, 2023**



The second earner tax wedge assumes a first earner at 100% of the average wage and no children. For the methodology of the tax wedge for second earners, see OECD, 2016, *Taxing Wages 2014-2015*.
Source: European Commission

Belgium's labour tax burden is more progressive than the EU average, but the tax brackets are narrow. Graph A19.1 shows that, as a result of previous reforms, the labour tax wedge for Belgium in 2023 was close to the EU average for single people earning 50% of the average wage but much higher than the EU average at higher levels of income. For a single worker earning the average wage, the tax wedge is the highest in the EU. The personal income tax system offers several tax brackets, but these are rather narrow. Even average income earners are therefore subject to the highest income tax rates (45% and 50%). There are high marginal tax rates for lower-middle wage earners, leading to significant low-wage traps. Moreover, the high tax wedge for second earners and specific tax features like the 'marital quotient' may discourage second earners from working ([147]). In 2022, the tax-and benefit system performed better than the EU average in reducing income inequality, as measured by the Gini coefficient (Table A19.1). In Belgium, taxes and benefits reduced the Gini coefficient by 12.6 pps, while the reduction was on average 7.9 pps in the EU in 2022.

Graph A19.2: **Fossil fuel subsidies due to excise duty exemptions and reduced rates, 2021, millions of EUR**



Source: FPS, 2024 Inventory of federal fossil fuel subsidies

Excise duties on energy products used for heating are still low for fossil fuels. The level of excise duties on gas and electricity was linked to market price levels (the 'cliquet system'), but excise duties on heating oil were kept at the EU minimum level. Excise duties on transport fuel are rather high for diesel and are average for petrol, but professional transporters and agriculture benefit from a reduced excise rate on diesel (see Graph A19.2). Transport taxes and pollution taxes seem to be underused, contributing to increasing traffic congestion and pollution issues. There

([147])The 'marital quotient' allows the allocation of part of the taxable income of the spouse with the highest income to the other spouse, where it will benefit from the tax-free allowance and be taxed at a lower marginal rate.

remains scope to consistently apply environmental taxes throughout Belgium.

Property transfer taxes are high, while recurrent taxes on immovable property remain underused. Taxation of immovable property is characterised by high transaction tax rates in Brussels and Wallonia, which may hamper the functioning of the real estate market and restrict labour mobility. Moreover, a system strongly reliant on transaction taxes as the main source of property taxation generates a more volatile revenue stream than a property tax system where lower transaction taxes are combined with higher recurrent property taxes.

No major tax reform could be agreed upon, In July 2023, the Belgian prime minister announced that negotiations on the first stage of a broad tax reform, proposed by the minister of finance, had failed as no political consensus could be reached. However, some smaller tax measures were agreed in December 2023 as part of the budget agreement. This includes, for example, an extension of the scope of the sectors and limitation in the tax exemption for the flexi-scheme. Furthermore, it includes an increase in the fiscal work bonus. Finally, shortcomings were addressed in the so-called 'Cayman tax', which aims to prevent Belgian tax residents from avoiding taxation by holding assets through foreign low-taxed legal entities and trusts.

The complexity of the tax system weighs on the business environment and hinders the efficiency of tax collection. To offset the heavy tax burden on labour, wage subsidies and other tax expenditures have been widely used. Special schemes (e.g., the company car scheme and the withholding tax exemption for overtime, R&D work and night/shift work) have been introduced to compensate for the high tax burden on labour. These schemes are costly and risk leading to inefficiencies, but their use has been increasing. In addition, concerns remain as regards tax administration. Despite the efforts to increase the digitalisation of the tax administration, the on-time filing rates for personal and corporate income taxes in 2021 remained comparatively low at 87.6% and 82.5% respectively.

Revenues from consumption taxes decreased further due to more extensive use of reduced VAT rates. The estimated VAT gap (the gap between revenues actually collected and the theoretical tax liability) shrank to 6.9% in 2021, but increased to stabilise at 11.6% in 2022. The VAT rate gap increased following the introduction of a reduced VAT rate for electricity and gas in 2022. The policy gap decreased slightly from 53.4% in 2020 to 53.0% in 2021.

