

**Joint Master in EU Trade and
Climate Diplomacy**

*Alignment of regional
development policy in Flanders to
EU-level objectives*

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Abstract

This thesis examines the alignment of the Flanders European Regional Development Fund (ERDF) work programme with European Union objectives, focusing on the 2014-2020 period, and evaluates through document analysis the extent to which it aligns with the Europe2020 strategy and ERDF regulations. With regards to the Europe2020 strategy, this thesis focuses on thematic alignment of objectives and the achievement of targets by 2020. In the case of the ERDF regulations, the focus is on the thematic alignment of the objectives and the earmarking requirements of resources. Lastly, the four main priority axes in the Flanders work programme are analysed to determine if the concrete achievements support the alignment with EU-level objectives. The analysis demonstrates substantial alignment of the ERDF in Flanders with European Union objectives and regulations. This alignment is underscored by achievements of the work program, particularly in innovation and energy efficiency. However, analysis has shown that some sectors require improvement, such as sustainable transportation and non-ETS industry emissions. The overall findings underscore the effectiveness of the ERDF in driving regional development and provide insights for future policy-making in Flanders.

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List of abbreviations

<u>Abbreviations</u>	<u>Definitions</u>
CAP	Common Agricultural Policy
CO2	Carbon Dioxide
Commission	European Commission
COVID	Coronavirus Disease
DG REGIO	Directorate-General for Regional and Urban Policy
EAFRD	European Agricultural Fund for Rural Development
EE	Energy Efficiency
EFF	European Fisheries Fund
EMFF	European Maritime and Fisheries Fund
EMU	Economic and Monetary Union
ERDF	European Regional Development Fund
ESF	European Social Fund
ESI Fund	European Structural Investment Funds
ESIF	European Structural Investment Funds
ETS	Emission Trading System
EU	European Union
FIFG	Financial Instrument for Fisheries Guidance
GDP	Gross Domestic Product
GNI	Gross National Income
ICT	Information and Communication Technology
ISPA	Instrument for Structural Policies for Pre-Accession
NUTS	Nomenclature of Territorial Units for Statistics
OECD	Organisation for Economic Co-operation and Development
R&D	Research and Development
RE	Renewable Energy
SBA	Small Business Act
SME	Small and Medium-sized Enterprises
Structural Funds	European Structural Investment Funds
TEA	Total Early-stage Entrepreneurial Activity
VLAIO	Flanders Agency of Innovation & Entrepreneurship

Introduction

The European Union's Cohesion policy aims to reduce economic and social disparities between regions, promoting harmonious development across member states. At the heart of this policy is the European Regional Development Fund (ERDF), which is a fund that supports regional development initiatives that align with broader European Union (EU) strategies, such as the Europe2020 strategy. Europe2020 emphasizes smart, sustainable, and inclusive growth, setting ambitious targets for 2020 in employment, innovation, education, social inclusion, climate and energy¹. In 2021 the EU started a new programming period which will run until 2027. In this programme the EU allocated €376 billion for Cohesion Policy, which represents a significant portion of the EU's total budget². Cohesion policy in the EU is extremely relevant in the 2024 political context. Potential new member states such as Moldova or Ukraine are significantly underdeveloped compared to EU member states³. Furthermore, Ukraine is currently engaged in a destructive war with its neighbour Russia. If these countries join the Union, the gap between the least and most developed region will widen significantly and Cohesion policy can play a crucial role in fostering economic convergence in the Union.

On a macro-level, cohesion policy has created improvements in bridging the development gap in the last decade. The eighth cohesion report⁴, published by the European Commission in 2022, found that Cohesion investments have resulted in a 3.5% reduction in the gap between the 10% least developed regions and the 10% most developed regions since 2001. The report also highlighted that the cohesion funds as a share of public investments have been rising steadily over the last decades, reaching 52% in the 2014-2020 programming period, indicating the growing role the Cohesion funds play in public investments. However, while the overall development gap has decreased, regional disparities in employment and innovation have grown. Additionally, overall convergence in numerous middle-income regions and less-developed regions have stagnated or declined all-together⁵.

The apparent slump in important convergence indicators raises questions regarding the effectiveness of the EU's Cohesion funds, especially in light of its crucial role if the European Union expands in the coming years. To examine the Cohesion funds, academics often policy analysis as a primary tool. Policy analysis involves examining government actions, such as laws and regulations, using various methods like quantitative research,

¹ European Commission, *Communication from the Commission Europe 2020 A strategy for smart, sustainable and inclusive growth*, (COM(2010) 2020 final), Brussel, 2010.

