

Future of R&D in Belgium

Belgium at the Crossroads: A Decade of Growth, a Change of Course Required

Preliminary Version

March 2026

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The objective of this joint study of AmCham Belgium and Deloitte was to investigate Belgium's competitiveness for R&D and innovation. This was achieved by engaging with stakeholders across industries to identify both strengths and development opportunities. This report a compelling case for change, calling for a next-generation R&D framework in Belgium to grow through a stronger transatlantic collaboration. The findings are a result of desk research, interviews, and a roundtable featuring R&D experts from leading companies in R&D-intensive fields, active in both Belgium and the US.

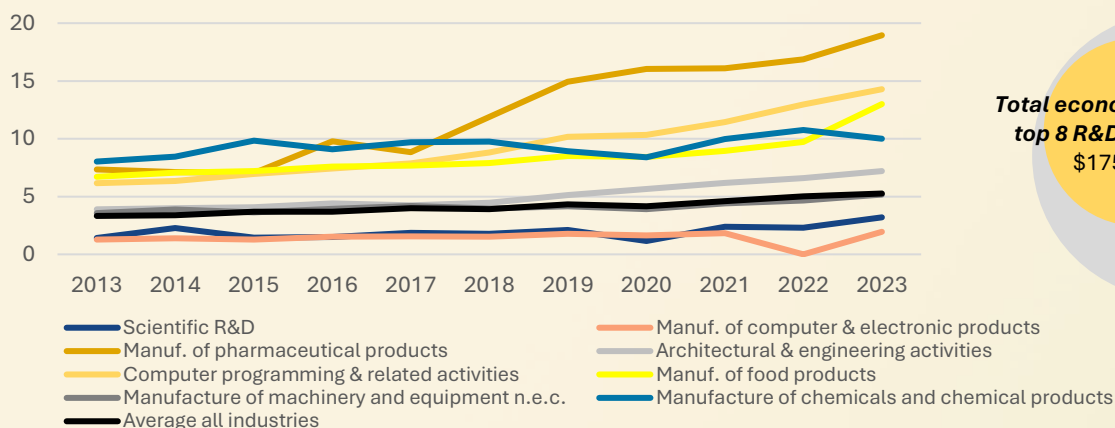
Executive summary (1/3)

R&D has been an important engine driving Belgium's economic prosperity

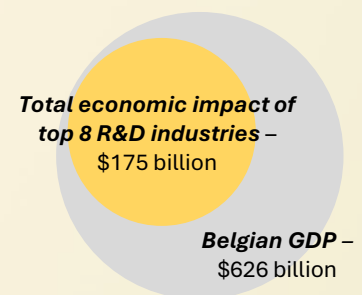
Belgium is coming out of a decade of R&D-driven growth, building an innovation ecosystem that now accounts for 28% of GDP and positions the country among Europe's research leaders. This golden decade has attracted significant foreign investment, created thousands of high-value jobs, and demonstrated the transformative power of sustained commitment to innovation. Yet this competitive advantage is now eroding. While Belgium continues to show moderate growth, the competition is intensifying from within Europe and beyond. A decrease in patent and design applications raises critical questions about whether Belgium's R&D investments are being sufficiently valorized, and stagnating figures in infrastructure investments are warning signs that Belgium, and Europe, are at an important crossroad. Europe's general competitiveness challenges (e.g., access to capital, high costs, over regulation, and reputation) are aggravated in Belgium due to its complexity and fragmentation.

The total economic impact of **Belgium's top 8 R&D-intensive industries represented 28% of the total Belgian GDP in 2022**, employing 15% of the total workforce (blue and white collars).

Value added of Belgium's top R&D industries (\$ billion)



Total economic impact (2022)



Source: Statbel, Deloitte analysis, Belfirst (2022), Statbel (2022), Planbureau (2022)

These industries are responsible for a significant amount of Belgian exports. With pharmaceuticals commanding a significant 16% share of total exports in 2024 (cf. Figure 13 in Appendix), **these industries provide the leverage necessary to influence the global market.** Consequently, they act as a dual magnet for international sales and investment.

The US partnership has been instrumental in a decade of growth

\$2.7B

Belgium is top 5 in EU for US affiliate R&D spending (2023)

122k jobs

Direct job creation from the partnership in Belgium (2024)

\$27.7B

Belgian goods & services exports to the US (2024)

\$17B

Net added value from companies headquartered in the US (2023)

The US has long been a key commercial partner for both Europe and Belgium. This partnership is a vital driver of innovation and economic growth, evidenced by \$2.7B in US affiliate R&D spending in Belgium in 2023. The partnership is crucial to attract new R&D investment. In 2023, US-headquartered companies operating within Belgium's top eight innovation industries contributed \$17 billion in value added. This amount represents 23% of the total value added by these industries.

Source: AmCham, Belfirst (2023)

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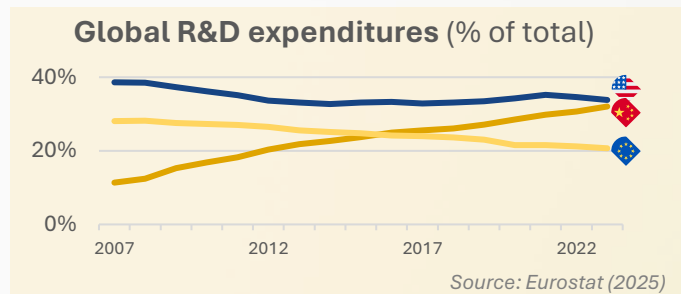
PRELIMINARY VERSION

Future of R&D in Belgium

Executive summary (2/3)

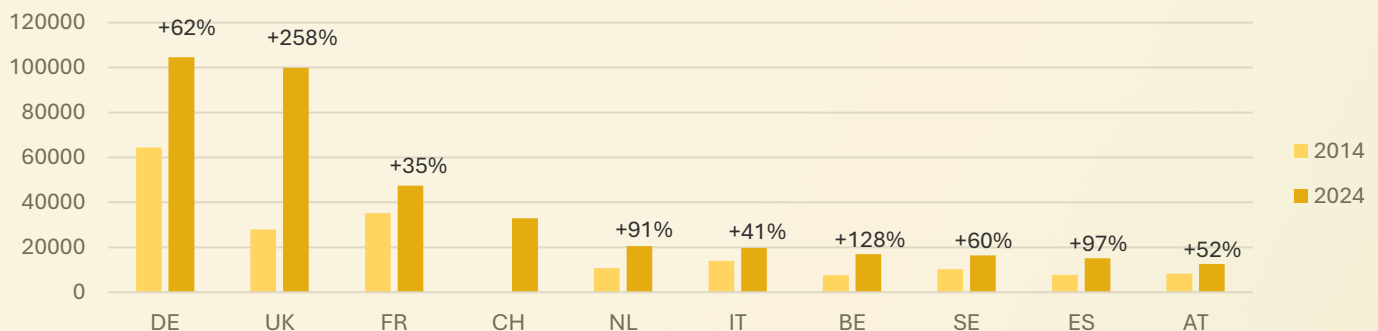
Global competition for R&D investments is intensifying

While **Europe** remains competitive in attracting R&D investment, it is **losing ground to the US and, critically, China**, whose share of global R&D expenditure is growing rapidly. Within this landscape, Belgium faces increasing competition in Europe, notably from Germany, the United Kingdom and the Netherlands.



Zooming in on countries within Europe: Germany, the United Kingdom, and France spent the most on R&D in 2024. Belgium ranks 7th in terms of absolute R&D expenditures, but it ranks 2nd when looking at R&D expenses relative to GDP (cf. Figures 27 & 28 in Appendix).

Top 10 European countries with highest absolute R&D expenditures (\$M)



While Belgium's robust framework of fiscal incentives has long positioned it as a premier destination for R&D investment, this **competitive advantage is eroding**. Other European nations are rapidly modernizing their own R&D support measures, closing the gap on what was once Belgium's unique selling proposition, **urging a change**.

Belgium needs to invest in its reputation, ease of doing business, and support for innovation

Belgium's R&D success is built on a strong historical position in sectors such as consumer products, technology, pharmaceuticals, biotechnology, chemicals, automotive and industrial products. Of these sectors, many are increasingly under pressure throughout Europe due to high costs, while others are facing intensifying global competition. Beyond the challenges of Europe, Belgium's potential is currently constrained by structural complexities that create friction for scaling innovators. **Complexity of our state structure leads to fragmentation of policies, regulation, initiatives, incentives, and efforts across regions**. The lack of a unified national brand often obscures the country's rich incentive landscape for international investors, while the **education system remains highly specialized** at a time when the market demands multi-disciplinary talent to successfully adopt new technologies. Additionally, Belgium's competitive position is challenged by **high operational costs and a lack of agility when it comes to labor**, alongside a **"funding gap" to invest in valorization and commercialization of innovation** that prevents local breakthroughs from reaching full industrial scale. To secure its leadership, Belgium must now evolve from a collection of regional strengths into an agile, streamlined, and clearly branded global innovation hub.

Executive summary (3/3)

Recommendation 1: Create a National Innovation Gateway with unified and compelling Belgium positioning

Establish a National Innovation Gateway: A true one-stop-shop for international investors

Create a national entry-point for all international R&D investors. This entity would operate on a "must-win" principle i.e., first attract the investment to Belgium, and only in a second step would the regions compete for the investment. This one-stop-shop should unburden companies who make investment decisions in Belgium, navigating the complexity of Belgium for them by immediately mobilizing dedicated taskforces for critical projects to accelerate timelines and increase success rates. The Gateway would streamline all phases of the investment lifecycle:

- Opportunity selection
- Opportunity management & conversion
- Business case
- Implementation

Develop unified and compelling Belgium innovation positioning

Belgium must move beyond its "Strong Innovator" label and articulate a bold, unified positioning that integrates regional innovation strategies. To achieve this, Belgium must address two critical barriers: regional fragmentation and insufficient EU funding and risk capital to fuel R&D growth.

- Coherent with national positioning enable cross-regional access to incentives, talent, and infrastructure through coordinated R&D projects and partnerships
- Unlock EU funding via a single national support to maximize access to EU grants and risk capital

Recommendation 2: Update our R&D incentive framework – Promote cross-regional collaboration and bridge the commercialization gap

Update our R&D incentive framework

Belgium's separate R&D incentive mechanisms must be consolidated into a single, coherent "R&D Excellence Framework" that maintains the differentiated support mechanisms that are so important for Belgian competitiveness but operates them under unified governance, a single application portal, and harmonized compliance procedures, through:

- A unified legal structure; consolidating the R&D tax credit, withholding tax exemption, and innovation income deduction into one coherent framework
- A research tax exemption to reduce administrative complexity
- Elimination of overlapping requirements; allowing companies to apply and report once
- Digitalization and streamlining; for applications, reporting, and compliance

Bridge the commercialization gap: Dedicated support for scaling and commercializing innovation

Belgium excels at supporting early-stage innovation, but Belgium must do more to anchor these innovations in Belgium. That means incentivizing companies to invest in piloting, scaling, and industrializing their innovation investments. Given Belgium's size, and financial position, it will have to be smarter: de-risking investments through:

- Creating a new tax grant or credit scheme targeting strategic sectors
- Enhancing IP exploitation incentives to reward companies that anchor taxable IP income in Belgium
- Dedicated commercialization funding; establishing a grant program for the R&D-to-commercialization transition

Note: For a comprehensive overview of all recommendations, please refer to the main report.

REPORT

Future of R&D in Belgium



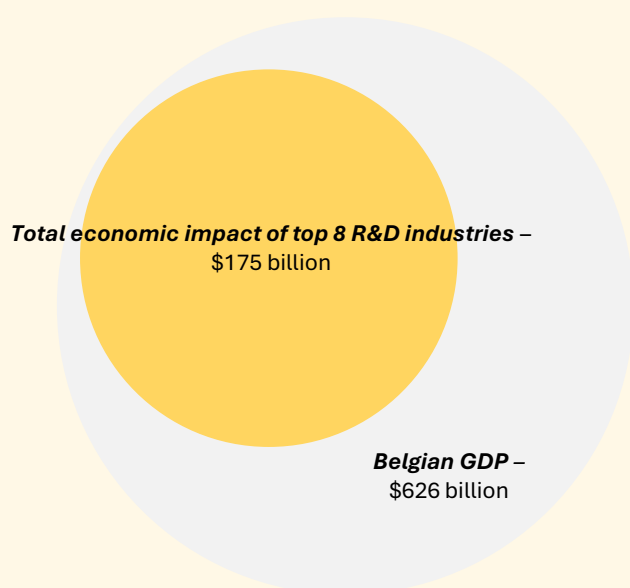
1. Looking back: Belgium is coming out of a decade of R&D-driven growth

1.1 Contribution of R&D-intensive sectors to the Belgian economy

R&D has been an important engine driving Belgium's economic prosperity

Research and development has become the defining driver of Belgium's economic competitiveness and prosperity. To understand the full scope of this impact, we examined six critical economic metrics that reveal how R&D-intensive industries shape the nation's economic trajectory: R&D expenditure, investment, employment, productivity, value added, and exports & trade surplus. Together, these metrics paint a comprehensive picture of R&D's transformative power. When we account for the total economic impact of Belgium's leading R&D-intensive industries, including their direct, indirect, and induced impact, the total economic impact reaches \$175 billion, representing 28% of Belgium's GDP in 2022 (cf. Figure 5). The following section zooms into each of these metrics to reveal how each industry contributed to them.

Figure 5: Total economic impact (2022)



The total economic impact of companies is the sum of their **direct, indirect, and induced economic impact**. The indirect economic impact of the companies within our ecosystem covers the net added value of the suppliers and other entities working directly with them. The induced economic impact of the companies consists of the economic impact of employees of these companies and their supply chain.

In 2022, the total economic impact of Belgium's top 8 R&D industries accounted for 28% of Belgium's GDP.

Sources: Deloitte analysis, Belfirst (2022), Statbel (2022), Planbureau (2022)

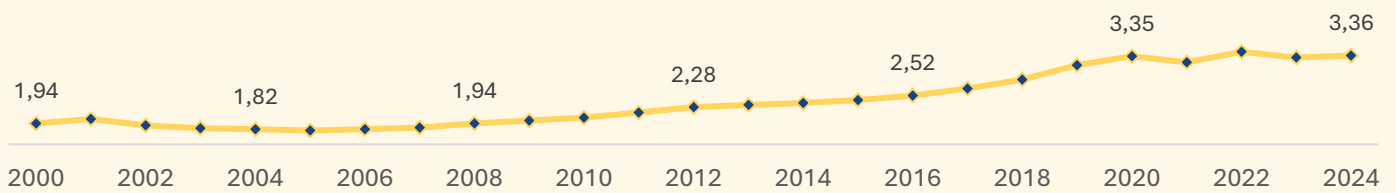
Belgium is coming out of a strong decade for innovation

The past decade has been transformative for Belgium's innovation ecosystem. Over the past 10 years, Belgium solidified its position as one of Europe's leading R&D hubs, with R&D expenditures growing by 8.4% annually. This period witnessed the maturation of Belgium's competitive advantages in high-value sectors, the emergence of world-class research capabilities, and the cultivation of a talent pool that rivals global innovation centers. Belgium's achievement of the second-highest R&D investment ratio among EU member states (cf. Figure 27 in Appendix) stands as testament to this decade of sustained commitment to innovation-driven growth. The following metrics illustrate the depth and breadth of this transformation.

R&D expenditures

Belgium invested 3.36% of its gross domestic product in research and development in 2024 (cf. Figure 7), the second-highest proportion among EU countries. This substantial commitment reflects a deliberate strategic choice to compete on innovation rather than cost. The **pharmaceutical industry** has emerged as the cornerstone of this investment, consistently increasing its R&D expenditure over the past decade and achieving a compound annual growth rate of 9% between 2013 and 2023. Equally impressive, computer programming activities have grown at 15% annually, while scientific research has expanded at 10% per year.