Table A19.1:**Taxation indicators**

		Belgium					EU-27				
		2010	2020	2021	2022	2023	2010	2020	2021	2022	2023
Tax structure	Total taxes (including compulsory actual social contributions) (% of GDP)	43.6	43.4	43.2	43.3		37.9	40.0	40.4	40.2	
	Labour taxes (as % of GDP)	23.7	22.9	21.7	22.3		20.0	21.3	20.7	20.3	
	Consumption taxes (as % of GDP)	10.9	10.4	10.7	10.3		10.8	10.7	11.2	11.0	
	Capital taxes (as % of GDP)	8.8	9.9	10.5	10.6		7.1	8.0	8.6	8.9	
	Of which, on income of corporations (as % of GDP)	2.5	3.3	3.8	4.0		2.4	2.5	3.0	3.4	
	Total property taxes (as % of GDP)	3.1	3.5	3.6	3.4		1.9	2.3	2.2	2.1	
	Recurrent taxes on immovable property (as % of GDP)	1.3	1.3	1.2	1.2		1.1	1.2	1.1	1.0	
	Environmental taxes as % of GDP	2.4	2.5	2.5	2.2		2.4	2.2	2.3	2.0	
Progressivity & fairness	Tax wedge at 50% of average wage (Single person) (*)	41.8	32.8	33.4	33.9	33.9	33.9	31.7	32.1	31.8	31.7
	Tax wedge at 100% of average wage (Single person) (*)	55.9	52.2	52.4	53.0	52.7	41.0	40.1	39.9	40.0	40.2
	Corporate income tax - effective average tax rates (1) (*)		23.3	23.4	23.4			19.5	19.0	19.0	
	Difference in Gini coefficient before and after taxes and cash social transfers (pensions excluded from social transfers) (2) (*)	11.0	12.4	13.5	12.6		8.6	8.1	8.2	7.9	
Tax administration & compliance	Outstanding tax arrears: total year-end tax debt (including debt considered not collectable) / total revenue (in %) (*)		16.6	15.5				40.9	35.5		
	VAT Gap (% of VAT total tax liability, VTTL)(**)	11.7	13.6	6.9	11.6			9.7	5.4		

(1) Forward-looking effective tax rate (OECD).
(2) A higher value indicates a stronger redistributive impact of taxation.
(*) EU-27 simple average.
(**) Forecast value for 2022, if available. For more details on the VAT gap, see European Commission, Directorate-General for Taxation and Customs Union, 2023, *VAT gap in the EU*, https://data.europa.eu/doi/10.2778/911698.
For more data on tax revenues as well as the methodology applied, see the Data on Taxation webpage: https://ec.europa.eu/taxation_customs/taxation-1/economic-analysis-taxation/data-taxation_en.
Source: European Commission and OECD