² Directorate-General for budget, *The EU's 2021-2027 long-term budget and NextGenerationEU* (Luxembourg, Publications Office of the European Union, 2021), 3

³ Miriam Kosmehl, and Stefani Weiss, *Outlier or not? The Ukrainian economy's preparedness for EU accession* (Germany: Bertelsmann Stiftung, 2023) , 56.

⁴ European Commission, " *Communication from the Commission to the European Parliament, the Council, the European Economic and social committee and the committee of the regions on the 8th Cohesion Report: Cohesion in Europe towards 2050*" (SWD(2022) 24 final, Brussels, 2022.

⁵ European Commission, *Communication from the Commission on the 8th Cohesion Report*, 1.

discourse analysis, and citizen fora⁶. This thesis focuses on policy documents, which outline the goals, criteria, structure, and resources that form the framework of policies. These documents are crucial for understanding how policies are shaped and implemented. Through thorough document analysis of EU policy documents, this thesis aims to answer to what extent the Flanders 2014-2020 European Regional Development Fund (ERDF) work program (which can be considered the framework for the regional implementation of the ERDF in Flanders) corresponds with European Union economic policy objectives, which are part of EU strategies such as the Europe2020 strategy or EU legislation such as the ERDF regulations. Examining this alignment offers insights into how the policies of national or regional governments contribute to the success or failure in achieving EU objectives.

Flanders is a region with a strong economy but is facing specific economic and social challenges. Notably, these include an entrepreneurship rate under the EU-average and underperformance on Europe2020 climate objectives⁷. The Flemish government has implemented its ERDF work programme for 2014-2020 with the intent of aligning closely with EU objectives. The combination of rigorous reporting together with the clearly defined economic and social challenges that were to be solved by 2020, makes Flanders an ideal region for analysis. In sum, this thesis explores the degree of policy alignment through a document analysis, focusing on to what extent the Flemish programme's priorities and outcomes correspond with the strategic goals set by the EU.

The focus of this thesis lies on the European Regional Development fund (ERDF) in Flanders. The ERDF is one of the cornerstones of regional development in the EU. Together with the Cohesion fund it aims to reduce economic and social disparities between the regions of the European Union. But since the Cohesion fund is only accessible to Member states that have gross national income (GNI) per capita below 90% of the EU-27 average, Flanders does not qualify for this fund. The GNI of Flanders measured, according to OECD data from 2014, 42 702.70 euro per capita, which was well above the EU-27 average of 34 536.34 euro per capita⁸. As a result, the scope of this thesis is limited on the development fund which Flanders has access to, namely the ERDF. The analysis focuses on the alignment of the 2014-2020 Flanders ERDF work programme with European Union strategies and legislation. The specific objectives of the analysis are:

- to examine the extent to which the strategic objectives and priorities of the Europe2020 and ERDF legislation have been incorporated into the work programme.
- to understand whether the specific requirements of the Europe2020 and ERDF legislation have been met.

⁶ Mayer I.S., van Daalen C.E., Bots P.W.G., "Perspectives on Policy Analysis: A Framework for Understanding and Design," *Public Policy Analysis. International Series in Operations Research & Management Science*, vol 179 (2013): Abstract.

⁷ Flemish Region of Belgium, *Operationeel Programma "Investeren in groei en Werkgelegenheid" Vlaanderen 2014-2020* (4th Version: 2014BE16RFOP002, Brussels: VLAIO, 2021), 14-16.

⁸ OECD, "Gross national income (indicator)," (2024). doi: 10.1787/8a36773a-en (Accessed on 08 June 2024)

- to analyse to what extent the results of the work program, as shown through output indicators, support this alignment in practice.

The thesis commences with a general review of the ERDF, with a special focus on evolving ERDF legislation and EU economic strategies, which will be the basis for examining the alignment in later chapters. Alignment will be assessed through analysing potential links between the EU documents and Flanders' work programme. Concretely, this will mean analysing the representation of EU-level objectives and priorities in the regional document. Lastly, this thesis will assess the output indicator results for this financial framework period in order to assess whether there has been achievements in practice towards the EU objectives and priorities, which in turn underscores alignment with the thematic EU objectives.

This thesis does not analyse the indicators themselves, how they developed over time and what are their strengths and weaknesses. The study of ERDF indicators for the 2014-2020 program has been covered extensively by Nigohosyan and Vutsova⁹. For relevant indicators, this thesis will not attempt to differentiate between the achievements due to the Flanders ERDF work program or other investment programs that may have taken place during the same period. This thesis will be limited in scope to a document analysis, providing a deep understanding of the extent these documents are aligned and an analysis of indicator output data which will provide an understanding of success in practice and of the extent the achievements support the thematic alignment of objectives.