Figure 7: Evolution of gross domestic expenditure on R&D as a percentage of GDP in Belgium

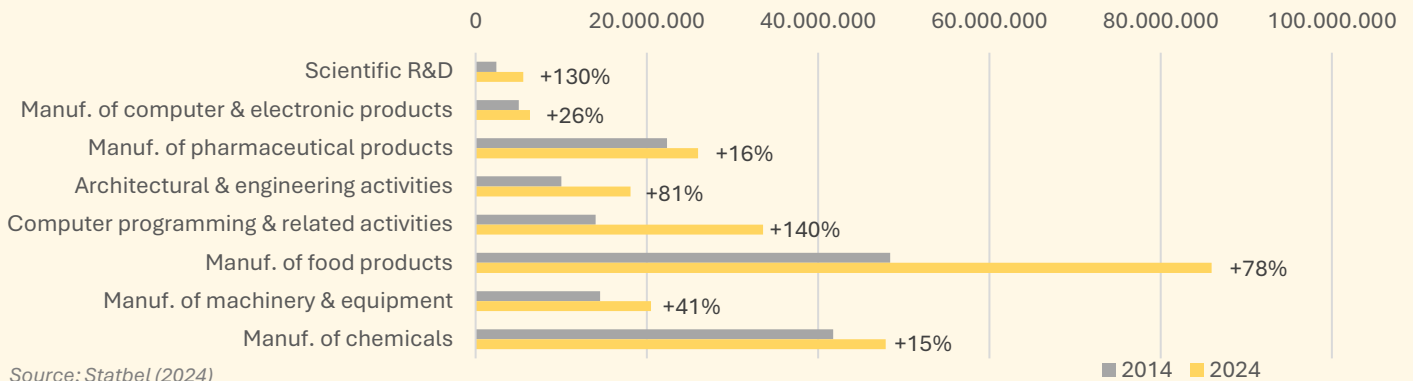


Source: Statista, Invest in Flanders (2024), Belga News Agency (2023), Eurostat (2025)

Total investment footprint

By 2024, the total investment footprint of the eight top R&D industries had expanded dramatically to \$244 billion, equivalent to 35% of Belgium's GDP (cf. Figure 12). This expansion reveals the broadening of Belgium's innovation base beyond pure research into **manufacturing, (digital) services, and food production.**

Figure 12: Investments in Belgium's most R&D-intensive sectors (\$k)

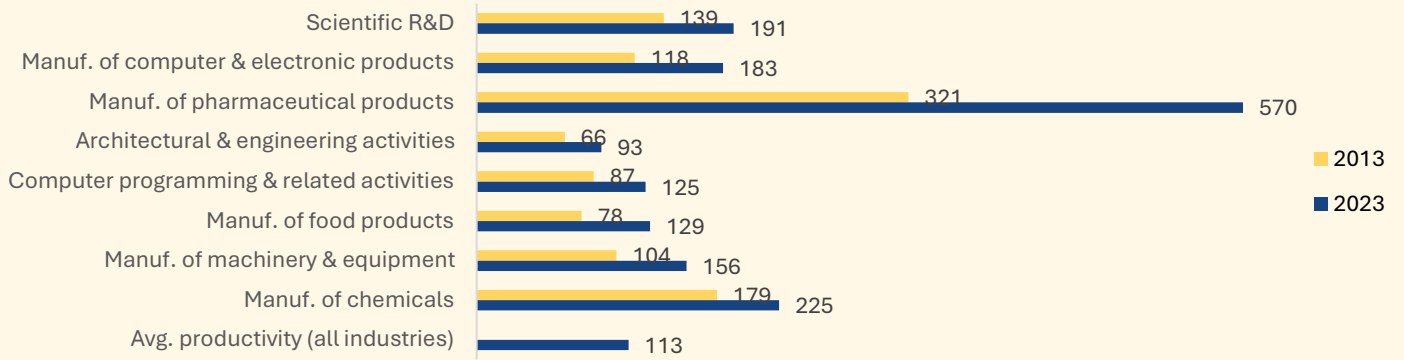


Source: Statbel (2024)

Employment, productivity, and value added

Belgium's R&D-intensive industries have become major employers creating **high-quality, blue and white collar, jobs**, directly supporting approximately 359k workers, representing 15% of the national workforce (cf. Figure 10 in Appendix). The true measure of innovation's impact emerges in productivity, measured as value added per employee. During the past decade, productivity levels of the top R&D industries have shown steady growth (cf. Figure 11). Some industries demonstrate productivity levels more than five times higher than the national average, a striking differential that underscores the value-creation potential of R&D-intensive activities. Seven of the eight leading R&D industries exceed the national productivity average, with only architecture and engineering falling slightly below. Collectively, these eight industries contributed \$74 billion in value added during 2023, accounting for 10% of Belgium's total GDP (cf. Figure 9 in Appendix). This productivity premium means that Belgium's innovation workers generate disproportionate economic value, multiplying the return on every euro invested in research and development.

Figure 11: Productivity as value added per employee (\$k, 2023)



Source: Statbel (2023)

Exports and trade surpluses

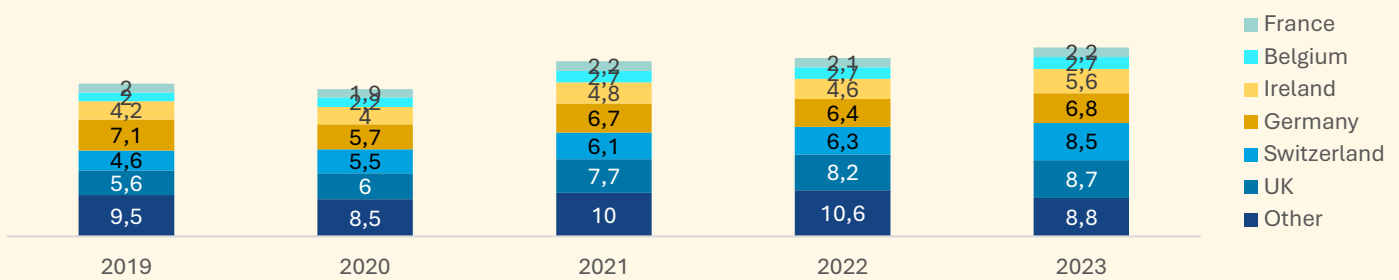
Belgium's R&D-intensive industries have translated innovation into commanding positions in global markets. The **R&D intensive industries are some of the country's largest export categories** and a cornerstone of Belgium's international trade profile. For example, the pharmaceutical industry generated \$16 billion in trade surpluses, directly contributing to 2.4% of Belgium's GDP. Food manufacturing adds a further \$8 billion in trade surpluses, and manufacturing of chemicals another \$12 billion, bringing the combined contribution of these product groups to \$36 billion, or 6% of Belgium's GDP.

1.2 The US-Belgium partnership powering innovation

US- Belgium partnership proved instrumental in accelerating Belgium’s R&D-driven growth

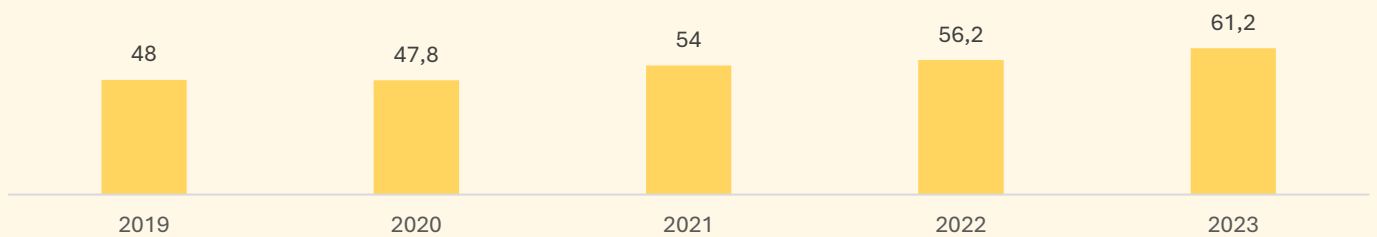
Belgium’s strong decade for innovation was underpinned by a symbiotic transatlantic partnership that proved instrumental in accelerating Belgium's R&D-driven growth. **US-headquartered companies recognized Belgium's innovation ecosystem as a strategic asset, investing \$2.7 billion in R&D activities in Belgium in 2023**, representing **19% of Belgium's total R&D expenditure** and positioning **Belgium as the sixth-largest destination for US affiliate R&D spending in Europe** (cf. Figure 17). Beyond capital deployment, US-headquartered companies operating within Belgium’s top six innovation industries **contributed €12 billion to the Belgian economy**, accounting for one-quarter of the total value added by these industries (cf. Figure 19 in Appendix). The presence of US corporate R&D operations created a multiplier effect: attracting talent, facilitating knowledge transfer, and reinforcing Belgium's reputation as a premium innovation hub. US companies directly employed 122k workers in Belgium, anchoring high-skilled employment in research, development, and advanced manufacturing activities that became hallmarks of a very strong decade (cf. Figure 24 in Appendix).

Figure 17: Evolution of US affiliate R&D spending in Europe (\$ billion)



Source: AmCham: The transatlantic economy (2022;2023;2024;2025)

Figure 18: Evolution of European affiliate R&D spending in the US (\$ billion)



Source: AmCham: The transatlantic economy (2022;2023;2024;2025)

Reciprocally, **innovative Belgian companies often look towards the US for investments and as one of the primary markets to scale their business** (e.g., in food and pharmaceuticals). Belgian innovation reached global markets through the US partnership, enabling R&D-intensive industries to scale beyond Europe's borders. Belgium exported \$27.9 billion in goods to the United States in 2023, representing 6% of Belgium's total exports, with chemicals and pharmaceuticals commanding 31% of this trade, a direct reflection of Belgium's competitive advantage in knowledge-intensive sectors (cf. *Figure 20 in Appendix*). This market access proved transformative: it allowed Belgian companies to monetize their R&D investments at scale, generating the revenue streams necessary to fund continued innovation and expansion. Belgian companies directly employed 82,400 workers in the United States, demonstrating that Belgium's innovation ecosystem created value not only domestically but across the Atlantic (cf. *Figure 24 in Appendix*). Together, these inbound and outbound flows of capital, talent, and goods transformed the US-Belgium relationship from a simple commercial partnership into a strategic alliance that amplified Belgium's capacity to compete globally in the R&D intensive economy.

1.3 Conclusion

Innovation and the transatlantic partnership are key drivers of economic prosperity in Belgium

R&D is the central engine of Belgium's economy. The evidence is clear: Belgium's R&D-intensive industries drive employment, generate exceptional productivity, command global export markets, and create substantial trade surpluses.

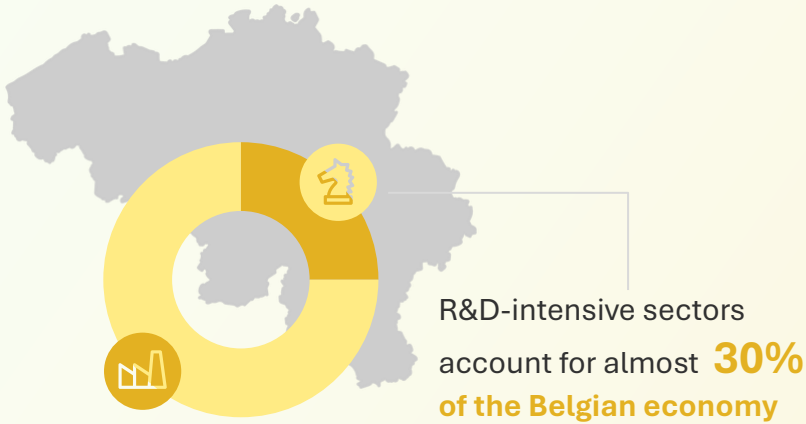
Belgium has experienced a golden decade of R&D-driven growth, solidifying its position as one of Europe's leading innovation hubs. This achievement was not built in isolation. The transatlantic partnership with the United States has been instrumental in accelerating Belgium's success, bringing capital, talent, and market access that amplified the country's innovation ecosystem and enabled Belgian companies to scale globally.

Belgium's competitive advantage extends beyond R&D excellence to a proven track record in commercializing innovation and bringing advanced production to market. Historically, the country has attracted and retained major manufacturing and R&D hubs. **Yet this success cannot be taken for granted.** While multinational corporations continue to invest in new infrastructure in Belgium, the country stands at a crossroads. Belgium must remain vigilant in staying at the forefront of emerging innovation areas and actively position itself as the preferred location for commercializing next-generation technologies. The imperative is to **not only protect the companies currently anchored in Belgium but to attract and enable new commercialization hubs** in adjacent and emerging fields.

Belgium Makes Innovation Happen

Important scaling hub for innovation in the heart of Europe

R&D-intensive sectors as the engine of the Belgian economy



of the Belgian workforce works in white- and blue-collar jobs in the R&D intensive industries, creating a vibrant opportunity-rich talent ecosystem with high-skilled people.

In the last decade, Belgium has proven itself as a European growth champion in R&D and innovation

Growth in R&D intensity (per country)

Rank	Country	Growth rate
1	United Kingdom	+258%
2	Belgium	+128%
3	Spain	+97%
4	Netherlands	+91%
5	Germany	+62%

Main sectors driving this growth



Belgium acts as a **steppingstone for scaling and commercializing** innovation in Europe and beyond.

US and Belgium have been important partners in innovation



US R&D investments of almost **\$3 billion** accounts for **20%** of total R&D investments in Belgium

6th largest destination for US affiliates R&D spending in Europe



\$4.6 billion R&D spending by Belgian companies operating in the US

100.000 jobs created by Belgian companies in the US

2. Looking outward: Europe and Belgium are at a crossroads – How global competition is intensifying

2.1 Europe's attractiveness vs the rest of the world

Europe is trailing the US and China as global competition intensifies

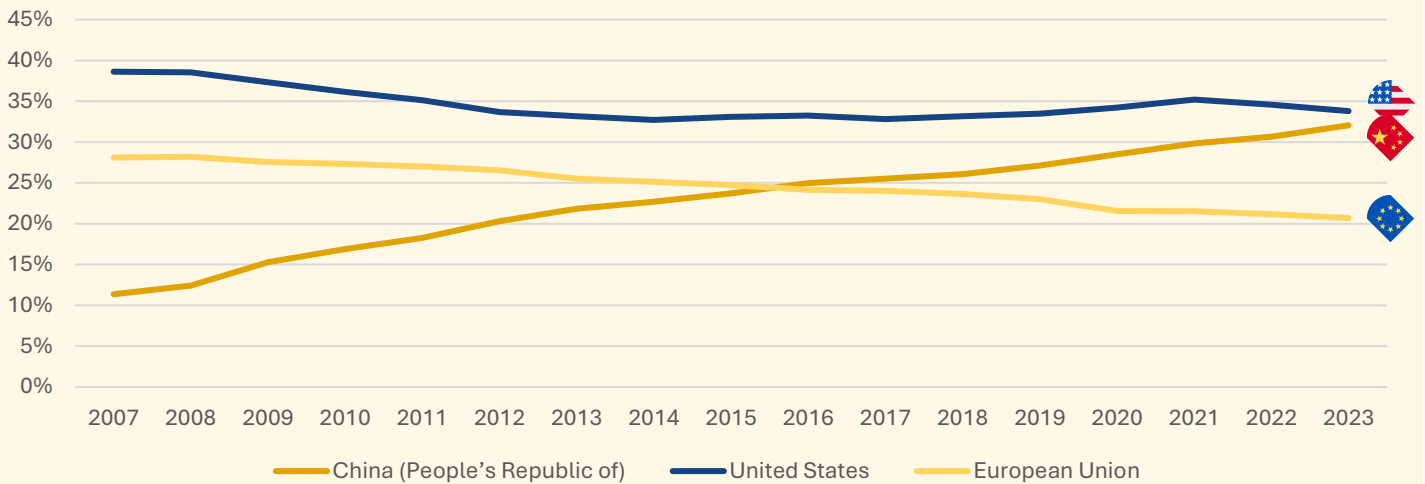
First, let's consider the competitiveness of Europe compared to the rest of the world. Europe's innovation paradox has never been more acute: while absolute R&D investment continues to grow, Europe's share of global innovation spending has contracted significantly, revealing a troubling **gap between research inputs and competitive outcomes**. The European Union and United Kingdom contributed more than 20% of global R&D spending in 2022, supported by a highly educated workforce, world-class scientific institutions, and robust public research investment. Yet this foundation of research excellence masks a critical structural weakness: Europe excels at generating knowledge but struggles to convert it into commercial advantage.

The most significant gap lies in business R&D investment. European companies invest substantially less in applied R&D than their US counterparts, a structural weakness that reflects deeper challenges embedded in Europe's innovation ecosystem: **limited government support for business R&D, lower venture capital availability, more risk-averse corporate cultures, and fragmented domestic markets that constrain scaling opportunities**. These systemic constraints mean that even when European research produces breakthrough discoveries, the ecosystem lacks the capital, risk appetite, and market scale necessary to rapidly commercialize and scale innovations globally.

This commercialization gap extends directly to innovation outputs. While Europe generates world-class scientific research, its patent, design, and trademark applications lag significantly behind competitors. China, by contrast, demonstrates aggressive commercialization: trademark applications stand at 833 compared to Europe's approximately 60, a 14-fold gap that signals a fundamentally different approach to converting R&D into market-ready products and services. This gap is particularly acute in emerging technology sectors; artificial intelligence, quantum computing, biotechnology, and cybersecurity, where first-mover advantage and rapid commercialization are critical to market dominance. In these high-stakes domains, Europe's research excellence provides little competitive advantage if innovations cannot reach markets quickly enough to establish leadership positions.

This paradox has profound competitive consequences. Between 2007 and 2023, **the European Union's share of global R&D spending declined** from 28% to 21%, a relative contraction despite absolute growth in investment (*cf. Figure 25*). Over the same period, **China's share surged from 11% to 32%, nearly tripling its global R&D footprint and emerging as a formidable innovation competitor**. The **United States maintained a stable share** of approximately 34-39% throughout this period, preserving its position as the global innovation leader. The divergence becomes even more apparent when examining R&D intensity: the ratio of R&D spending to GDP. The **EU's R&D intensity has stagnated**, rising modestly from 2.09% in 2014 to 2.24% in 2024, while the **United States has widened its lead**, increasing from 2.70% in 2014 to 3.45% in 2023 (*cf. Figure 25 in Appendix*). Most significantly, **China surpassed the EU's R&D intensity** in 2020 and has continued to expand its commitment, signaling a strategic pivot toward innovation-driven growth that Europe has not matched.