Table A20.1:**Key economic and financial indicators**

	2004-07	2008-12	2013-20	2021	2022	2023	forecast 2024	forecast 2025
Real GDP (y-o-y)	3.0	0.7	0.7	6.9	3.0	1.4	1.3	1.4
Potential growth (y-o-y)	.	1.4	1.4	1.6	1.8	1.9	1.6	1.5
Private consumption (y-o-y)	1.6	1.5	0.1	6.3	3.2	1.4	1.7	1.5
Public consumption (y-o-y)	1.4	1.3	0.8	5.2	4.5	1.6	0.8	1.1
Gross fixed capital formation (y-o-y)	6.0	0.2	2.5	4.9	-0.2	3.6	1.5	1.5
Exports of goods and services (y-o-y)	5.7	0.8	2.5	13.9	4.9	-3.3	-0.7	3.0
Imports of goods and services (y-o-y)	5.9	1.3	2.6	13.0	4.9	-2.6	-0.5	3.0
Contribution to GDP growth:								
Domestic demand (y-o-y)	2.4	1.1	0.8	5.6	2.6	2.0	1.4	1.4
Inventories (y-o-y)	0.5	0.0	0.0	0.5	0.3	0.0	0.0	0.0
Net exports (y-o-y)	0.2	-0.3	-0.1	0.9	0.1	-0.6	-0.2	0.0
Contribution to potential GDP growth:								
Total Labour (hours) (y-o-y)	.	0.6	0.5	0.7	1.0	1.0	0.7	0.6
Capital accumulation (y-o-y)	.	0.5	0.6	0.6	0.6	0.6	0.6	0.6
Total factor productivity (y-o-y)	.	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Output gap	1.2	-0.4	-0.6	-0.7	0.5	0.0	-0.4	-0.5
Unemployment rate	8.3	7.7	7.1	6.3	5.6	5.5	5.6	5.4
GDP deflator (y-o-y)	2.0	1.6	1.6	3.2	5.9	4.1	2.5	2.1
Harmonised index of consumer prices (HICP, y-o-y)	2.1	2.5	1.3	3.2	10.3	2.3	4.0	2.3
HICP excluding energy and unprocessed food (y-o-y)	1.6	1.9	1.6	1.4	4.9	7.4	3.3	2.1
Nominal compensation per employee (y-o-y)	2.7	2.5	0.8	4.4	7.3	7.7	3.5	2.6
Labour productivity (real, hours worked, y-o-y)	1.8	0.0	1.0	-0.9	-1.3	0.4	0.6	0.5
Unit labour costs (ULC, whole economy, y-o-y)	0.9	2.6	1.2	-0.5	6.3	7.1	2.6	1.8
Real unit labour costs (y-o-y)	-1.1	0.9	-0.4	-3.6	0.4	2.9	0.1	-0.3
Real effective exchange rate (ULC, y-o-y)	-0.2	0.4	-0.4	-0.7	2.6	0.3	-1.9	-0.5
Real effective exchange rate (HICP, y-o-y)	0.6	0.1	0.5	0.7	0.6	-2.0	.	.
Net savings rate of households (net saving as percentage of net disposable income)	10.7	9.9	6.7	10.5	5.8	.	.	.
Private credit flow, consolidated (% of GDP)	9.3	11.3	4.8	6.1	5.8	2.2	.	.
Private sector debt, consolidated (% of GDP)	125.2	174.9	179.3	172.3	161.4	156.5	.	.
of which household debt, consolidated (% of GDP)	44.1	53.0	59.7	62.1	59.9	58.1	.	.
of which non-financial corporate debt, consolidated (% of GDP)	81.1	121.9	119.6	110.2	101.4	98.4	.	.
Gross non-performing debt (% of total debt instruments and total loans and advances) (1)	2.6	4.2	2.4	1.4	1.3	.	.	.
Corporations, net lending (+) or net borrowing (-) (% of GDP)	1.3	1.5	1.7	2.5	1.2	1.4	1.2	1.7
Corporations, gross operating surplus (% of GDP)	24.2	23.6	25.5	27.9	27.9	26.3	26.1	26.2
Households, net lending (+) or net borrowing (-) (% of GDP)	3.6	3.8	1.9	4.3	1.5	3.2	3.0	2.7
Deflated house price index (y-o-y)	7.0	0.6	1.3	4.1	-3.9	-2.8	.	.
Residential investment (% of GDP)	5.9	6.1	5.9	6.2	6.0	5.8	.	.
Current account balance (% of GDP), balance of payments	2.3	0.1	0.6	1.3	-1.0	-1.0	-0.4	-0.5
Trade balance (% of GDP), balance of payments	2.5	-0.2	0.9	1.8	-1.6	-1.6	.	.
Terms of trade of goods and services (y-o-y)	-0.5	-0.6	0.3	-1.3	-3.7	1.3	0.2	0.1
Capital account balance (% of GDP)	-0.2	0.0	0.0	0.2	0.2	0.3	.	.
Net international investment position (% of GDP)	35.6	49.9	46.2	67.7	57.7	65.2	.	.
NENDI - NIIP excluding non-defaultable instruments (% of GDP) (2)	.	58.4	43.9	36.0	28.7	31.4	.	.
IIP liabilities excluding non-defaultable instruments (% of GDP) (2)	.	241.1	196.9	200.6	183.2	188.9	.	.
Export performance vs. advanced countries (% change over 5 years)	.	.	-3.7	8.1	1.4	-2.8	.	.
Export market share, goods and services (y-o-y)	-2.5	-3.3	0.3	2.0	-5.3	-4.3	-4.1	-0.6
Net FDI flows (% of GDP)	-2.0	-3.0	1.5	4.3	2.3	-1.5	.	.
General government balance (% of GDP)	-0.7	-3.9	-2.9	-5.4	-3.6	-4.4	-4.4	-4.7
Structural budget balance (% of GDP)	.	.	-2.8	-4.8	-3.9	-4.2	-4.0	-4.3
General government gross debt (% of GDP)	92.8	100.4	104.1	107.9	104.3	105.2	105.0	106.6

(1) domestic banking groups and stand-alone banks, EU and non-EU foreign-controlled subsidiaries and EU and non-EU foreign-controlled branches.
(2) NIIP excluding direct investment and portfolio equity shares.
Source: Eurostat and ECB as of 2024-5-17, where available; European Commission for forecast figures (Spring forecast 2024).