⁹ Daniel Nigohosyan and Albena Vutsova, "The 2014–2020 European Regional Development Fund Indicators: The Incomplete Evolution," *Soc Indic Res* 137, (2018): 559–577.

Literature Review

The effectiveness of the Structural Funds in the European Union (EU), and before in the EEC, has been a topic of significant scrutiny since its very conception, including both studies that examine the impact on specific regions such as by Buonaiuto¹⁰, who conducted a comparative analysis between the European Regional Development Fund's (ERDF) impact on Tuscany and Campania, or on specific projects such as by Zdolec et al.¹¹, which investigated an ERDF project upgrading cheese production in Croatia. Additionally, there have been broader studies considering the wider impact of structural funds, such as a study by Ivascu on the role of the European Structural funds in economic development¹². The funds that have witnessed the most scrutiny are the European Regional Development Fund (ERDF), which has the goal of strengthening the territorial, social, and economic cohesion in the European Union, the European Social Fund Plus (ESF+), whose purpose is to promote social cohesion in the EU, and finally the Cohesion fund (CF), which is specialized to support the least prosperous member states in environment and transport development. Together, these funds add up to approximately 360 Billion euro for the 2021-2027 financial framework, and around 20% of the total European Union budget. It is this significant financial weight of the funds that encouraged critical assessment on the effectiveness of these funds in reaching their goals. Effectiveness is defined by the OECD as “*The extent to which the intervention achieved, or is expected to achieve, its objectives, and its results, including any differential results across groups.*”¹³, with the addendum that the importance of results and goals need to be taken into account when conducting effectiveness assessments. In terms of this thesis the objectives used to indicate effectiveness will be the strategic objectives of the funds, as mandated by the European Commission and the member states, and their representation in member state work programs.

Analysing policies usually revolves around a central question, generally something similar to: ‘does this policy work as intended, and is it worth it? Using a document analysis such as this paper strives to do is one way to get closer to that answer. When it comes to a fund as sizable and complex as the ERDF it is very difficult to have a single complete analysis determining whether the fund was overall a success or not. Therefore there are many studies that focus on the different aspects of analysing policy, all with different methods and methodologies, and often also different conclusions. When it comes to assessing the ERDF there is no better starting point than an analysis that goes to the heart of the ERDF’s mission, namely whether it actually decreases the development

¹⁰ Alessandra Buonaiuto, “ Are the European Regional Development Fund and the Italian National Recovery and Resilience Plan contributing to reduce intra-regional disparities? A comparative analysis of Campania and Toscana,” (Master’s Thesis, Università degli Studi di Padova, 2023).

¹¹ Zdolec Nevijo et al., “Upgrading the cheese production in Croatia by using medicinal and aromatic herbs – an example of the European Regional Development Fund project CEKOM 3LJ,” *University of veterinary medicine and pharmacy in Kosice*, (2023).

¹² Cosmin Ivascu, “The Role of European Funds in the Economic Development,” *Romanian Economic Journal* vol. 24, no. 79 (2021): pages 75-89.

¹³ OECD, *Applying Evaluation Criteria Thoughtfully*, (OECD Publishing, Paris, 2021), 52-53. <https://doi.org/10.1787/543e84ed-en>.

gap between member states. Wise and Croxford¹⁴ examined the effectiveness of the ERDF in terms of its capacity to close the gap between the rich members of the European Union (at that time called the European Economic Community) and the poorer members. The authors were sceptical of the effectiveness of the fund, highlighting four major issues. Firstly, the fund was not sizable enough to make a significant difference in closing the development gap between EU member states. By 1985 (two years before the paper was written), the ERDF was still less than 0.1% of the EEC's GDP¹⁵. While this might still be a considerable sum by most standards, the budgets that national governments allocated for regional development dwarfed the ERDF. This indicated that development was still very much considered a national responsibility at the time, to the detriment of member states that did not have the financial means to invest in development at the same level as richer EU member states.

However, the report found that these national development budgets have failed to facilitate a significant change in spatial patterns of wellbeing, and therefore it is unlikely that the ERDF, with its smaller budget extra bureaucratic layer, will succeed where these larger programs have failed. Second, the resources provided by the ERDF were often not truly additional to those already available from national budgets. The authors argue that, contrary to the intention of the European Commission, member states often used ERDF resources to replace development funding in their national budgets. In such circumstances the additionality of the ERDF is more an illusion than a reality, and cannot deliver on the goal of lowering the development inequality gap. Third, the ERDF funds are not sufficiently being concentrated in the poorest areas of the EEC. From 1975-1985, 22% of ERDF expenditure was in countries which have GDP per capita above the EEC's average. The insistence of rich countries to have a significant part of the ERDF budget allocated to themselves fosters the criticism that the ERDF's resources are not flowing to the areas in greatest need. Finally, Wise and Croxford argue that the nature of ERDF projects are too uncoordinated and scattered in a way that hinders the fund's effectiveness. Grants have been often allocated to individual and unconnected projects, without consideration for an broader and long term development strategy. This has been a source of frustration for the European Commission who have advocated for a more long-term and coordinated approach to ERDF investment, based on local ideas for development.