Figure 26: Global R&D expenditures (% of total)



Source: Eurostat (2025)

2.2 Comparison of Belgian R&D-intensity to other European countries

Belgium leads Europe in R&D intensity growth, ranking second only to Sweden

Within the EU, Belgium demonstrates exceptional R&D commitment. In 2024, Belgium achieved an R&D intensity of 3.36% of GDP; the second-highest in Europe, only slightly below Sweden's 3.57% and the United States' 3.45% (cf. Figure 27). For context, this far surpasses the EU average of 2.24%. More significantly, **Belgium experienced the largest increase in R&D intensity over the past decade**, between 2014 and 2024, a growth rate that outpaced nearly all other EU member states. This trajectory demonstrates Belgium's sustained commitment to R&D investment and positions the country as one of Europe's most R&D-intensive economies.

In absolute terms, Belgium ranks 7th in total R&D expenditures within Europe (cf. Figure 28). While this places Belgium behind larger economies like Germany (\$105 billion, +62% since 2014) and the UK (\$100 billion, +258% since 2014), Belgium's \$17 billion in R&D spending represents a substantial 128% increase since 2014.

Figure 27: Evolution of gross domestic expenditure on R&D (% of GDP, 2014-2024)

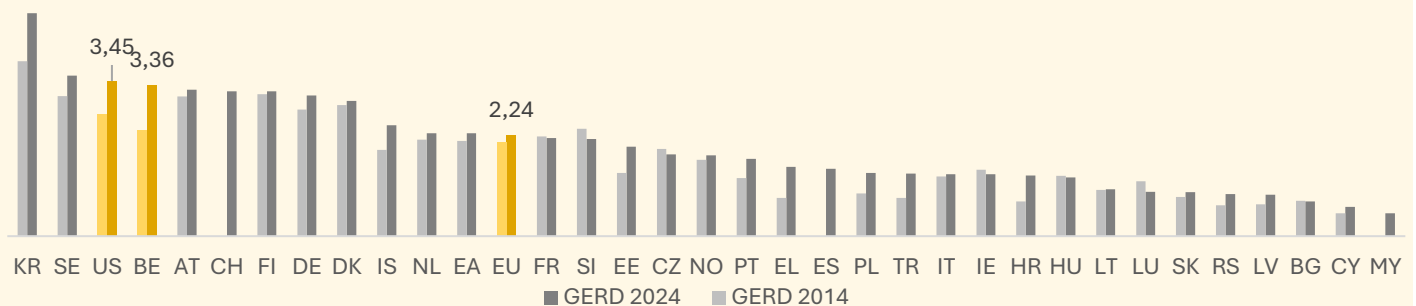
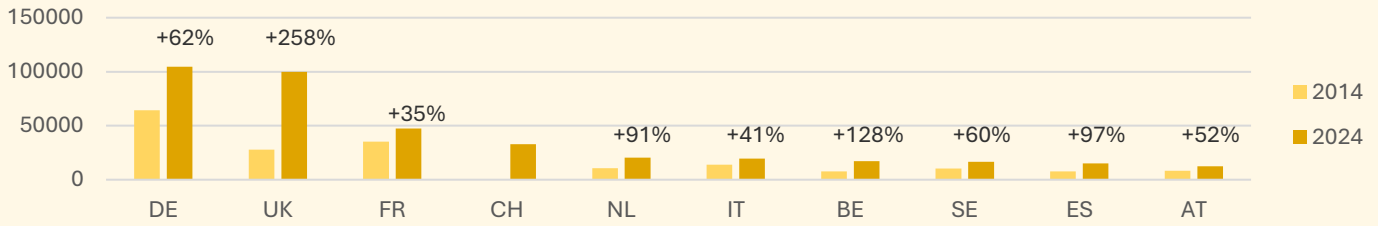


Figure 28: Evolution of gross domestic expenditure on R&D (\$ million, 2014-2024)

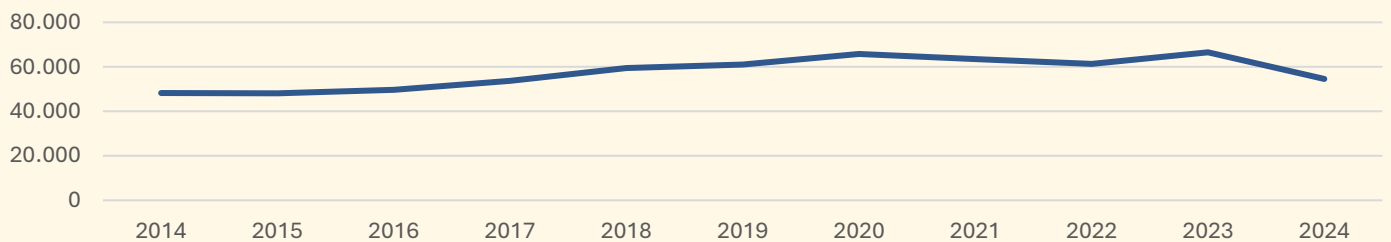


The Implication for Belgium

For Belgium, as part of the EU innovation ecosystem, this dual reality presents both opportunity and imperative. **Belgium can build on Europe's collaborative research strengths, its world-class scientific talent, and its robust public R&D investment, but also suffers the challenges of Europe** (i.e., lack of capital, over regulation and fragmentation). This is also apparent from the evolution of direct investment from the US: US foreign direct investment is increasing in Europe, but it is decreasing in Belgium (*cf. Figure 32*). That while it has increased in countries like Italy, France, Germany, Netherlands, and even Hungary or Greece (*cf. Figure 20 in Appendix*), indicating that Belgium is losing momentum. The underlying industries driving this decrease are chemicals, machinery, transportation equipment, miscellaneous manufacturing, and oil & gas.

Therefore, closing the critical gap between knowledge creation and commercial application is essential. This requires increasing business R&D investment, accelerating the path from research to market, strengthening venture capital ecosystems, and fostering a culture of entrepreneurship and risk-taking. Only by addressing these structural weaknesses can Belgium—and Europe—compete effectively in the emerging technologies that will define the next decade of global innovation.

Figure 32: US FDI position in Belgium (\$ million)



Source: AmCham: *The transatlantic economy* (2026)

2.3 Introduction to the R&D framework: levers for innovation attractiveness

Companies make a trade-off between cost and operational de-risking

Assessing R&D competitiveness requires understanding the fundamental trade-offs that investors and companies make in their investment decisions: **companies balance the cost of operations against the probability of operational and strategic success of their investments.** To evaluate how effectively a location addresses this trade-off, the R&D framework (*cf. Figure 6*) examines three critical dimensions. Financial burden encompasses operating expenses, government-related costs and incentives, and access to financing and capital; the direct financial levers that shape investment economics. Operational de-risking focuses on factors such as the ease of doing business, availability and quality of talent, and availability and quality of infrastructure; the operational foundations that enable innovation to flourish. Strategic risk reflects the potential uncertainties associated with the target market in which the company will make the investment. Together, these three dimensions form a comprehensive framework for assessing what makes a location attractive for R&D investment and, by extension, for evaluating Belgium's competitive position in the global innovation economy.

Figure 6: R&D framework

FINANCIAL BURDEN

Where can we invest at the lowest cost...

Operating costs

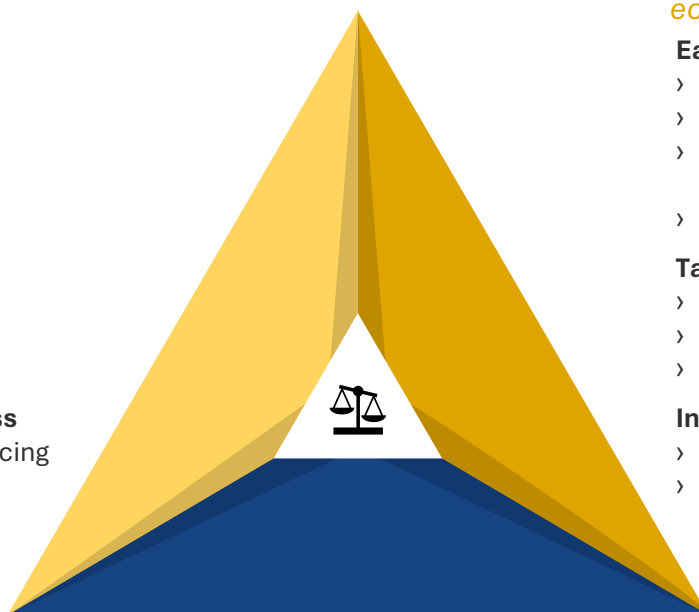
- › Labor cost
- › Infrastructure cost
- › Utilities cost
- › Cost of resources
- › Cost of compliance

Government related costs/benefits

- › Taxes
- › Incentives & grants

Financing & capital access

- › Access to credit & financing
- › Access to risk capital



OPERATIONAL DE-RISKING

... while accessing the right talent, ecosystem, and infrastructure...

Ease of doing business

- › Regulation administration
- › Permitting process duration
- › Investment in ecosystem coordination
- › Institutional & political stability

Talent

- › Availability of local talent
- › Culture/mindset
- › Ability to attract foreign talent

Infrastructure

- › Infrastructure availability
- › Investment in ecosystem infrastructure

STRATEGIC RISK

... and remain close to our key markets

Market

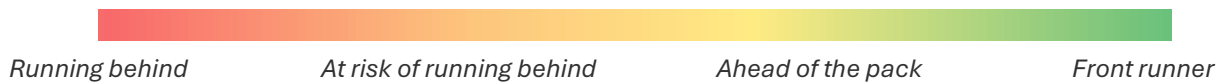
- › Market size
- › Location

2.4 Belgium’s innovation attractiveness vs other European countries

Belgium excels in research quality & human capital, but faces structural barriers

To understand Belgium's competitive position in the global R&D landscape, we applied the three-dimensional framework outlined above to assess Belgium's performance across seven critical levers. The assessment draws on Belgium's innovation profile, comparative benchmarking data, and insights from a round table with R&D experts from leading companies with US/Belgian operations. The findings reveal a country with genuine strengths in research quality and human capital, yet it faces critical structural barriers that threaten to undermine these advantages.

The countries in scope are ranked on each of the levers of the R&D framework, based on their relative performance, calculated using aggregated normalized scores from internationally recognized rankings:



Financial burden

Operating costs



Belgium offers cost-effective academic collaboration compared to US alternatives, reducing the financial burden of R&D partnerships. However, **Belgium's operational cost structure reflects its position among Western Europe's premium markets**. Labor costs in manufacturing rank second-highest in Europe after Denmark, followed by Austria and Germany. Business services costs are similarly elevated, with Belgium ranking third in Europe behind only Luxembourg and Denmark. Energy costs compound this challenge, running 12-23% above neighboring countries (France, Germany, Netherlands), and Belgium faces additional disadvantages in energy price stability compared to countries with greater regulatory control.

Government-related costs / benefits



Belgium's government-related costs and benefits present a paradoxical picture: **attractive incentive mechanisms undermined by implementation uncertainty**. Tax incentive interpretation depends on individual tax inspectors conducting audits, creating significant legal uncertainty when applying for R&D tax credits. Administrative formalities dominate over substance, making incentives less attractive in practice. Additionally, **Belgium's fragmented incentive landscape**, with multiple programs evaluated in isolation across different administrative bodies, **prevents companies from seeing the full integrated value of available support**. This is in a context where we see global competition rising, with several countries increasing government support for innovation, digitalization, and sustainability. This fragmentation also prevents policymakers from accurately assessing the true economic impact of investments.

Current frameworks focus narrowly on direct employment and capital expenditure, insufficiently accounting for intellectual property income anchoring, which often generates substantially higher economic returns. This fragmentation and uncertainty undermine what should be a competitive advantage.

Notes: (1) Based on cost of labor (Eurostat 2024) and Cost of energy (EC 2022), (2) Based on Direct & indirect government support on business R&D (EC 2025)

Best practices from European countries

R&D tax credits/deductions are among the most prevalent R&D tax policies deployed by many countries worldwide. These incentives operate through enhanced deductions (allowing companies to deduct more than 100% of qualifying R&D expenses) or direct tax credits (reducing tax liability based on R&D spending). By lowering the effective cost of R&D, these incentives motivate companies to increase their investment in innovation. Examples are the French R&D Tax Credit (Crédit d'Impôt Recherche) providing 30% credit on R&D expenses, Switzerland's 150% super deduction on qualifying R&D expenditure, and the UK's 13% Research and Development Expenditure Credit (RDEC).

The innovation or patent box regimes apply reduced corporate tax rates to income streams generated from qualifying IP assets (e.g. patents, copyrighted software, plant variety rights, ...). By offering preferential tax treatment on income derived from intellectual property, jurisdictions incentivize companies to locate both R&D functions and resulting IP ownership domestically, generating sustained economic value beyond initial R&D investments. For instance, Belgium offers 85% exemption on patent income through its Innovation Income Deduction regime.

Additionally, there are tax exemptions for expatriates, which create attractive tax regimes aimed at reducing the cost of living for international talent. In globally competitive talent markets, taxation significantly influences location decisions of highly skilled professionals. Expatriate tax incentives reduce the total cost of employment for international talent while improving net compensation, enabling companies to compete for specialized expertise—particularly in R&D, technology, and executive functions—that may be scarce in domestic labor markets. For example, Portugal deployed the Non-Habitual Resident regime providing a reduced flat tax rate of 20% on employment income for qualifying professionals in high-value activities for up to 10 years.

Financial & capital access



While Belgium excels in early-stage research and academic collaboration, many promising Belgian innovations fail to scale because companies cannot secure the budgets needed for late-stage development and technology demonstration at scale. This shows that **Belgium faces a critical funding gap that directly undermines its ability to convert R&D into market-ready products**. This funding gap represents a structural weakness in Belgium's innovation ecosystem: the capital necessary to bridge the gap between laboratory research and commercial viability is insufficient.

Belgium ranked 9th among 13 European countries in total venture capital investments and 7th by GDP share (2024) (cf. Figures 15 & 16 in Appendix). Investment is heavily skewed toward later-stage deals, leaving a dangerous gap in early and mid-stage venture capital. The Draghi Report warns that Europe is failing to bridge the "startup" to "scale-up" gap—Belgium must address this to prevent losing its most promising tech leaders.

Grant funding reveals an equally troubling picture. Of \$28 billion distributed in 2023, only 25% (\$7 billion) targets private enterprise competitiveness. Within that, \$6 billion is consumed by correction mechanisms, leaving only \$1 billion for actual economic projects and R&D. Belgium must shift from "compensating for weaknesses" to "investing in strengths" to retain innovative companies.

Notes: (1) Based on venture capital investments (Statista 2024) and access to credit (Global Innovation Index 2025)

Best practices from European countries

Government funding is often provided as non-dilutive cash grants to promote R&D investment aligned with public policy goals. Many regions offer targeted funding schemes addressing specific sectors like clean energy, healthcare innovation, or advanced manufacturing. For example, Germany's Central Innovation Programme for SMEs (Zentrales Innovationsprogramm Mittelstand, ZIM), launched in 2008, provides direct cash grants to small and medium-sized enterprises for collaborative R&D projects, enabling companies to pursue innovation without financial risk.

Governments encourage private investment through equity and venture capital funding and co-investment schemes, where public funds are deployed alongside private investors to reduce risk and attract institutional capital. These mechanisms improve access to capital markets and make equity financing more attractive for innovative companies. For instance, Sweden's Almi, operates as a state-owned enterprise providing business development, loans, and venture capital funding to innovative companies, helping to build Sweden's position as a leading European venture capital ecosystem.

Operational de-risking

Ease of doing business



Belgium presents a mixed picture on the ease of doing business, with significant administrative friction offsetting some operational advantages. On the positive side, **Belgium has demonstrated a unique ability to navigate regulatory "grey zones," allowing for pragmatic problem-solving** that is often missing in more rigid jurisdictions. However, this flexibility is **undermined by broader administrative challenges caused by fragmentation across different governments and authorities**. Permitting processes are unpredictable and often tied to specific locations rather than technology type, causing delays in fast-moving sectors where speed is critical. The speed and consistency of permit approval varies significantly by region and administrator, creating operational uncertainty that companies must factor into investment decisions. This regional variation reflects Belgium's complex federalized structure, where regulatory authority is distributed across federal, regional, and local levels. The unpredictability of timelines and the location-specific nature of permits create planning challenges that are particularly problematic for R&D operations requiring rapid iteration and scaling.