This annex assesses fiscal sustainability risks for Belgium over the short, medium and long term. It follows the multi-dimensional approach of the European Commission's 2023 Debt Sustainability Monitor, updated based on the Commission 2024 spring forecast.

1 – Short-term risks to fiscal sustainability are low. The Commission's early-detection indicator (S0) does not point to any major short-term fiscal risks (Table A21.2) ([148]). Government gross financing needs are expected to remain high, at around 17.5% of GDP in 2024-2025 (Table A21.1, Table 1). Financial markets' perceptions of sovereign risk are positive, as confirmed by the ratings of the main agencies.

2 – Medium-term fiscal sustainability risks appear high.

The baseline DSA shows that the government debt ratio is projected to remain at a high level over the medium term, with a continuous increase to 119% of GDP in 2034 (Graph 1, Table 1) ([149]). The assumed structural primary deficit of 1.9% of GDP as of 2025 (prior to changes in ageing costs) contributes to these developments. Compared to historical data, the deficit appears plausible, indicating that the country has considerable room for corrective action. Indeed, most of past fiscal positions were more stringent than the one assumed in the baseline (Table A21.2) ([150]). The debt dynamics continue to benefit from a favourable but declining snowball effect of 1 pp. of GDP annually on average in 2025-2034.

The baseline projections are stress-tested against four alternative deterministic scenarios to assess the impact of changes in key assumptions relative to the baseline (Graph 1). Under the *historical structural primary balance (SPB)* scenario (i.e. the SPB returns to its historical 15-year average of -0.4% of GDP) the debt ratio would be lower than under the baseline by about 11 pps. in 2034. However, under the *adverse interest-growth rate differential* scenario (i.e. the interest-growth rate differential deteriorates by 1 pp. compared with the baseline), the debt ratio would be about 9 pps. of GDP higher in 2034 than under the baseline. Under the *financial stress* scenario (i.e. interest rates temporarily increase by 1.9 pps. compared with the baseline) the government debt ratio would be about 2 pps. higher in 2034. The *lower structural primary balance* scenario (i.e. the projected improvement in the SPB in 2024 is halved) has a similar impact.

The stochastic projections indicate high risk, pointing to the considerable sensitivity of these projections to plausible unforeseen events ([151]). These stochastic simulations indicate a 64% probability that the debt ratio will be higher in 2028 than in 2023, implying high risks given the high debt level. In addition, the uncertainty surrounding the baseline debt projections is high, with a difference of 29 pps. of GDP between the 10th and 90th debt distribution percentiles in five years' time (Graph 2).

3 – Long-term fiscal sustainability risks appear overall high. This assessment is based on the combination of two fiscal gap indicators, capturing the required fiscal effort to stabilise debt (S2 indicator) and to bring debt to 60% of

([148]) The S0 is a composite indicator of short-term risk of fiscal stress. It is based on a wide range of fiscal and financial-competitiveness indicators that have proven to be a good predictor of emerging fiscal stress in the past.

([149]) The assumptions underlying the Commission's 'no-fiscal policy change' baseline include in particular: (i) a structural primary surplus, before changes in ageing costs, of 1.9% of GDP from 2025 onwards; (ii) inflation converging linearly towards the 10-year forward inflation-linked swap rate 10 years ahead (which refers to the 10-year inflation expectations 10 years ahead); (iii) the nominal short- and long-term interest rates on new and rolled over debt converging linearly from current values to market-based forward nominal rates by T+10; (iv) real GDP growth rates from the Commission 2024 spring forecast, followed by the EPC/OGWG 'T+10 methodology projections between T+3 and T+10 (average of 1.2%); (v) ageing costs in line with the 2024 Ageing Report (European Commission, Institutional Paper 279, April 2024). For information on the methodology, see the 2023 Debt Sustainability Monitor (European Commission, Institutional Paper 271, March 2024).