The macro-economic approach and analysis of Wise and Croxford can only pinpoint issues that are visible from a macro-economic perspective. But this is only one part to understanding the complexities and challenges that the ERDF face. A closer look on the implementation of ERDF projects can provide additional insights, but requires a different method. In 1995, Mcleavey evaluated the effectiveness of the ERDF by developing a model of policy implementation as 'incomplete contracting'¹⁶. The model of incomplete

¹⁴ Mark Wise and Gregory Croxford, "The European Regional Development Fund: Community ideals and national realities," *Political Geography Quarterly* 7, no. 2 (1988): 161-182.

¹⁵ European Commission, *Eleventh Annual Report to the Council by the Commission: European Regional Development Fund*, (COM(86)545 final, Brussels, 1986), 9.

¹⁶ Paul Mcleavey, "Policy Implementation as Incomplete Contracting: The European Regional Development Fund," (Phd thesis, European University Institute, 1995), 69.

contracting relies on an analysis where the role of the ‘contract’ is placed central. The author conceptualizes a contract (in the context of the ERDF) as an agreement among the member states, the European Commission, and regional partners to execute a regional economic development program.

The strength of this model is that it allows for a deep understanding of the power-relations in the partnerships of the programs. Focusing on the actors that shape the contract, the implementation, and the monitoring, aids in gaining insight in the complexity that are the ERDF partnership frameworks. The author points out that all contracts are by nature ‘incomplete’, as it is arguably impossible to consider all the issues and eventualities that might arise in the development of the projects. This means that the contract needs a certain amount of flexibility and leeway for actors to amend and adapt to challenges. Hence, an incomplete contract. By analysing the preparation, enforcement/monitoring, and implementation of development projects (or ‘contracts’), the paper identifies key areas where the ERDF has underperformed, which in turn hindered its effectiveness as a policy tool for diminishing regional inequalities.

Mcaleavey’s model was based on three key features. Firstly, the significance of governance structures in such projects. Governance structures and their relation to economic development were still under-researched in the 1990’s as the role of institutions in coordinating different actors to accomplish economic tasks were not a focus in the neo-classist economic theory. Governments and other organizations were treated as black boxes, where decisions were taken for optimal effects which are based on their environment. To provide an example, a firm would be viewed as operating in a market environment, and therefore would take decisions which maximise profitability, but with less consideration given to the internal structures mechanisms that shape their behaviour as well. Mcaleavey, however, drew on economic neo-institutionalism to develop his model. Economic neo-institutionalism focuses on how institutional arrangements shape economic processes, which is a theory that often lies at the heart of research into the ERDF or the ESF. Secondly, the model considers the transaction costs that are associated with any form of contractual arrangement. By analysing the transaction costs in his model, Mcaleavey evaluates the role of the European Union as an economic organization in providing coordination and motivation. Which are the two variables that encompass the transaction costs according to Milgrom and Roberts.¹⁷ Lastly, the nature of incomplete contracting implies that contracts need a certain degree of adaptability in order to overcome future obstacles. Mcaleavey succinctly compares this to “bridge-crossings”. The English language has the saying ‘We’ll cross that bridge when we come to it’, which has relevance to the concept of incomplete constructing. The saying implies that at some point in the future it is likely that a ‘bridge’ needs to be crossed. Meaning it is unlikely or unrealistic to have detailed agreements that can foresee all the future bridges and incorporate these in the contract preparation.

By analysing the ‘nature’ of these contracts, it is possible to assess the adaptability of ERDF projects when facing challenges. The author’s findings showed that EU has taken

¹⁷ Paul Milgrom and John Robert, *Economics, Organization and Management* (Englewood Cliffs: N.J.: Prentice Hall, 1992).

steps which also addressed several of the challenges identified by Wise and Croxford (1988). ERDF reforms not only saw a concentration of resources on the most seriously disadvantaged regions, but also to increase the effectiveness of the implementation of projects on a regional level. The extent to which these reforms were effective is however disputed by the author. While the size and concentration of resources were indeed better focused on regions with the greatest needs, the problem of ‘absorption’ remains. Absorption refers to the capacity of member states to spend resources in an effective manner. The issue of absorption is still a significant challenge for the implementation of investment programs in the EU. In a 2023 study, the European Commission found that at the end of the 2013-2020 financial programming period, only 52.5% of the structural funds allocated to that period had been paid to the member states.¹⁸ McAleavey argues that absorption of ERDF funds were a significant challenge in several southern member states, and this in part can explain why even as the size of the ERDF has increased, regional disparities have as well.