Best practices from European countries

A strong policy framework is key to advancing national research and innovation. This begins with tailored national research and innovation plans aligned with the EU's strategy and setting realistic R&D expenditure targets aiming for or beyond 3% of GDP, as well as establishing monitoring systems to track progress. Long-term strategic visions (e.g. UK's 10-year Life Science Vision) and sustainability incentives (e.g. Denmark's Intelligent Waste Management), ensure innovation supports broader goals. Facilitating the commercialization of academic research and reforming public procurement to favor innovation-friendly criteria create demand-pull incentives, helping bring new technologies to market.

Simplifying administrative procedures to access funding and support helps innovators focus on development rather than paperwork, speeding up growth. Efficient permit systems with reduced bureaucracy shorten approval times, reducing uncertainty and making the environment more attractive for innovation investments. Portugal's Simplex Administrative Simplification Programme streamlines business registration, permitting, and compliance through digital one-stop services, "zero licensing" regimes for low-risk activities, and process simplification across central and local government.

Regulatory sandboxes foster innovation by providing a controlled environment where businesses can test innovative products, technologies and business models under relaxed regulatory conditions before full-scale implementation. This reduces time and costs for market entry while balancing innovation with consumer protection and market integrity. Spain's AI Sandbox aims to promote innovation and make it easier for SMEs, start-ups and large companies to meet European requirements for high-risk Artificial Intelligence systems by providing a space to test these products.

Notes: (1) Based on ease of doing business scoring (World Bank Group 2020)

Talent availability & quality



Belgium's produces high-quality graduates and maintains a strong talent pipeline, yet it faces critical barriers to effectively deploy this talent: **the education system is overly specialized, creating a critical shortage of cross-functional profiles**, particularly scientists with artificial intelligence expertise or engineers with business acumen. This specialization gap limits Belgium's ability to support emerging technology sectors that require integrated skill sets. Additionally, the lack of English-language technical programs at universities limits Belgium's ability to attract international researchers and professionals. Existing internship programs typically have an average duration of only 1-3 months, which just covers the training & onboarding phase, meaning that companies cannot effectively use internships as a talent pipeline.

Furthermore, although union membership in Belgium has declined from 52% to 39% in recent years, the influence of social partners remains strong, affecting wage flexibility and working hour arrangements, factors that matter significantly for attracting and retaining international talent accustomed to more flexible compensation and scheduling structures. Together, these factors create a "talent paradox": Belgium has the raw talent but lacks the educational and labor market flexibility to fully leverage it.

Best practices from European countries

To strengthen and retain local STEM talent, countries adopt integrated STEM education policies that connect education, the labor market and economic objectives, supported by measurable KPIs. Strong partnerships between industry and academia are encouraged through paid apprenticeships and dual learning programs, along with career guidance and early STEM exposure for all students, including those from underrepresented groups. Flexible legal frameworks also facilitate professional exchanges between academia and industry. For example, Switzerland's Vocational Education and Training (VET) system, deeply rooted in Swiss society, combines on-the-job training with classroom instruction. More than two-thirds of Swiss students pursue apprenticeships after compulsory schooling, creating a respected, high-quality pathway that contributes to low youth unemployment (8.8% in 2025) and strong industry-education linkages.

Attracting international STEM talent involves streamlined migration and visa processes, as seen in Ireland and Denmark, which offer fast-track permits and 'trusted partner' schemes for employers. Extended stays for non-EU graduates, such as Ireland's 24-month post-study work period, enhance retention. Countries support international integration through alumni networks and expat centers, maintain flexible language policies with widespread English use in education and government, and enable cross-border mobility with teleworking arrangements, making them attractive to talent from neighboring regions.

For reskilling and upskilling local talent, effective collaboration between industry, educational institutions and public employment agencies ensures training aligns with evolving market needs. Centralized platforms improve access to learning and job opportunities, while a strong culture of lifelong learning—exemplified by the UK and Switzerland—supports continuous skill development. Knowledge exchange initiatives, including peer mentoring and reverse mentoring, foster ongoing growth and bridge generational divides within the workforce.

Notes: (1) Based on Human capital & research score (Global Innovation Index (2025))

Infrastructure availability & quality



Green infrastructure is now a prerequisite for corporate retention as companies commit to ESG targets. While Belgium shows resilience in green and digital transitions, these pockets of strength are insufficient to offset the broader investment gap. Without carbon-neutral energy grids, circular waste systems, and sustainable logistics, Belgium risks losing industrial leaders to better-equipped regions. More importantly compared to other countries we see a **stagnation in infrastructure investments** i.e., while **Belgium has a strong historical infrastructure** footprint for the knowledge intensive industries, we see that **other countries are modernizing that infrastructure at a higher pace**. Belgium allocates only 0.6% of its GDP to infrastructure: the 8th lowest among 13 countries (OECD 2021). Furthermore, regional disparities across Flanders, Wallonia, and Brussels further fragment the country's competitive position. Belgium must increase infrastructure investment and ensure consistent, modern facilities across all regions.

Best practices from European countries

Advanced research facilities provide essential environments for scientific innovation, supported by investments in state-of-the-art labs. These facilities are coordinated through national research infrastructure strategies that set priorities for large-scale investments and align with European research networks. For example, Germany's German Roadmap for Research Infrastructures (Deutsche Roadmap für Forschungsinfrastrukturen) establishes national priorities for large-scale research infrastructures across disciplines including physics, life sciences, earth observation, and digital infrastructures. This strategic framework guides co-funding between federal and regional governments while positioning Germany within European research infrastructure networks, ensuring that research investments are coordinated and aligned with national innovation priorities.

Incubators and science parks offer specialized facilities, mentoring, and networks to support startups and SMEs, reducing barriers to innovation. World-class research institutions attract top talent and funding, driving innovation hubs. Sweden's Kista Science City, established in the 1980s as an ICT and digital technologies cluster in Stockholm, exemplifies this approach. Kista integrates university research (particularly from KTH Royal Institute of Technology), corporate R&D operations (including global firms like Ericsson), and startup incubation, creating a comprehensive ecosystem that attracts high-tech innovation investment and talent while supporting the development of emerging technologies including 5G, wireless systems, and AI-enabled solutions.

Industry associations and network coordination play a key role in stimulating public-private partnerships. These partnerships accelerate innovation by sharing risks and pooling resources. Industry clusters and associations, science parks and collaborative platforms foster cooperation. National councils (e.g. Denmark's Life Sciences Council and the UK's Accelerated Access Collaborative) coordinate efforts to accelerate innovation uptake, ensuring that research breakthroughs are rapidly translated into market-ready solutions and that industry needs inform research priorities.

Notes: (1) Based on Infrastructure score (Global Innovation Index (2025))

Best practices from European countries

Building capabilities in data assets, digitalization, analytics and AI is essential for maximizing the value of research data. It enables better data connectivity and sharing across the ecosystem. France's Health Data Hub, established in 2019, provides a flagship example of national data infrastructure. This public platform aggregates health data from national health insurance, hospitals, registries, and other public sources, enabling researchers and innovators to access and analyze data under strict governance and privacy frameworks. By facilitating data sharing and enabling advanced analytics and AI applications in healthcare, the Health Data Hub demonstrates how strategic data infrastructure investments can unlock innovation value while maintaining robust data protection and ethical oversight.

Strategic risk

Compared to larger European markets like Germany, France, or the UK, Belgium's 11.5 million population creates a structural constraint for startups and scale-ups requiring extensive market testing and validation. This limitation is particularly acute for companies in the commercialization phase, where access to a large, accessible customer base is essential for testing product-market fit and refining offerings before global expansion.

Yet Belgium's geographic positioning offers significant offsetting advantages. Belgium sits at the heart of Europe, providing unparalleled proximity to EU policy institutions and major European markets. The Port of Antwerp, one of Europe's largest and most connected logistics hubs, positions Belgium as a strategic gateway for supply chain access and distribution across the continent. This geographic centrality and connectivity enable companies to access the larger European markets that Belgium's domestic market cannot provide, effectively mitigating the market size constraint through proximity and logistics excellence.

2.5 Conclusion

Belgium's competitive position is under pressure

Belgium faces a critical strategic risk: the **absence of a clear, bold, and easily communicable unique selling proposition (USP) in the global R&D investment marketplace**. Unlike Ireland, which has successfully positioned itself as a premier technology and innovation hub with a clear, consistent global brand, Belgium lacks a comparable strategic positioning. The fragmented marketing of Flanders vs. Wallonia vs. Brussels often confuses international stakeholders and dilutes the country's collective strengths. For multinational companies evaluating R&D locations, this "long-list invisibility" creates uncertainty: international investors struggle to understand Belgium's distinctive advantages and the full menu of federal and regional incentives available. This positioning gap is particularly problematic given Belgium's strengths, which are not effectively communicated as an integrated value proposition.

Belgium's regional fragmentation extends beyond marketing to create substantive strategic risks. **The country's complex regionalized structure creates significant disparities in regulations, permits, and talent acquisition policies across regions, making it difficult for international investors to navigate the full landscape of available support**. This fragmentation prevents companies from seeing Belgium as a unified innovation destination and instead forces them to navigate multiple regulatory and incentive frameworks. Until Belgium develops a unified, clearly communicated strategic positioning and integrates its fragmented incentive landscape into a coherent package, it will continue to lose ground to competitors like Ireland and France that have successfully orchestrated their policy levers into compelling, easily understood value propositions.

Furthermore, Belgium's patent, design, and trademark (PCT) applications fall below the EU average, indicating lower market-facing innovation activity. This gap suggests that Belgian innovators are not effectively translating research into market-ready products.

The warning signals are clear: declining corporate R&D growth, a critical venture capital funding gap, structural complexity, talent shortages, stagnating infrastructure investments and eroding competitive advantage. Belgium's position is under pressure. The framework assessment reveals that while Belgium possesses genuine strengths, these advantages are being systematically undermined by structural barriers in funding, talent development, administrative efficiency, and strategic positioning, causing the country to lose ground to competing countries like Ireland and France (*cf. Appendix 4 for detailed use cases*).

Yet Belgium has the right ingredients to address these challenges.

3. Looking forward: A new R&D framework for Belgium to increase competitiveness

3.1 Recommendations for policymakers

Recommendation 1: Create a National Innovation Gateway with a unified and compelling Belgium positioning

Belgium's regional fragmentation and administrative complexity create a critical competitive disadvantage: despite possessing world-class research capabilities, cost-effective academic partnerships, and strategic regulatory flexibility, the country fails to present itself as a coherent, attractive destination for global R&D investment. International investors face a confusing landscape of federal and regional incentives, inconsistent permitting processes, and fragmented marketing messages (Flanders vs. Wallonia vs. Brussels) that obscure Belgium's genuine competitive strengths. To transform this fragmentation into a unified competitive advantage, Belgium must take two decisive actions:

1. Establish a National Innovation Gateway: A true one-stop-shop for international investors

Create a national entry-point for all international R&D investors. This entity would operate on a "must-win" principle i.e., first secure the investment for Belgium as a whole, then allow regions to compete for its allocation. This one-stop-shop should unburden companies who make investment decisions in Belgium, navigating the complexity of Belgium for them by immediately mobilizing dedicated taskforces for critical projects to accelerate timelines and increase success rates (*cf. Appendix to see how Ireland created a single point of contact with IDA*). The Gateway would:

Sub-recommendations

- **Opportunity creation:** Maintain responsibility for investment promotion at the regional level, while simultaneously presenting Belgium as a unified, cohesive brand on the international stage. To reinforce this unified national identity, organize coordinated events that showcase Belgium as a premier investment destination.
A successful example to consider is SelectUSA, a federal and state partnership in the United States that combines lead routing with state-level competition. SelectUSA hosts an annual investment summit attracting over 3,000 participants, effectively promoting the country as a whole while respecting regional dynamics.
- **Opportunity management & conversion:** Create an overarching gateway that acts as a single point of entry, mobilizing regions for all opportunities that come in centrally. For opportunities above a certain threshold, e.g., \$100 million, it operates on a must-win principle, fostering collaboration and full transparency between regions to secure the opportunity at the national level first, and only then competing internally.
- **Business case:** Present the full economic impact of investing in Belgium by providing comprehensive support throughout the investment journey. This includes assistance in identifying the optimal location within Belgium, navigating the tax framework, facilitating talent recruitment, managing work permits, etc. with a central support team for larger investment opportunities.
- **Implementation:** Coordinate with federal, regional, and local authorities to provide fast-track processes, clear timelines, predictable processes, and single-window access to all permits and regulatory approvals, eliminating the current unpredictability that delays fast-moving sectors.

2. Develop a unified and compelling Belgium innovation positioning

Belgium must move beyond its historical position as a "Strong Innovator" and articulate a bold, easily communicable positioning that unifies the innovation strategies of its regions. To achieve this, Belgium must address two critical barriers: the fragmentation of its innovation ecosystem across regional boundaries, and the need to attract more EU funding and risk capital to fuel R&D growth. The following measures will unlock Belgium's full potential as a cohesive innovation destination:

Sub-recommendations

- **Coherent with national positioning enable cross-regional access to incentives, talent, and infrastructure:** This includes incentivizing cross-regional collaboration that leverage Belgium's full innovation ecosystem, preventing the current fragmentation where companies are locked into regional silos and discouraging investment in complementary capabilities across borders.
- **Unlock EU funding and EU risk capital:** Maximize Belgian companies' access to all EU funding mechanisms through a single national body, who would work in partnership with industry associations and regional authorities to ensure Belgian R&D companies compete effectively for EU grants and to position Belgium as an attractive destination for EU risk capital deployment.

Recommendation 2: Update our R&D tax incentive framework – Promote cross-regional collaboration and bridge the commercialization gap

Belgium's historic competitive advantage in attracting innovation investments has been built on an innovative tax framework complemented by attractive support measures. However, this advantage is now under pressure. Competing nations have introduced comprehensive R&D support packages, combining tax benefits, cash grants, and sector-specific programs, that match or exceed Belgian offerings in support rates, funding scale, and strategic prioritization. Compounding this challenge, geopolitical tensions are driving a global shift toward manufacturing-focused investment incentives, intensifying competition for strategic capital in emerging sectors like semiconductors, batteries, and advanced therapeutics.

Belgium's current challenge is twofold: (1) its multiple R&D support measures function as separate schemes, preventing companies from understanding the full value of an integrated package, and (2) a critical funding gap exists between early-stage R&D support and late-stage commercialization/manufacturing, causing promising innovations to stall before reaching industrial scale. To remain competitive and attract strategic manufacturing investments coupled with R&D excellence, Belgium must evolve its support framework across two interconnected dimensions:

1. Update our R&D Tax Incentive Framework

Belgium's three separate R&D tax incentive mechanisms must be consolidated into a single, coherent "R&D Excellence Framework" that maintains differentiated support mechanisms but operates under unified governance, a single application portal, and harmonized compliance procedures. This consolidation directly addresses the "fragmented incentive evaluation" challenge, enabling companies to see the full value of Belgium's integrated offering. To this end, the following actions need to be undertaken:

Sub-recommendations

- **Unified legal structure:** Consolidate the R&D tax credit, withholding tax exemption, and innovation income deduction into one coherent framework with clear eligibility guidance aligned with OECD standards and safe-harbor provisions for gray-area activities.
- **Research center exemption:** Belgium could enhance its competitiveness by introducing a dedicated research center exemption within the payroll withholding tax framework to improve the system for large-scale R&D centers and reduce administrative complexity. This would apply to recognized research centers, remain proportionate without requiring full exemption or a minimum R&D threshold, and avoid a narrow business unit requirement. This would allow qualifying researchers outside formal R&D units, including those in production collaborating with R&D, to be included, making the regime more practical, predictable, and attractive for companies investing in cutting-edge research in Belgium.
- **Eliminate overlapping requirements:** Reduce compliance burden by requiring companies to apply once, report once, and receive a single determination covering all available incentives—dramatically simplifying the process compared to current fragmented schemes.
- **Digitalize and streamline:** Establish an integrated digital platform for applications, reporting, and compliance. Introduce binding advance rulings for R&D programs (3-5 year validity) to provide legal certainty. Harmonize interpretation through formal coordination mechanisms and unified guidance documents, eliminating the current legal uncertainty.

2. Bridge the commercialization gap: dedicated support for scaling and commercializing innovation

Belgium risks losing IP and manufacturing operations to other EU countries if it does not strengthen incentives to anchor IP exploitation domestically. This IP leakage represents a critical vulnerability: Belgium invests heavily in R&D and innovation, yet fails to capture the downstream economic benefits - jobs, tax revenue, and industrial added value - that come from anchoring IP exploitation and advanced manufacturing at home. Without targeted incentives to reward companies for keeping IP income and manufacturing operations in Belgium, the country risks becoming a pure R&D hub for foreign investors, forfeiting the multiplier effects of a vertically integrated innovation ecosystem. The following measures address this gap by making IP anchoring economically attractive for Belgian companies:

Sub-recommendations

- **Sector-specific manufacturing support:** Create a new cash grant or tax credit scheme specifically targeting pilot plants and advanced manufacturing facilities in strategic sectors.
- **Enhance IP exploitation incentives:** Expand the innovation income deduction framework to provide tax benefits to companies that invest in advanced manufacturing capabilities. This mechanism would reward companies for anchoring high-value manufacturing operations in Belgium, transforming the country from a pure R&D hub into a vertically integrated innovation and advanced manufacturing powerhouse.
- **Dedicated commercialization funding:** Establish a grant program specifically for the R&D-to-commercialization transition, filling the critical funding gap that currently prevents Belgian innovations from reaching industrial scale.