([150]) This assessment is based on the fiscal consolidation space indicator, which measures the frequency with which a tighter fiscal position than assumed in a given scenario has been observed in the past. Technically, this consists in looking at the percentile rank of the projected SPB within the distribution of SPBs observed in the past in the country, taking into account all available data from 1980 to 2023.

([151]) The stochastic projections show the joint impact on debt of 10,000 different shocks affecting the government's budgetary position, economic growth, interest rates and exchange rates. This covers 80% of all the simulated debt paths and therefore excludes tail events.

GDP (S1 indicator) in the long term ([152]). This assessment is driven by the unfavourable initial budgetary position and projected increase in ageing costs.

The S2 indicator points to high fiscal sustainability risks. The indicator shows that, relative to the baseline, the SPB would need to improve by 6.2 pps. of GDP in 2025 to ensure debt stabilisation over the long term. This result is driven by the projected increase in ageing-related spending (contribution of 3.6 pps.) and an unfavourable initial budgetary position (2.5 pps.). Rising ageing costs are primarily due to a projected increase in public pension expenditure (2.2 pps.) and long-term care spending (1.5 pps.) (Table A21.1, Table 2). Hence, additional measures may be required to further improve the efficiency and fiscal sustainability of the Belgian long-term care system.

The S1 indicator points to medium fiscal sustainability risks. The indicator shows that reducing government debt to 60% of GDP by 2070 would require an improvement of the fiscal position by 4.8 pps. of GDP in 2025. Similar to the S2 indicator, this result is driven by the current unfavourable budgetary position (contribution of 1.7 pps.) and the projected rise in age-related public spending (2.1 pps.). The gap between the current government debt ratio and the 60% reference value adds to the required effort 0.9 pp.) (Table A21.1, Table 2).

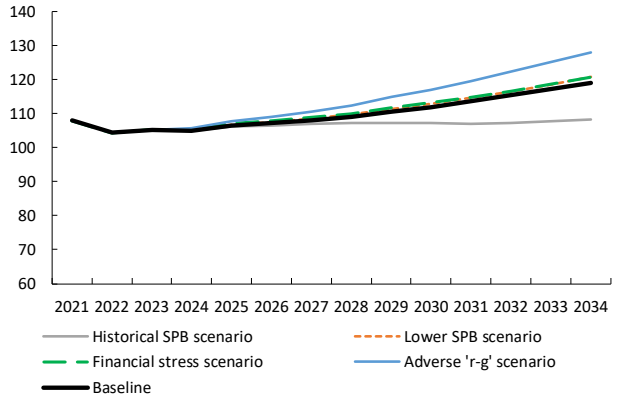
4 – Finally, several additional risk factors need to be considered in the assessment. On the one hand, risk-increasing factors relate to the recent increase in interest rates, the share of short-term debt, high gross financing needs, the large share of government debt held by non-residents and the lack of fiscal coordination among the different government levels, with several of the federated entities displaying specific vulnerabilities. On the other hand, risk-mitigating factors include the lengthening of debt maturity in recent years, which allows for a more gradual transmission of rising interest rates to the debt burden, relatively stable financing sources, with a diversified and large investor base, and government debt being fully denominated in euro.

([152])The S2 fiscal sustainability indicator measures the permanent SPB adjustment in 2025 that would be required to stabilise public debt over an infinite horizon. It is complemented by the S1 indicator, which measures the permanent SPB adjustment in 2025 to bring the debt ratio to 60% by 2070. The impact of the drivers of S1 and S2 may differ due to the infinite horizon component considered in the S2 indicator. For both the S1 and S2 indicators, the risk assessment depends on the amount of fiscal consolidation needed: 'high risk' if the required effort exceeds 6% of GDP, 'medium risk' if it is between 2% and 6% of GDP, and 'low risk' if the effort is negative or below 2% of GDP. The overall long-term risk classification combines the risk categories derived from S1 and S2. S1 may notch up the risk category derived from S2 if it signals a higher risk than S2. See the 2023 Debt Sustainability Monitor for further details.