When analysing the steps that the EU have taken to resolve the challenges that plagued the ERDF in the last decades, the impact indicators used by the Commission to assess effectiveness are a crucial component. Nigohosyan and Vutsova¹⁹ analysed the ERDF indicator system, how it has evolved, and whether the significant overhaul that the ERDF had for the 2014-2020 program period was successful in tackling well-known issues. The paper uses logic models and case-studies in order to analyse and assess if the new ERDF intervention logic solved issues or even created more of them. Logic models are frameworks that show the logical relationships between program inputs, activities, outputs, outcomes, and impacts. They help clarify the intended pathway of change and which were the essential assumptions to achieve it.²⁰ Logic models are often described as road maps for change, serving as a structured and visual method to show how the resources available for a program, the planned activities, and the expected outcomes are linked with each other. This approach shows the causal relationships between the inputs, activities, and the expected changes or results²¹.

The paper recognises the changing nature of the European Commission’s approach towards logic models. For the 2000-2006 financial period the Council of the European Union mentioned the critical role that indicators play for the monitoring of the ERDF, and the Commission identified them as: output, results, and impacts. The Commission argued results to be the direct immediate effects on the direct beneficiaries of the actions, while impacts refer to the effects beyond the scope of results.

¹⁸ Andrea Ciffolilli et al., *Absorption rates of Cohesion Policy funds* (European Parliament, Policy Department for Structural and Cohesion Policies, Brussels).

¹⁹ Daniel Nigohosyan & Albena Vutsova, “The 2014–2020 European Regional Development Fund Indicators: The Incomplete Evolution,” *Social Indicators Research: An International and Interdisciplinary Journal for Quality-of-Life Measurement* vol. 137, no. 2, (2018): 559-577.

²⁰ W.K. Kellogg Foundation, “Logic Model Development Guide,” *W.K. Kellogg Foundation*, 2004. Retrieved from <https://www.nj.gov/state/assets/pdf/ofbi/kellogg-foundation-logic-model-development-guide.pdf>

²¹ W.K. Kellogg Foundation, “Logic Model Development Guide,” 1.

The indicator systems of the 2000-2006, and the 2007-2013 periods were very similar due to a lack of political guidance on the development of indicators. The approach for the 2007-2013 programming period was unexpectedly vague on the concept of indicators. The Council of the European Union only briefly mentioned financial, output and result indicators in its 2006 general provisions regulation²² and does not expand on the concepts in the ERDF regulation of 2006. In 2007 multiple member states, notably Italy and Spain, resisted the reforms out of fears concerning the potential increase in administrative burdens and the practical difficulties of implementing standardized indicators²³. As a consequence, indicators did not change significantly for over a decade, providing ample opportunities for evaluation studies of which the large majority were critical of the current system's effectiveness. In a report on pilot tests of result indicators, which was conducted by the Directorate-General for Regional and Urban Policy (DG REGIO), numerous challenges were found, including²⁴:

- Program objectives were too broad and the result indicators did not capture the direct effect.
- The use of general indicators made it difficult to measure results.
- There was often no clear correlation between the different levels of indicators, including output and result indicators.

In order to address the above issues (and more), the European Commission modified the indicator system for the 2014-2020 programming period, adjusting the notion of 'impact indicators'. The Common Provisions Regulation (which is the regulation that governs the EU structural funds) outlines three types of indicators: financial indicators linked to allocated expenditures, output indicators concerning supported operations, and result indicators associated with the priority of the project²⁵. During the 2014–2020 period, impact is explained as the change attributable to an intervention²⁶. Consequently, the 'impact/long-term result' indicators from the 2007–2013 intervention logic were left out from the European Regional Development Fund (ERDF) indicator system. This programming period emphasized results, requiring programs to state the intended changes of projects.

But, as Nigohosyan and Vutsova²⁷ concluded, this new system experienced numerous issues. Concretely, the issues include: variations in indicator concepts across Structural funds, inconsistencies in common output indicators, challenges in attributing a program's impact on results, ongoing struggles in defining target values for results, and the presence

²² European Union, "Regulation 1083/2006 on General provisions of the ERDF," 46.