Appendix 1 for additional recommendations

3.2 Conclusion

To maintain its position as a European innovation leader, Belgium must act now

Belgium's R&D landscape reveals a critical paradox: the nation possesses world-class innovation capabilities—top-tier academic research, exceptional public-private collaboration, and exceptional R&D intensity (3.36%, second in Europe)—yet operates within an administrative framework that systematically hinders speed, scalability, and visibility to international investors.

Belgium's innovation foundations are genuine: deep linkages between technology providers and industrial sectors create a robust ecosystem, and pragmatic regulatory flexibility makes it attractive for piloting breakthrough technologies. However, structural barriers undermine competitiveness. Regional fragmentation creates unpredictable permitting timelines and diminishes investor visibility. Fragmented R&D incentives prevent companies from understanding Belgium's true value. Most critically, a funding gap between early-stage research and late-stage commercialization causes promising innovations to stall before reaching industrial scale.

To maintain its position as a European innovation leader, Belgium must act on two fronts:

First, **consolidate governance and branding. Establish a National Innovation Gateway as a single point of contact for international investors**, aggregating incentives and streamlining permitting. Develop a unified Belgium-level brand—"Europe's R&D Hub"—that positions the country as a coherent, primary destination for global R&D investment.

Second, **strengthen government support**. Consolidate Belgium's three separate R&D incentive mechanisms into a **single "R&D Excellence Framework" with unified governance and a single application portal**. Establish a dedicated legal framework for pilot plants and advanced manufacturing in priority sectors, with sector-specific support and dedicated commercialization funding.

Belgium's competitive position is not permanently secure. Competing nations are actively strengthening their R&D frameworks. The window to act decisively is narrowing. Success requires bridging the gap between Belgium's exceptional intellectual output and the velocity of its administrative processes—transforming fragmentation into coherence and hidden strengths into a compelling value proposition. The two recommendations provide a concrete roadmap for this transformation.

APPENDIX

APPENDIX 1: Additional recommendations to policymakers

Critical foundations

To ensure the ‘big moves’ yield the desired impact, Belgium must first address the foundational pillars of a competitive innovation ecosystem: **talent** and **capital**.

While our educational standards remain high, curricula have failed to keep pace with industrial shifts, favoring rigid specialization over the interdisciplinary agility modern businesses require.

Simultaneously, a persistent gap in scale-up funding creates a "glass ceiling" for homegrown ventures, stifling their domestic growth and forcing them to seek expansion capital and relocate abroad.

- **Curriculum reform:** It is recommended that universities proactively integrate transversal capabilities (e.g., AI applications, soft skills, and storytelling) across all scientific and technical degrees to produce "dual-profile" talent. An open line of communication between the industry and the education sector is recommended to increase awareness about the competencies needed in the future.
- **Internship modernization:** Policymakers should work with academic institutions to extend standard internship durations to 3–6 months. This would allow for meaningful onboarding and transform internships into a genuine "continuum" between education and the first professional role.
- **International talent attraction:** To remain a global hub, Belgium must accelerate highly skilled migration procedures, for example by accepting legal contracts and social documents in English. It should loosen the restriction of 30% tax exemption or international recruits regarding the 150km and €90k (\$102k) cap. Additionally, Belgium should offer a larger share of technical and postgraduate programs in English, removing linguistic barriers for world-class researchers. It should also loosen local language proficiency requirements for higher education professors for English courses/trajectories.
- **Strengthen and retain local STEM talent:** Measure the impact of STEM initiatives through KPIs to fuel a more effective, less fragmented and coherent STEM policy and increase digital infrastructure and capabilities in secondary and higher education curricula.
- **‘Seal of Excellence’ fast-tracking:** Projects with a local ‘seal of excellence’ should receive additional support from Belgium to attract EU funding or capital from foreign investors. This will help improve ‘ticket size’ and create an acceleration effect on the valorization of R&D.
- **Scalability over consortia:** While collaboration is a strength, funding models should be adjusted to support smaller, agile players and scaling-up phases, rather than mandating complex, multi-partner consortia that often result in excessive red tape.
- **Pilot unit funding:** Belgium must address the ‘funding gap’ at higher TRL levels by establishing a dedicated growth and scale-up fund specifically for funding for pilot units and industrial upscaling. Recognizing that the cost of building high-TRL testing facilities is prohibitive for individual SMEs, Belgium should subsidize shared pilot plans where multiple companies can rent equipment to test technologies at scale.

APPENDIX 3: Definitions of the levers of the R&D framework:

FINANCIAL BURDEN

Labor cost: The total expenditure required to attract, employ, and retain the (specialized) talent needed to execute the research and development or manufacturing project.

Infrastructure cost: The total capital and operational expenditure required to acquire, develop, and maintain the physical site and its connectivity, excluding utility consumption. This includes the leasing or acquisition of land and buildings, the cost of specialized construction (such as cleanrooms, labs, or reinforced production floors), and the expenses associated with logistics and transport networks (proximity to ports, rail, or air).

Utilities cost: The ongoing expenditure for the essential resource consumption required to sustain facility operations and specialized R&D processes. This includes electrical power, natural gas or process fuels, and water and wastewater services.

Cost of resources: The total expenditure associated with the procurement and management of the physical inputs and raw materials essential for R&D experimentation and production output.

Cost of compliance: The total financial burden associated with adhering to the legal, regulatory, and industry-specific standards of a given jurisdiction. This encompasses the expenses for permitting and licensing, mandatory environmental and safety certifications, and the administrative overhead required for audit readiness and reporting.

Taxes: The mandatory fiscal obligations imposed by local, regional, and national governments that directly impact the project's bottom line and net present value (NPV). This driver encompasses statutory corporate income taxes on generated profits, property and real estate taxes tied to the physical facility, and capital taxes on investment.

Incentives & grants: The total package of financial offsets and non-dilutive funding provided by government or regional bodies to reduce the investment's net cost and accelerate the return on investment. This driver encompasses direct cash grants for capital expenditure or R&D activities, tax credits and holidays that lower the effective fiscal burden, and subsidies specifically tied to job creation, sustainability goals, or technology benchmarks. It also includes "soft" support, such as subsidized land, infrastructure co-financing, or specialized workforce training programs funded by the host jurisdiction.

Access to credit & financing: The availability and cost of external capital within the local market to fund the project's setup and ongoing operations.

Access to risk capital: The presence and depth of an active investment ecosystem, such as venture capital, private equity, and specialized innovation funds, willing to finance high-uncertainty, high-reward ventures.

OPERATIONAL DE-RISKING

Regulation administration: This driver focuses on the predictability of the legal environment, the transparency of reporting requirements, and the professionalism of the bureaucracy. It measures the risk of "regulatory creep", where rules change unexpectedly, and the ease of interacting with authorities for day-to-day compliance, inspections, and renewals.

Permitting process duration: The time between the submission of applications and the final approval of the legal authorizations required to break ground and begin operations.

Investment in ecosystem coordination: The degree of active facilitation and structural support provided by the host jurisdiction to connect the facility with external partners. This driver measures the presence of formalized clusters, industry-academia bridges, and public-private partnerships that streamline collaboration between the company and local universities, research institutes, and startups.

Institutional and political stability: The degree of certainty regarding the long-term continuity of the country's governance, legal framework, and socioeconomic environment. This driver assesses the risk of disruptive policy shifts, civil unrest, or sudden changes in leadership that could jeopardize the facility's assets or legal standing.

Availability of local talent: The depth and accessibility of the regional labor pool possessing the skills necessary to staff the facility. This driver measures the current supply of qualified professionals, from researchers to technicians, and considers the quality of the local education system as the primary source of this talent.

Culture/mindset: The local attitudes toward work, innovation, and industrial collaboration that shape the daily operational environment. This driver evaluates the prevailing professional work ethic, the openness to change or disruptive technologies, and the cultural alignment with the company's organizational values.

Ability to attract foreign talent: This driver evaluates the attractiveness of the location, including quality of life, safety, and cost of living, alongside the efficiency of immigration policies, such as visa processing speeds and work permit flexibility.

Infrastructure availability: This driver focuses on the availability of suitable industrial sites and specialized real estate, with a particular emphasis on their proximity to universities and research hubs. It also evaluates the quality of logistical and digital networks, such as transport links and high-speed connectivity.

Investment in ecosystem infrastructure: The level of funding and commitment directed toward the specialized shared assets that support a specific industry cluster. This driver focuses on the presence of publicly or privately funded innovation hubs, shared laboratory spaces, pilot plants, and "clean rooms" that are accessible to multiple players in the ecosystem.

STRATEGIC RISK

Market size: This driver evaluates the total addressable market (TAM) within the region or country, as well as the ease of reaching neighboring markets through trade agreements.

Ease of market entry: The level of openness and the lack of structural barriers for a company to begin selling its products or services in the local market. This driver evaluates the simplicity of product certification, the transparency of local trade standards, and the absence of protectionist measures that favor domestic incumbents.

APPENDIX 4: USE CASES

IRELAND

Ireland, traditionally not recognized as a leading R&D hub in Europe, has increased its efforts to enhance its competitiveness in this area by implementing the following policy levers:

1. **Increased R&D tax deduction from 25% to 30%:** This change allows companies to deduct 30% of their R&D expenses from their taxes, in addition to the normal 12.5% revenue deduction, resulting in an effective benefit of 42.5%. A separate tax credit for investments in R&D infrastructure is available, including for manufacturing investments (partly) used for R&D purposes.
2. **Implemented a corporate tax rate of 12.5%:** Ireland's low corporate tax rate has long been a key incentive, but companies with global revenues over €750 (\$848) million are subject to a minimum tax rate of 15%. The low tax rate has been cited the primary reason Ireland became a European hub for tech and pharma giants.
3. **Let IDA act as one-stop-shop for foreign investors:** Ireland's Foreign Direct Investment Agency (IDA) works as a strategic partner for foreign owned companies, acting as a single point of contact for investors throughout the entire investment lifecycle. 10 key ways IDA unburdens investors:
 - Single point of contact (one account manager)
 - Unified permitting & regulatory navigation
 - No inter-agency coordination required
 - Integrated incentive negotiation
 - Simplified site selection
 - Coordinated local authority engagement
 - Consistent service standards
 - Integrated aftercare
 - No competing regional incentives
 - Unified data & intelligence
 - Comparative Analysis Tables:
 - Governance model comparison
 - Investor burden & complexity
 - Service integration
 - Outcomes & scale
 - When to use each model
4. **Strengthened their ecosystem:** Ireland deliberately focused efforts on specific niches, such as digital & IT and MedTech & pharma, creating an ecosystem that attracts complementary companies and talent. For example, when a major company considered Ireland, the government would ask what skills they needed and worked with universities to create specific degree programs in e.g., biotechnology or software engineering.
5. **Removed barriers to attract talent:** Ireland aggressively dismantled the bureaucratic and social barriers that make international relocation difficult. They replaced its traditional green card system with the Critical Skills Employment Permit, targeting niches like ICT and MedTech. After just two years on a CSEP, workers can apply for a "Stamp 4" permission, which allows them to live and work in Ireland without any further permit. On top of that, international students who graduate from Irish universities can stay and work for up to 24 months after finishing their degree. This provides a low-risk "trial period" for both the graduate and the employer.

 **FRANCE**

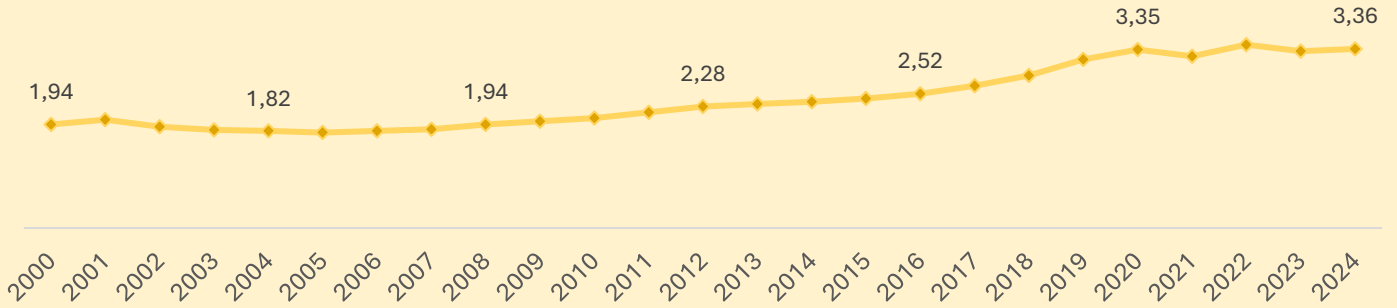
France has solidified its position as the #1 destination for foreign direct investment in Europe for the sixth year in a row. They successfully maintain this position by focusing on specific niches and cutting bureaucratic red tape:

- 1. France 2030 plan:** France created a €54 (\$61) billion fund to give direct financial support to sectors like batteries, semiconductors, biomanufacturing, AI, and green hydrogen.
- 2. Choose France strategy:** Every year, France organizes the Choose France top in Versailles where they welcome top CEOs and make promises on permitting and support in person. It also includes some structural shifts in French law and policy, such as offering a 4-year fast-track to international engineers, researchers, and founders to move to France with their families.
- 3. Ready-to-go industrial sites:** France created “ready-to-go” industrial sites where environmental impact studies and archeological research have already been conducted by the French government, enabling companies to build within months

APPENDIX 5: Figures and tables

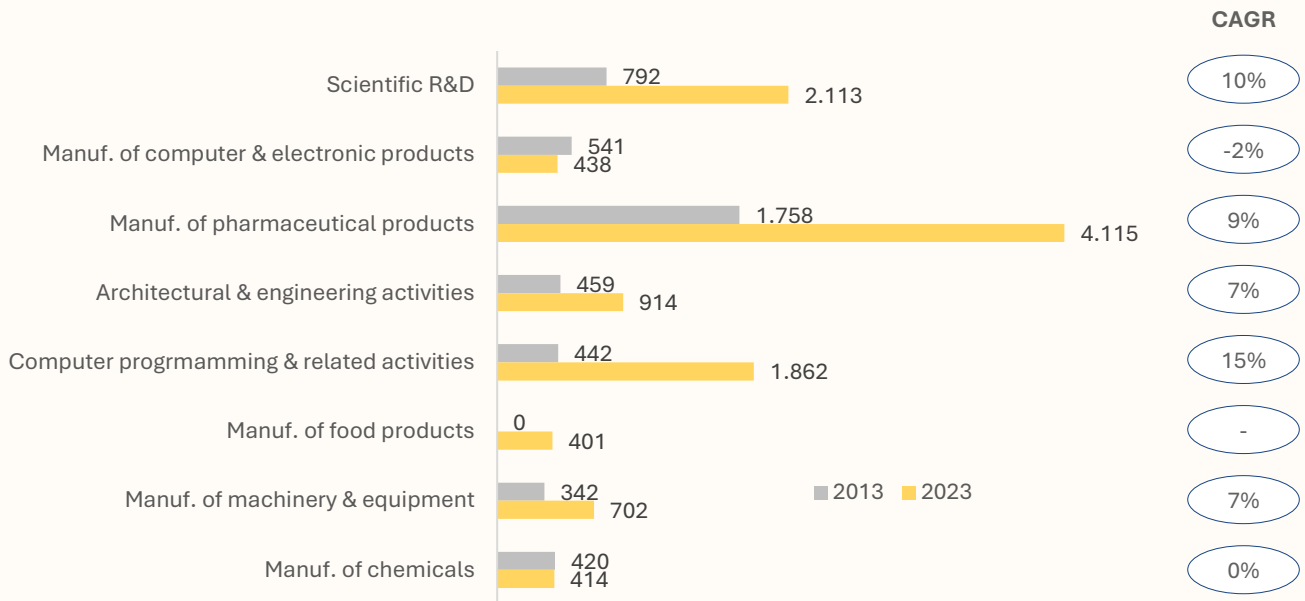
R&D in Belgium

Figure 7: Evolution of gross domestic expenditure on R&D as a percentage of GDP in Belgium



Source: Statista, Invest in Flanders (2024), Belga News Agency (2023), Eurostat (2025)

Figure 8: Evolution and growth rate of R&D expenditures (\$M)