Table A21.1: **Debt sustainability analysis – Belgium**

Table 1. Baseline debt projections	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Gross debt ratio (% of GDP)	**107.9**	**104.3**	**105.2**	**105.0**	**106.6**	**107.2**	**107.9**	**109.0**	**110.5**	**111.9**	**113.5**	**115.3**	**117.1**	**119.1**
Changes in the ratio	-3.9	-3.7	0.9	-0.1	1.5	0.6	0.8	1.1	1.5	1.4	1.6	1.7	1.9	2.0
of which														
Primary deficit	3.7	2.0	2.4	2.3	2.3	2.2	2.2	2.2	2.4	2.3	2.5	2.5	2.6	2.7
Snowball effect	-8.8	-7.4	-3.4	-1.7	-1.2	-1.6	-1.5	-1.2	-0.9	-0.9	-0.8	-0.8	-0.8	-0.8
Stock-flow adjustments	1.1	1.8	1.9	-0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross financing needs (% of GDP)	18.5	18.9	18.3	17.0	18.2	17.9	18.1	18.4	18.8	19.1	19.5	19.9	20.3	20.8

Graph 1. Deterministic debt projections



Graph 2. Stochastic debt projections 2024-2028

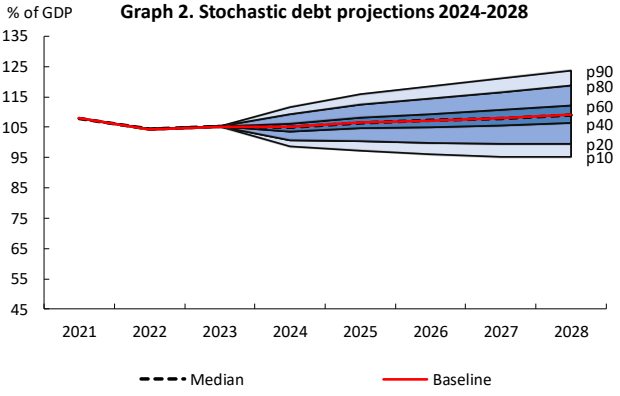


Table 2. Breakdown of the S1 and S2 sustainability gap indicators

		S1	**S2**
Overall index (pps. of GDP)		**4.8**	**6.2**
of which			
Initial budgetary position		1.7	2.5
Debt requirement		0.9	
Ageing costs		2.1	3.6
of which	*Pensions*	1.3	2.2
	Health care	0.4	0.5
	Long-term care	1.0	1.5
	Education	-0.6	-0.7

Source: Commission services.

Table A21.2: **Heat map of fiscal sustainability risks – Belgium**

Short term	**Medium term - Debt sustainability analysis (DSA)**								**Long term**		
			Deterministic scenarios								
Overall (S0)	**Overall**		Baseline	Historical SPB	Lower SPB	Adverse 'r-g'	Financial stress	**Stochastic projections**	**S2**	**S1**	**Overall (S1 + S2)**
LOW	**HIGH**	Overall	**HIGH**	**HIGH**	**HIGH**	**HIGH**	**HIGH**	**HIGH**	**HIGH**	**MEDIUM**	**HIGH**
		Debt level (2034), % GDP	119.1	108.3	120.7	128.0	120.6				
		Debt peak year	2034	2034	2034	2034	2034				
		Fiscal consolidation space	95%	86%	95%	95%	95%				
		Probability of debt ratio exceeding in 2028 its 2023 level						64%			
		Difference between 90th and 10th percentiles (pps. GDP)						28.6			

(1) Debt level in 2034. Green: below 60% of GDP. Yellow: between 60% and 90%. Red: above 90%. (2) The debt peak year indicates whether debt is projected to increase overall over the next decade. Green: debt peaks early. Yellow: peak towards the middle of the projection period. Red: late peak. (3) Fiscal consolidation space measures the share of past fiscal positions in the country that were more stringent than the one assumed in the baseline. Green: high value, i.e. the assumed fiscal position is plausible by historical standards and leaves room for corrective measures if needed. Yellow: intermediate. Red: low. (4) Probability of debt ratio exceeding in 2028 its 2023 level. Green: low probability. Yellow: intermediate. Red: high (also reflecting the initial debt level). (5) the difference between the 90th and 10th percentiles measures uncertainty, based on the debt distribution under 10000 different shocks. Green, yellow and red cells indicate increasing uncertainty. (For further details on the Commission's multidimensional approach, see the 2023 Debt Sustainability Monitor)

Source: Commission services.