²³ Țăranu, Folea, Cicoșatu, "Cohesion Policy instruments. Cohesion Structural Funds (CSF) 2007 - 2013 and European Structural and Investment Funds (ESIF) 2014 - 2020 absorptions in EU member countries," *Revista de Economie Mondială*, 8, no.4 (2016): 56 – 69.

²⁴ European Commission, *Results indicators 2014: Report on pilot tests in 23 regions/OPs across 15 MS of the EU*, (2013).

²⁵ Note: Output and result indicators will be used extensively as part of the analysis in chapter three.

²⁶ European Commission, *The New Programming Period 2007–2013. Indicative guidelines on evaluation methods: Monitoring and evaluation indicators* Working Document No. 2, Brussels, (2006).

²⁷ Nigohosyan and Vutsova, "The 2014–2020 ERDF Indicators: The Incomplete Evolution," 573–575.

of broad result indicators with indirect links to interventions hinder the effectiveness of indicators in assessing the impacts of the ERDF.

A completely different approach from the ones above, which look at economic or output data, is the method adopted by Holström²⁸. The study investigates the alignment between the EU's regional Growth policy and existing academic literature. The author opted for a qualitative approach, starting with an in-depth review of 16 academic articles on economic growth and its drivers in the European Union. This was followed by a policy analysis comparing the drivers identified in the literature with the priorities of the structural and cohesion funds policies. His research was limited to the European Regional Development Fund (ERDF), which the author considers the main Structural fund, and showed that from the eleven of the ERDF's investment priorities, seven correspond well or fairly well with the results found in the literature review. The author also notes that from the four 'main' investment priorities, three have found their way into the literature. This allowed the author to conclude that from an academic point of view, the ERDF has resulted in the desired outcomes such as economic growth and convergence. Significant examples are achievements in enhancing the competitiveness of SME's and strengthening innovation. However, the author also found that the ERDF has struggled in priorities that were of a more environmental or social nature such as the promotion of climate change adaption, promotion of social inclusion, or combatting poverty and discrimination.

The literature on the effectiveness of the ERDF provides a comprehensive overview of the fund's historical and current challenges. Studies like those of Wise and Croxford²⁹ highlight significant issues such as the insufficient size of the fund, lack of true additionality, and the misallocation of resources. These macro-level analyses underscore structural problems that hinder the ERDF's capacity to reduce regional disparities effectively. Additionally, Mcleavey's³⁰ exploration of policy implementation through the lens of incomplete contracting offers a deep understanding of the complexities in governance and the importance of a flexible approach to the preparation of projects. Furthermore, the study by Nigohosyan and Vutsova³¹ of the ERDF indicator system highlights the evolving nature of impact assessments, identifying significant issues such as broad program objectives and the challenge of linking indicators directly to outcomes. Finally, Hallström³²'s literature review and policy analysis identified areas of convergence between academic literature and EU Cohesion policy, allowing the author to draw conclusions on effectiveness and success of the ERDF in creating economic growth and economic convergence.

One fact that is clear from the research and studies on the ERDF, is that the program has significant imperfections which needed to be resolved. Whether you adopt a macro-

²⁸ Jonas Hallström, "Is the EU Structural Fund creating Economic Growth?" (Bachelor dissertation, UMEA University, 2019), p19.

²⁹ Mark Wise and Gregory Croxford, "The ERDF: Community ideals and national realities," 161-182.

³⁰ Paul Mcleavey, "Policy Implementation as Incomplete Contracting: The European Regional Development Fund," 87.

³¹ Daniel Nigohosyan & Albena Vutsova, "The 2014–2020 ERDF Indicators: The Incomplete Evolution," 559-577.

³² Jonas Hallström, "Is the EU Structural Fund creating Economic Growth?", p19.

perspective, or analyse the implementation process up close, the ERDF struggles to achieve its principal goal of closing the development gap in the European Union. With new candidate member states such as Ukraine, Moldova, and Georgia, being expected to join the European Union in the coming years (or decades); the effectiveness of the ERDF is gaining increased scrutiny and importance, as it will play a crucial role in ensuring balanced regional development and cohesion within an expanding EU.