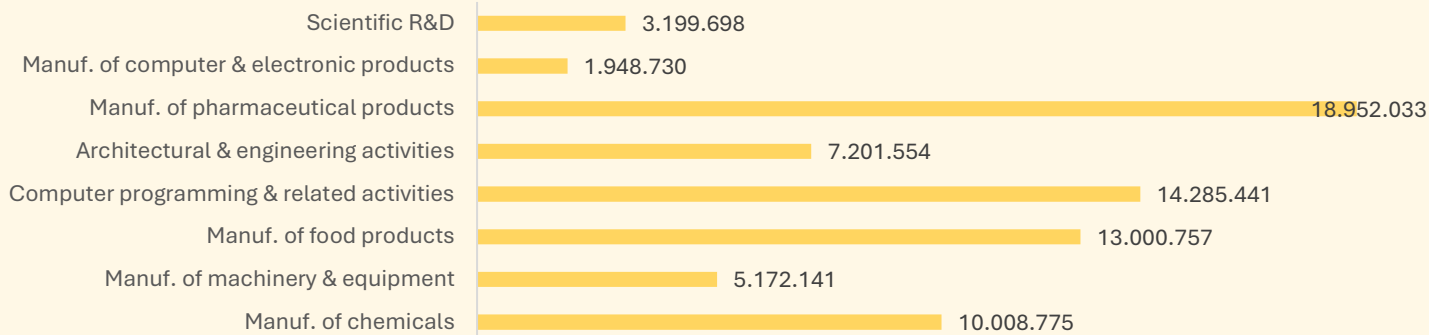


Source: Eurostat (2025)

APPENDIX 2: Figures and tables

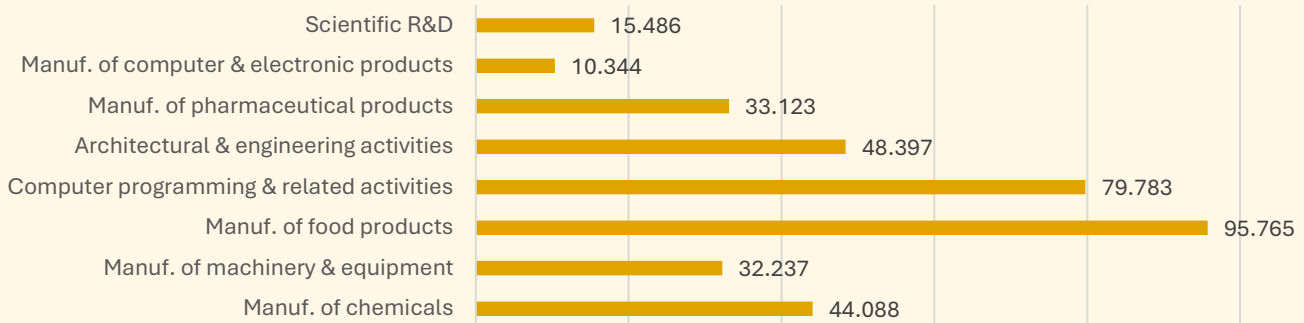
Drivers of the Belgian economy

Figure 9: Gross added value of top R&D-intensive sectors (in \$k, 2023)



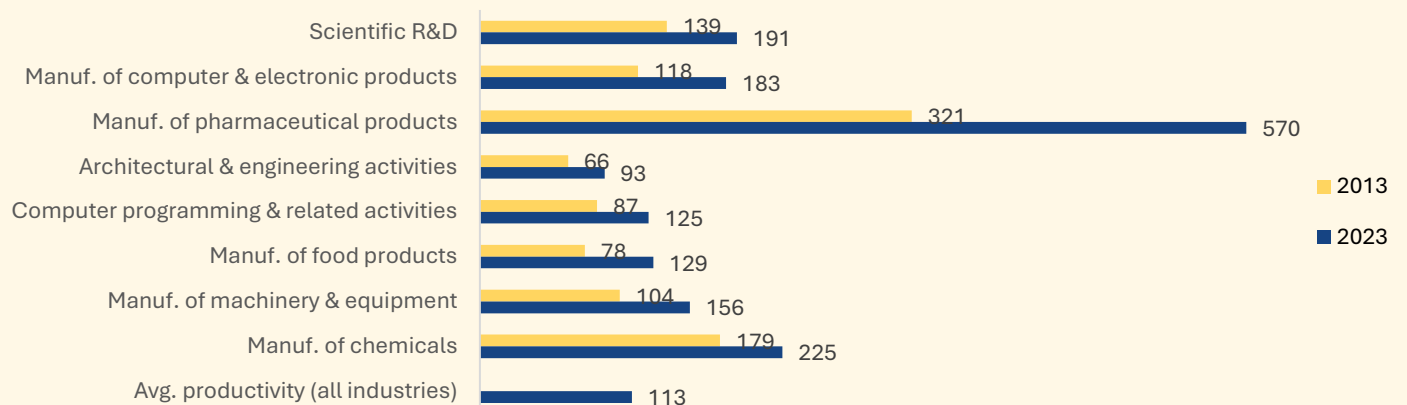
Source: Statbel (2023)

Figure 10: #employees (2023)



Source: Statbel (2023)

Figure 11: Productivity as value added per employee (\$k, 2023)



Source: Statbel (2023)

Figure 12: Investments in Belgium’s most R&D-intensive sectors (\$k)

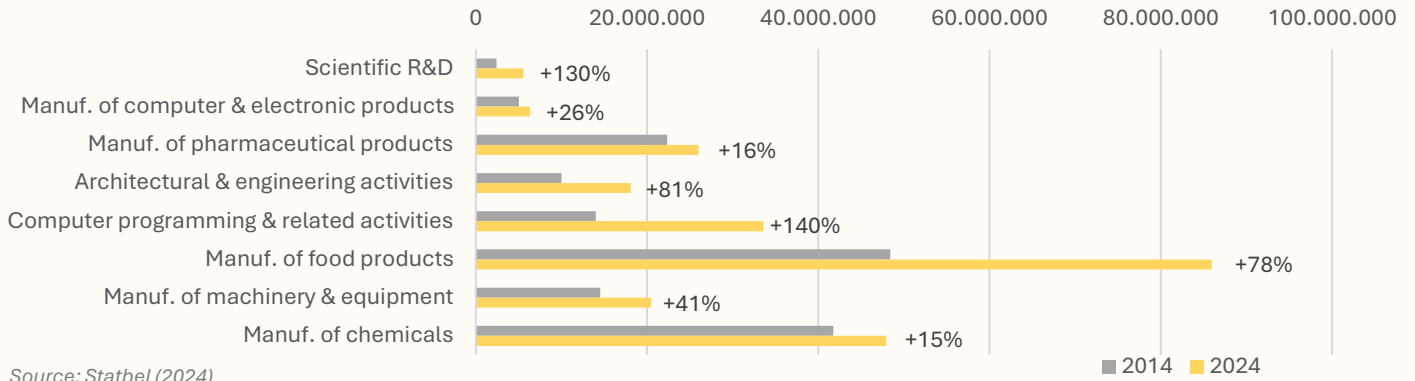


Figure 13: Belgium’s top 10 export product groups (% of total exports, 2024)¹

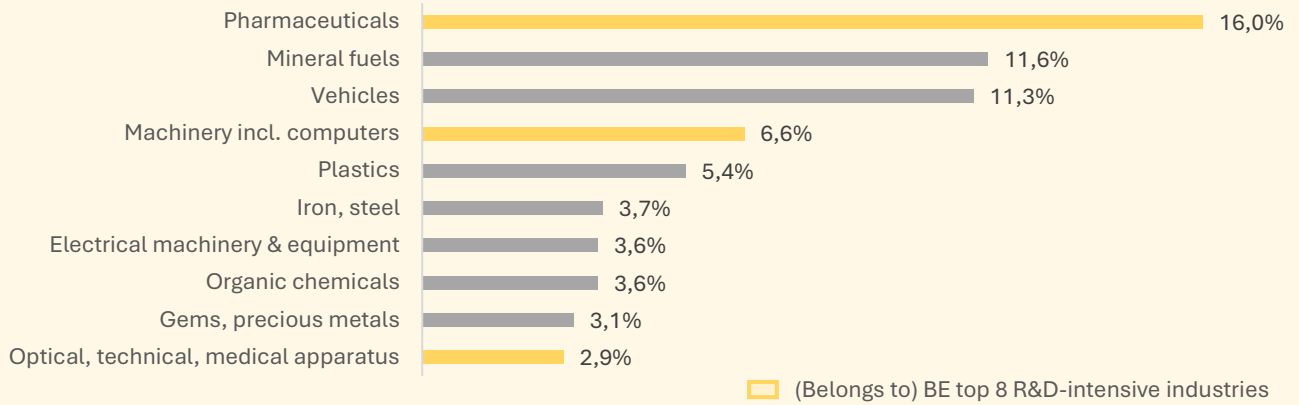
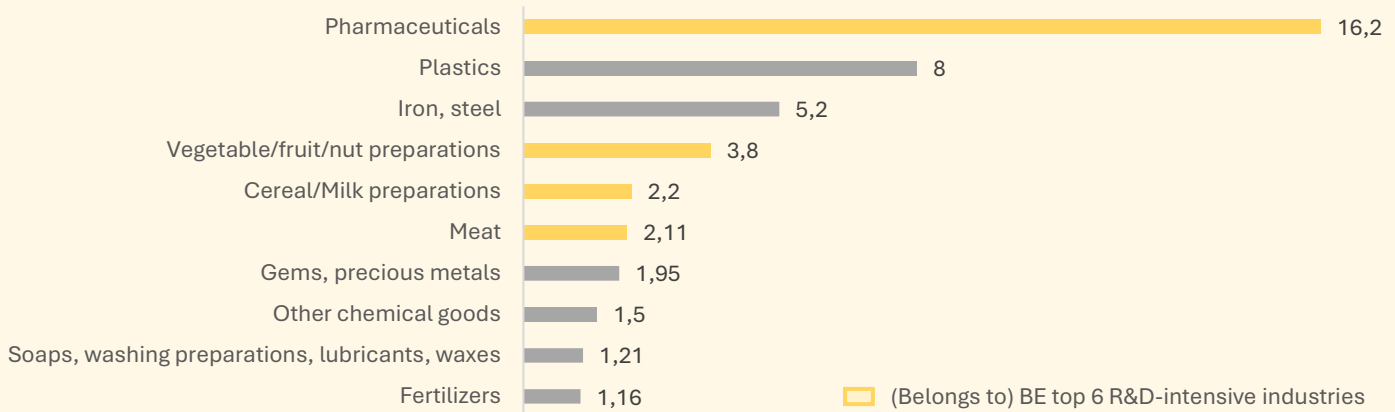


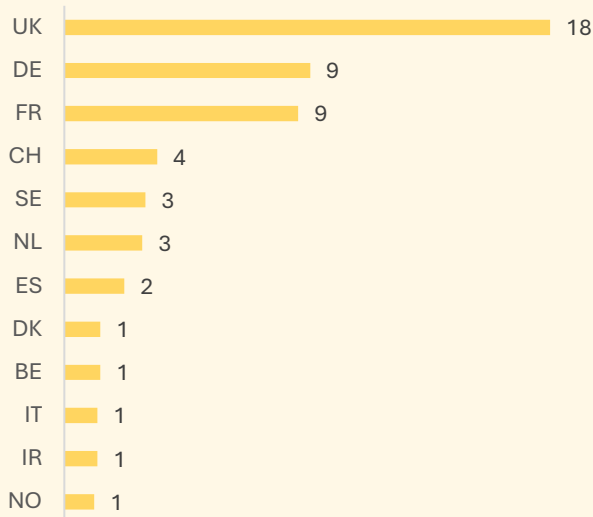
Figure 14: Products generating greatest trade surpluses in Belgium (in \$B, 2024)



Note: 1. Imports are goods physically entering Belgium for domestic consumption, processing, or storage. Exports are goods leaving Belgium destined for foreign markets. Goods passing through Belgium but not entering Belgian customs territory are transit goods and don’t belong to imports or exports

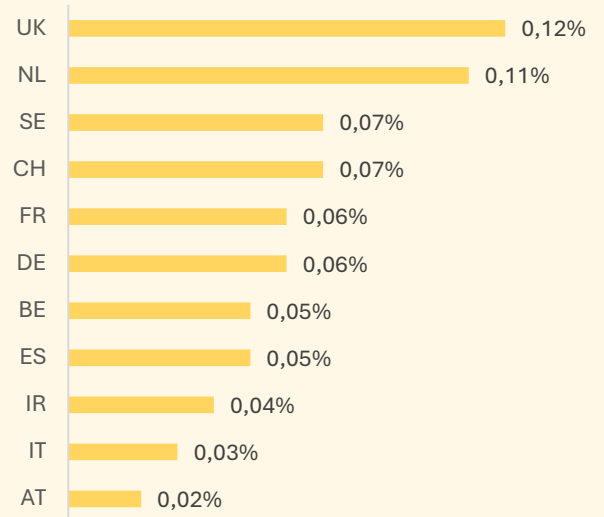
Funding in Belgium

Figure 15: Venture capital investments 2024 (\$B)



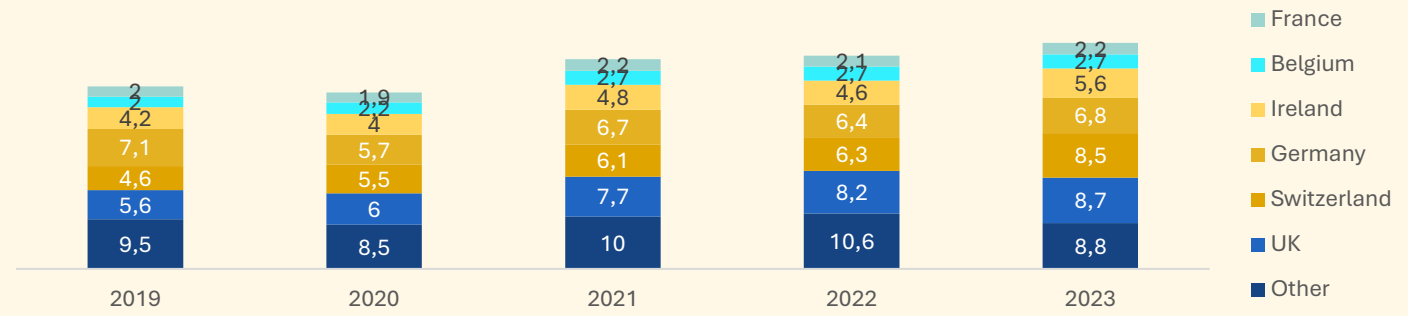
Source: Statista (2024)

Figure 16: Venture capital investments as share of GDP 2023



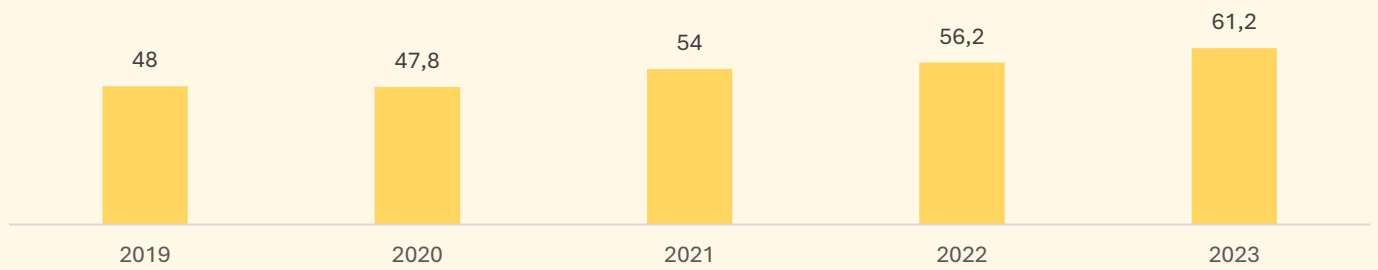
Transatlantic partnership

Figure 17: Evolution of US affiliate R&D spending in Europe (\$ billion)



Source: AmCham: The transatlantic economy (2022;2023;2024;2025)

Figure 18: Evolution of European affiliate R&D spending in the US (\$ billion)



Source: AmCham: The transatlantic economy (2022;2023;2024;2025)

Figure 19: Value added top 6 R&D industries

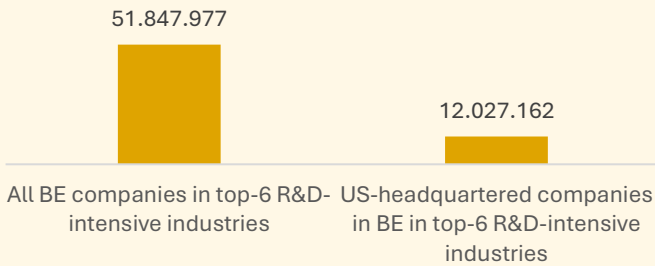


Figure 20: Evolution US foreign direct investment (\$ billion)

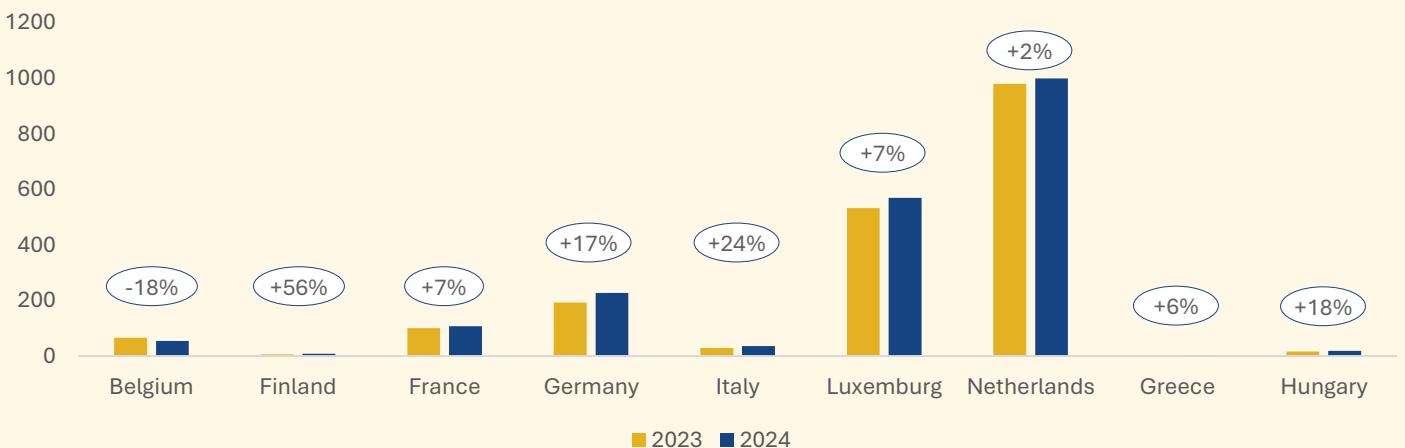
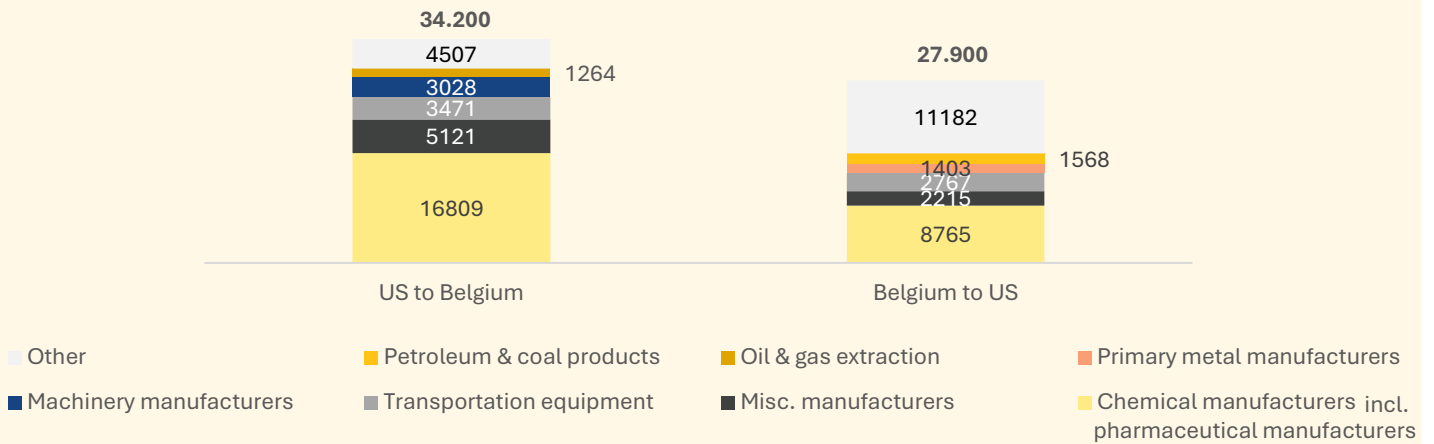


Figure 21: US goods imports & exports to Belgium (in \$ million, 2023)



Source: AmCham: The transatlantic economy (2022;2023;2024;2025)

Figure 22: Evolution of Belgian exports to the US (\$ million)

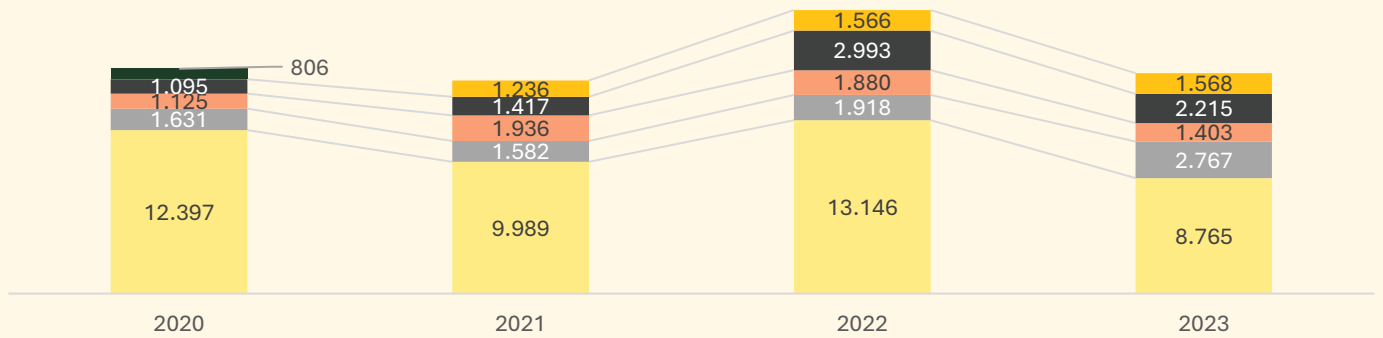
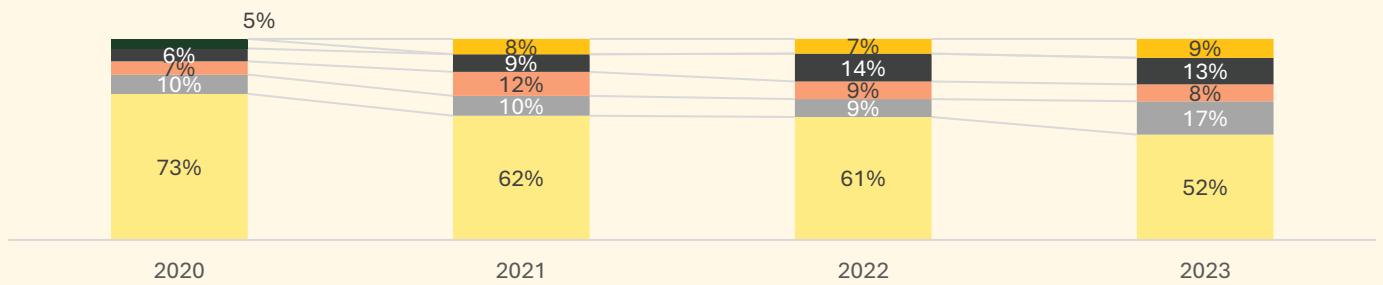
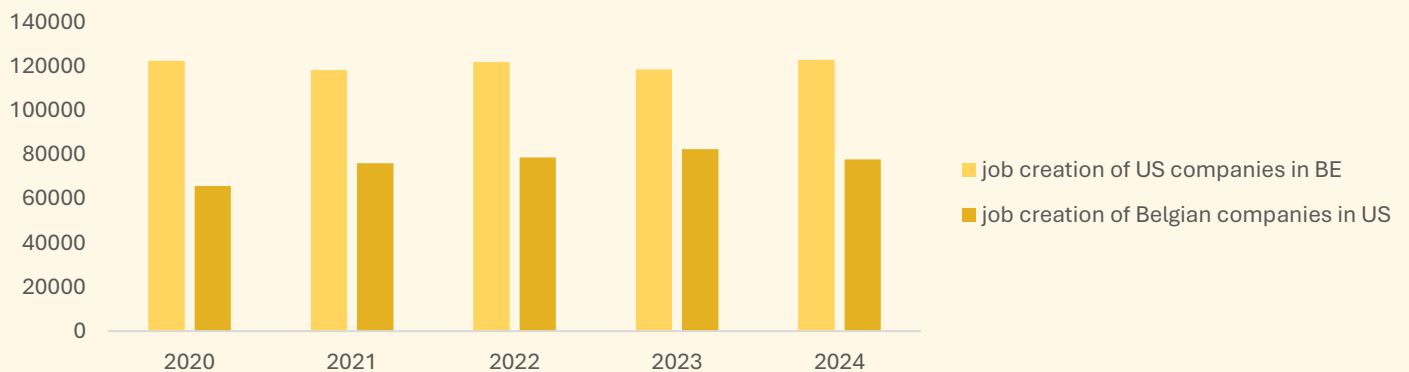


Figure 23: Evolution of Belgian exports to the US (relative share)



Source: AmCham: The transatlantic economy (2022;2023;2024;2025)

Figure 24: Evolution of US / Belgium job creation



Source: AmCham: The transatlantic economy (2022;2023;2024;2025)

R&D in the world

Figure 25: Evolution of gross domestic expenditure on R&D (% of GDP, 2014-2024)

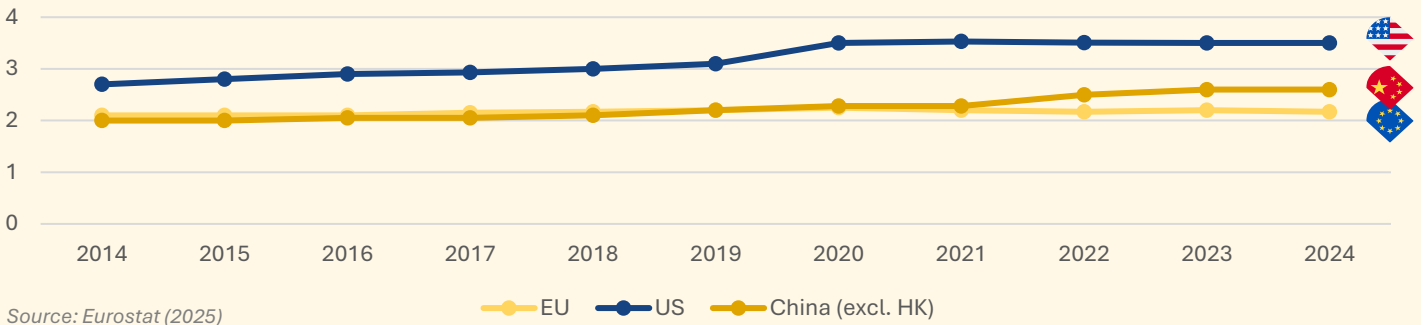


Figure 26: Global R&D expenditures (% of total)

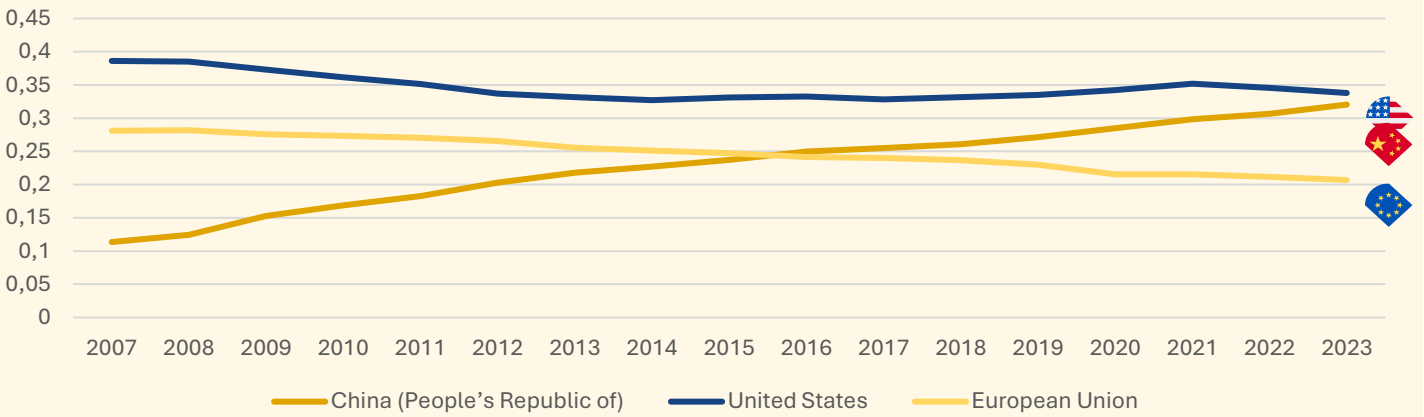


Figure 27: Evolution of gross domestic expenditure on R&D (% of GDP, 2014-2024)

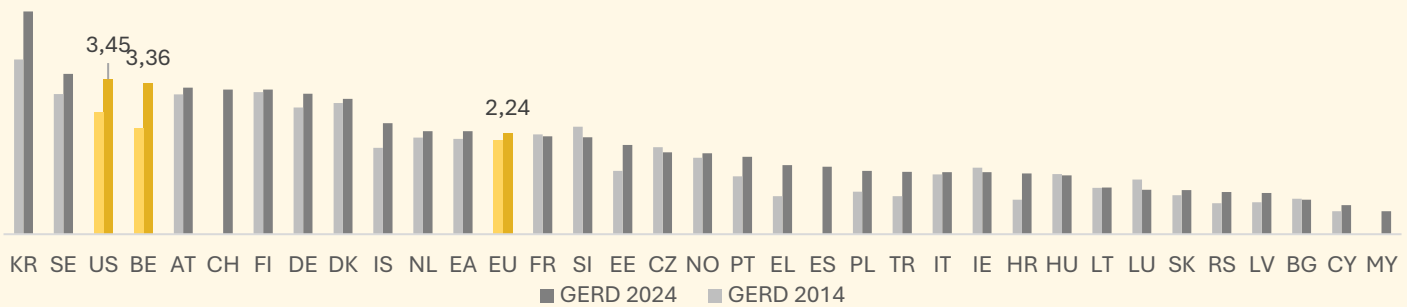
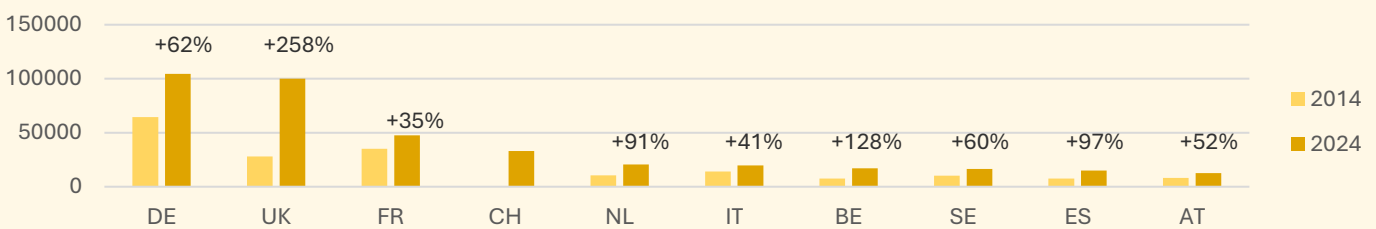


Figure 28: Evolution of gross domestic expenditure on R&D (\$ million, 2014-2024)

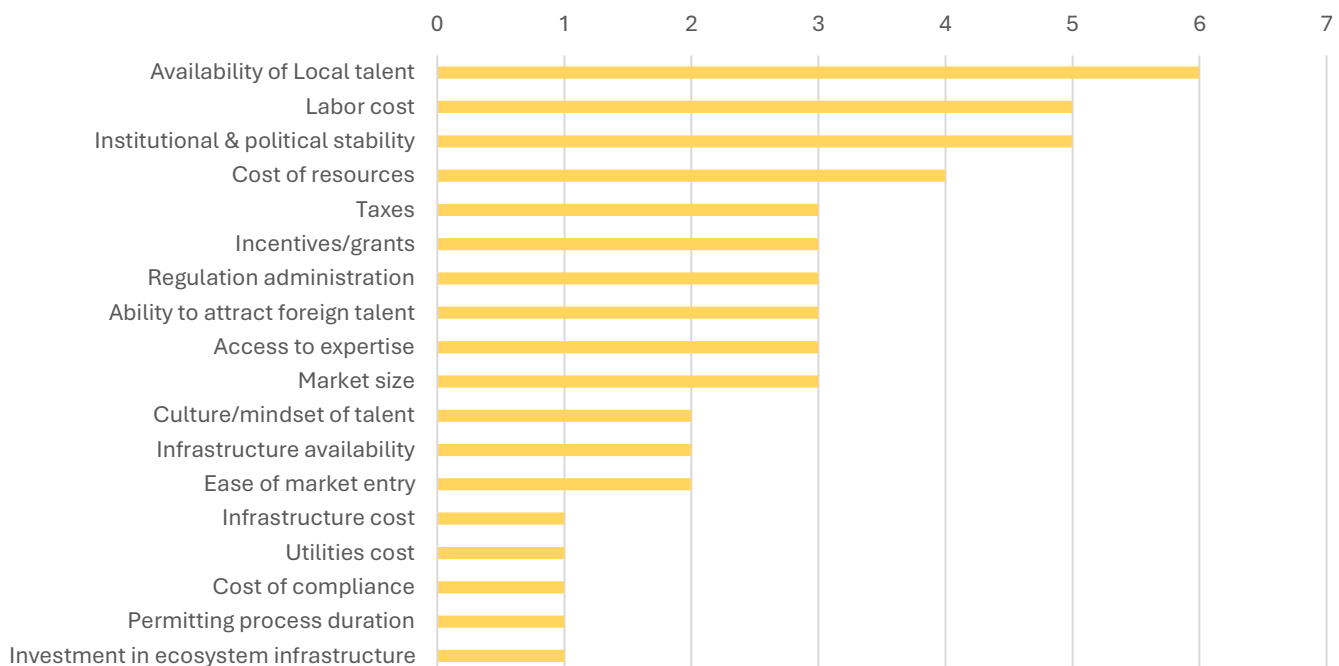


Innovation levers used by European countries

Table 2: Levers used by other countries to attract innovation investment

		UK	NL	DE	FR	SE	FI	DK	IR	AT	CH	IT	ES
Fiscal incentives	R&D tax credit/deduc.	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	IP / patent box	✓	✓		✓				✓		✓		✓
	Expat tax exemption	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Direct funding	Grants & subsidies	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Equity & VC support	✓											
Talent & human capital	Strengthen and retain local STEM talent	✓	✓	✓				✓	✓		✓		
	Attract international STEM talent	✓	✓	✓					✓		✓		
	Reskilling & upskilling incentives		✓	✓	✓			✓			✓		
Infrastructure & ecosystems	Research infrastructure, incubators	✓									✓		
	Network coordination										✓		
	Connecting data							✓					
Regulatory & administrative frameworks	Policy frameworks												
	Administrative ease												
	Regulatory sandboxes		✓	✓				✓					

Table 3: Survey results (19 respondents): What are the most decisive factors when choosing a location for R&D/innovation investments?