However, despite the valuable insights these studies offer, there are notable gaps in the literature, particularly concerning the specific regional context of Belgium. Despite the importance of the ERDF in regional development, academic research on the ERDF's effectiveness, especially for recent financial framework periods and local regions, is lacking. Most studies focus on broad, EU-wide perspectives or on specific regions such as Tuscany or Campania. This indicates a gap in the research that examines how the ERDF functions within the unique socio-economic and political landscape of Belgium. In Belgium, the responsibilities for the implementation of ERDF projects are delegated to the regions, one of which being Flanders. Furthermore, the structure of the ERDF is such that the success of national governments (or regional governments in devolved countries) in effectively implementing the projects and ensuring alignment with the policy objectives of the ERDF are crucial for overall success. While the macro-economic critiques and the implementation analyses provide useful frameworks, they struggle to capture specific local dynamics that influence the fund's effectiveness in Flanders. While Nigohosyan and Vutsova's analysis of the ERDF's indicator system reveals important systemic issues, it is necessary to investigate how these indicators are applied and interpreted at a regional level, such as in Flanders, as interpretation or diligence in the implementation of indicators can differ across regions.

In conclusion, while the existing literature provides a strong foundation for understanding the challenges and successes of the ERDF in an EU-wide context, there is a clear need for more localised studies that consider the specific context of Flanders. Addressing these gaps will not only enhance the theoretical understanding of the ERDF's effectiveness but also provide practical insights for policymakers and civil servants in Flanders.

Chapter 1 : The European Regional Development Fund

Since the early 2000's, the EU has strived to streamline the several funds focusing on regional policy. This resulted in the overall framework of the European Structural Investment Funds (ESIF). This framework currently incorporates five funds: the European Regional Development Fund (ERDF), the European Social Fund Plus (ESF+), the Cohesion Fund, the European Maritime and Fisheries Fund, and the European Agricultural fund for rural development³³.

The European Regional Development Fund was established significantly later than most other funds, such as the ESF, which were founded in 1975 and 1957 respectively. The economic imbalances in the European Economic Community (currently European Union) were a significant issue threatening the functioning of the single market. The first EEC enlargement in 1973 saw the inclusion of Ireland, the United Kingdom and Denmark. Around the same time, the EEC also experienced the first oil shock, a consequence of Western support to Israel in the Yom Kippur war³⁴. These crisis revealed the need for a common redistributive policy that would help less developed members develop and be able to compete better with the larger economies in the single market. Especially Ireland and the United Kingdom were insistent on the creation of the fund as Ireland was struggling with how their comparatively low-developed economy would compete with the larger economies of continental Europe and the UK had additional concerns regarding the significant and asymmetric agricultural subsidies that were provided to member states. Therefore, a precondition to agreement for joining the Community was the creation of a regional policy that would act as a redistributive policy, ensuring that less economically competitive members would still benefit from the single market and would not fall behind^{35,36}.

When the ERDF was created in 1975 it was thus an instrument of redistribution. The ERDF hoped to achieve this redistribution through productive investment, infrastructure, and the fostering of SME's in the less-developed regions of member states. Over the years the ERDF underwent multiple reforms and budget changes. To illustrate, with the accession of Greece, Spain and Portugal in the 1980's, regional disparities were significantly exacerbated. This is visible by looking at the impact of these countries joining the EEC. Pre-accession the EEC-10 had a population of around 270 million and a GDP of 2 187 billion US\$ (1986), which leads to a GDP per capita of 8000 US\$ (1986). When the new territories joined the EEC the population increased drastically, rising to approximately 320 million people, but the GDP per capita decreased to 7696 US\$ (1986),

³³ Victor Forte-Campos and Juan Rojas, "Historical Development of the European Structural and Investment Funds," *Economic Bulletin* 3:4, (2021).

³⁴ Emmert, Petrovi, "The Past, Present, and Future of EU Enlargement," *Fordham International Law Journal*, Volume 37:5, (2014): p19.

³⁵ Étienne Deschamps, "L'adhésion du Royaume-Uni aux CE," *Centre Virtuel de la Connaissance sur l'Europe*, (2017) : 5

³⁶ Sandy Dall'Erba, "European Regional Development Policies: History and Current Issues," *European Union Center* 2, No. 4 (2003): 5-6.

indicating a rising development gap between member states and creating a need for an ERDF with an expanded budget and scope. Consequently, the 1989-1992 Delors I package contained double the amounts allocated to the structural funds compared to before, reaching ecu 18.3 billion in 1992³⁷. In 1988, there was the growing understanding that the ERDF had to be reformed such that it would be able to diminish the growing development gap between member states. Accession of Spain and Portugal increased regional inequalities between rich and poor member states to an unacceptable level for the success of the single market. For example, without a high degree of economic convergence, creating a common currency would be impossible. This was confirmed by the European Commission in retrospect in a communication in 1992³⁸. Often attributed as a response to this challenge, the European Council at the 1988 Brussels summit greenlighted the reform of the ERDF.