Methodology

Selection of R&D-intensive industries

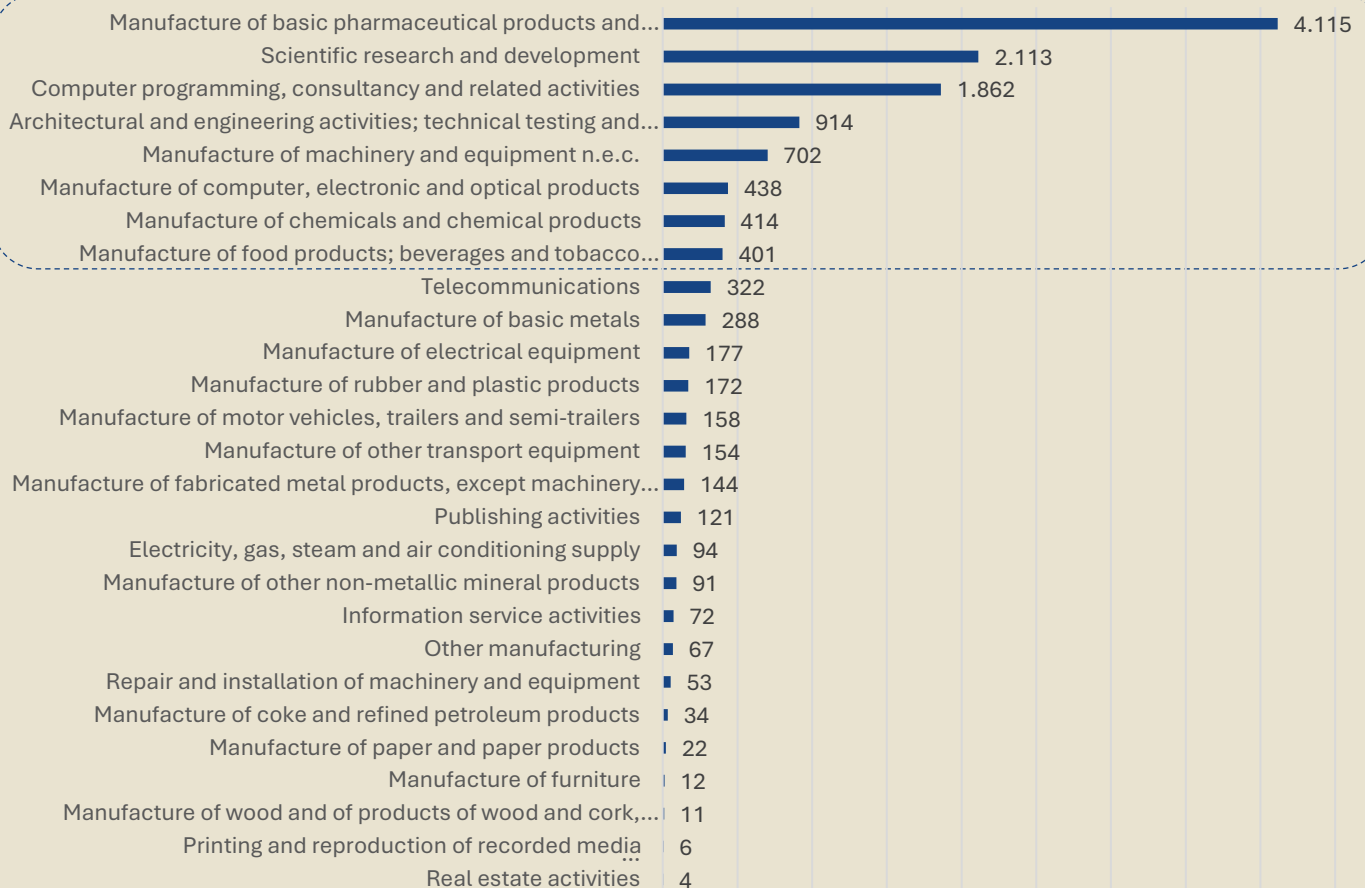
Throughout this report, particularly in Chapters 1 and 2, the data primarily focuses on a selection of Belgium’s most R&D-intensive industries, defined as the 8 industries with the highest absolute R&D expenses in Belgium.

Figure 1 below illustrates Belgian industries, classified according to NACE (statistical classification of economic activities) codes, ranked by their R&D expenditures in 2023. The graph shows that manufacturing of basic pharmaceuticals leads, followed by scientific research & development, computer programming & consulting activities, architectural and engineering activities, manufacturing of machinery & equipment, manufacturing of computer, electronic, and optical products, manufacturing of chemicals, and finally manufacturing of food products, beverages, and tobacco products.

These eight industries will be the primary focus of Chapters 1 and 2.

Refer to Table 1 for detailed definitions of each industry. It is important to note that, according to the NACE classification, each company is assigned to a single NACE class based on its principal activity, that is, the activity generating the greatest value added for the company.

Figure 1: Absolute R&D expenditures by industry in Belgium (2023; \$ million)



Sources: Eurostat (2023)

Notes: Excludes industries of which data is missing

Table 1: Definitions of selected industries according to NACE codes

Activity	Description
<p>Scientific research & development</p>	<p>This division includes the activities of three types of research and development:</p> <ol style="list-style-type: none"> (1) basic research: experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without particular application or use in view; (2) applied research: original investigation undertaken in order to acquire new knowledge, directed primarily towards a specific practical aim or objective; and (3) experimental development: systematic work, drawing on existing knowledge gained from research and/or practical experience, directed to producing new materials, products and devices, to installing new processes, systems and services, and to improving substantially those already produced or installed. <p>Research and experimental development activities in this division are not to be regarded as ancillary activities. They are subdivided into the two following categories: natural sciences and engineering; social sciences and the humanities. This division also includes: – developing and producing prototypes with the primary objective to make further improvements, whether or not associated with its production.</p> <p>This division excludes: – market research and public opinion polling</p>
<p>Manufacture of chemicals and chemical products</p>	<p>This division includes the transformation of organic and inorganic raw materials by a chemical process and the formation of products. It distinguishes the production of basic chemicals that constitute the first industry group from the production of intermediate and end-products produced by further processing of basic chemicals that make up the remaining industry classes. This division also includes manufacture of liquid biofuels.</p>
<p>Manufacture of machinery and equipment n.e.c.</p>	<p>This division includes the manufacture of machinery and equipment that act independently on materials either mechanically or thermally or perform operations on materials (for example, handling, spraying, weighing or packing), including their mechanical components that produce and apply force, and any specially manufactured primary parts. This includes the manufacture of fixed and mobile or handheld devices, regardless of whether they are designed for industrial, building and civil engineering, agricultural or home use. The manufacture of special equipment for passenger or freight transport within demarcated premises also belongs within this division. This division distinguishes between the manufacture of special-purpose machinery, in other words, machinery for exclusive use in a NACE activity or a small cluster of NACE activities, and general-purpose machinery, in other words, machinery that is being used in a wide range of NACE activities. This division also includes the manufacture of other special-purpose machinery, not covered elsewhere in the classification, whether or not used in a manufacturing process (for example, fairground amusement equipment, automatic bowling alley equipment). This division excludes the manufacture of metal products for general use (division 25), associated control devices, computer equipment, measurement and testing equipment, electricity distribution and control apparatus (divisions 26 and 27) and general-purpose motor vehicles (division 29)</p>
<p>Manufacture of computer, electronic, and optical products</p>	<p>This division includes the manufacture of computers, computer peripherals, communication equipment, and similar electronic products, as well as the manufacture of components for such products. Production processes of this division are characterized by the design and use of integrated circuits and the application of highly specialized miniaturization technologies.</p> <p>The division also contains the manufacture of consumer electronics, measuring, testing and navigating equipment, irradiation, electromedical and electrotherapeutic equipment, optical instruments and equipment, and the manufacture of magnetic and optical media. This division excludes the manufacture of conductors for electronic use and of optical fiber cables.</p>
<p>Manufacture of basic pharmaceutical products and pharmaceutical preparations</p>	<p>This division includes the manufacture of basic pharmaceutical products and pharmaceutical preparations. This division also includes the manufacture of medicinal chemical and botanical products</p>
<p>Architectural & engineering activities; technical testing & analysis</p>	<p>This division includes the provision of architectural services, engineering services, drafting services, building inspection services, and surveying and mapping services.</p> <p>This division also includes the performance of physical, chemical and other analytical testing services, and the provision of technical certification services.</p>

Sources: Eurostat (2025) – Statistical classification of economic activities in the European Union

Table 1: Definitions of selected industries according to NACE codes

Activity	Description
Computer programming, consultancy, and related activities	<p>This division includes:</p> <ol style="list-style-type: none"> (1) Activities of providing expertise in the field of information technologies, designing the structure and content of, and/or writing, modifying, customizing, testing and supporting software and applications (2) Planning and designing computer systems that integrate computer hardware, software and communication technologies (3) On-site management and operation of clients' computer systems and/or data processing facilities (4) Computer hardware, software and systems consultancy services.
Manufacture of food products	<p>This division includes the processing of products of agriculture, forestry and fishing into food for humans or animals, and includes the production of various intermediate products that are not directly food products. The activity often generates associated products of greater or lesser value (for example, hides from slaughtering, or oilcake from oil production).</p> <p>This division is organized by activities dealing with different kinds of products: meat, fish, fruits and vegetables, fats and oils, milk products, grain mill products, animal feed and other food products. Production can be carried out for own account, as well as for third parties, as in custom slaughtering.</p> <p>Some activities are considered manufacturing even though there is retail sale of the products in the producers' own shop (for example, those activities performed in bakeries, pastry shops and prepared meat shops which sell their own production). However, where the processing is minimal and does not lead to a real transformation.</p> <p>This division also includes the manufacture of liquids considered food or that use similar manufacturing processes (for example, milk and fruit juice/ concentrate).</p> <p>This division excludes the preparation of meals for immediate consumption.</p>

Sources: Eurostat (2025) – Statistical classification of economic activities in the European Union

Selection of countries to benchmark Belgium against

Chapters 3 and 4 of this report evaluate Belgium’s performance on key innovation indicators in comparison with a selected group of European countries. This group comprises the top ten countries with the highest R&D expenditures relative to their GDP. Additionally, three other countries—Italy, Spain, and Ireland—are included as they are emerging innovation hubs or due to their historical relevance in innovation.

Figure 2: Top-10 EU countries in terms of Gross Domestic R&D Expenditure¹

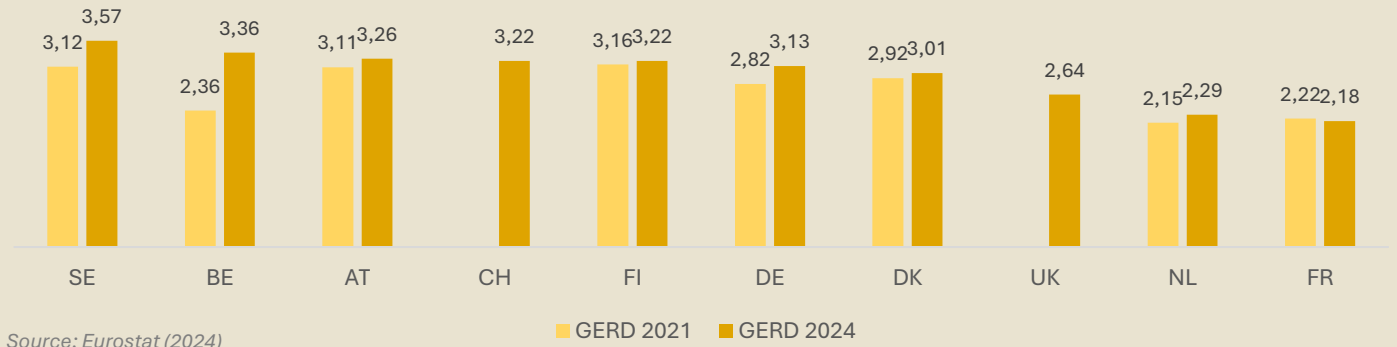


Figure 3: Top-10 EU countries in terms of Gross Domestic R&D Expenditure growth (percentage points)

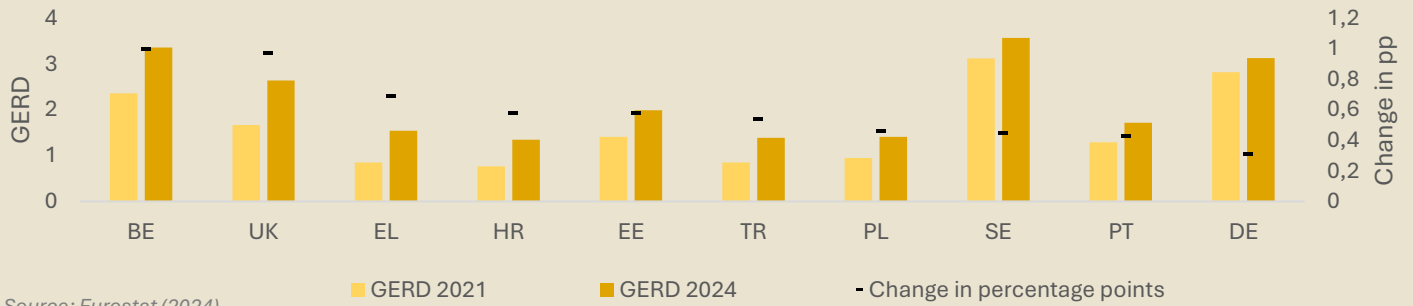
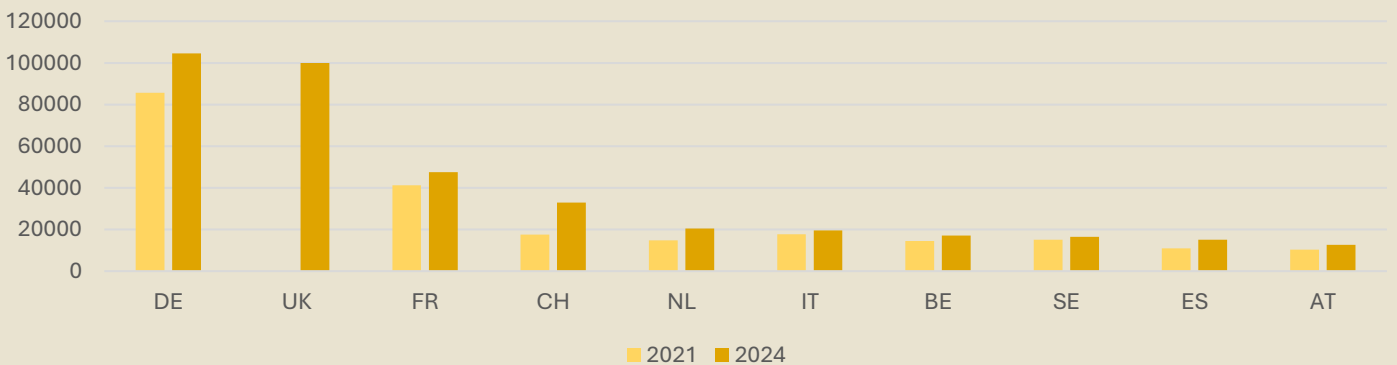


Figure 4: Top-10 EU countries in terms of Total R&D expenditures (\$ million)



Notes: (1) R&D expenditures from following sources: business sector, gov sector, higher education sector, private non-profit sector



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