In 1988, the European Union undertook significant reforms to its Structural Funds, of which the ERDF is a significant part of. These reforms introduced several key principles and mechanisms: multi-annual programming periods replaced funding for individual projects, allowing longer-term planning of development strategies; the funds were concentrated on five priority development objectives for a more focused approach; the partnership principle fostered closer collaboration between the European Commission, Member States, regional/local authorities, and economic/social partners in program design and implementation to better align with local needs; the additionality principle laid down that EU funds must supplement, not replace, national investment in regional development to provide additional resources; and Community Initiatives were introduced as complementary programs to address specific structural problems affecting the entire EU territory alongside the main programs negotiated between the Commission and Member States.

Initially there were 13 Community Initiatives between 1994 and 1999, which were later consolidated to four in the 2000's. The total amount of funds allocated to the ERDF which were meant for the poorest countries was also increased significantly through Spanish pressure during the negotiations of the 1992 Maastricht treaty³⁹. This treaty laid down the foundations of the Economic and Monetary Union (EMU) and the steps required for an eventual currency union. Among these requirements the treaty called for convergence in development between member states. Another crucial requirement was fiscal prudence of the member states, which was a prerequisite for the formation of the single currency. The dilemma posed by these seemingly contradicting criteria was solved in 1994 through the establishment of the Cohesion Funds. These funds provide targeted financial assistance to the EU's poorest nations, enabling them to invest in infrastructure and environmental projects while simultaneously working towards meeting the EMU's fiscal criteria. By offering this support, the Cohesion Funds helped reconcile the need for

³⁷ Sandy Dall'Erba, "ERDF: History and Current Issues," (2003): 2

³⁸ European Commission, "Community structural policies: assessment and Outlook. Communication of the Commission," (COM (1992) 84 final), Brussels, 2019.

³⁹ Antonio Juste, and Cristina Sio-Lopez, *Spain and the European integration process* (Luxembourg: CVCE, 2016), 7-8. Retrieved from http://www.cvce.eu/obj/spain_and_the_european_integration_process-en-bf91b328-fbed-4a65-9a3b-eadc21a7e831.html

increased investment with the requirement for fiscal discipline, in theory creating the path towards economic convergence and the successful adoption of a common currency. The main difference with the ERDF is that access to the Cohesion Funds is limited to a subsection of EU member states, namely those whose GNI per capita falls below 90% of the EU average. Both funds have the target of paving the way for greater economic integration and shared prosperity, but the ERDF has a broader scope targeting all regions in spite of national development levels⁴⁰.

Further reforms of the structural funds (and the ERDF in extension) were launched in 1995, when the accession of Austria, Finland and Sweden created a need to extend the scope of the funds to include fostering the development of under-populated areas in the new community members⁴¹.

In 1999, during the European Council meeting in Berlin, the decision was made to narrow down the priority objectives of the structural funds to three for the 2000-06 programming period, which also prompted discussions about the effectiveness of targeting Community expenditures. Additionally, at the Council meeting in Berlin there was agreement on the creation of the Instrument for Structural Policies for Pre-Accession (ISPA)⁴². This financial assistance was established for the central and eastern European countries seeking membership, and aimed to enhance their infrastructure and improve the rate of economic convergence with the EU member states.

The objectives of the structural funds were narrowed down to three primary/priority objectives:

Objective 1 focuses on advancing the development and structural realignment of regions grappling with developmental disparities;

Objective 2 aims to bolster the economic and social transformation of areas facing structural hurdles;

Objective 3 aims to facilitate the adaptation and modernization of education, training, and employment policies and systems in regions that do not qualify under Objective 1.

Notably, some initiatives funded through the Structural funds did not fall under any of the three objectives mentioned above.

The role of the ERDF in attaining these objectives is governed by Regulation (EC) No 1783/1999, which falls within the broader framework set forth by Council Regulation (EC) No 1260/1999⁴³, which outlines general provisions governing the Structural Funds.

⁴⁰ European Commission, "Regulation (EU) 2021/1058 of the European Parliament and of the Council of 24 June 2021 on the European Regional Development Fund and on the Cohesion Fund," OJ L 231, Brussels, 2021: 1

⁴¹ European Parliament, "Resolution on the Commission Communication on the allocation of funds and the implementation of Community Initiatives in Austria, Finland and Sweden (COM(95)0123 - C4-0282/95)," OJ C 032, 1999: 139.

⁴² Council of the European Union, "Council Regulation (EC) No 1267/1999 of 21 June 1999 establishing an Instrument for Structural Policies for Pre-accession," OJ L 161, Brussels, 1999.

⁴³ Council of the European Union, "Council Regulation (EC) No 1260/1999 of 21 June 1999 laying down general provisions on the Structural Funds," OJ L 161, Brussels, 1999:p 1–42.

This regulation mandates the European Regional Development Fund (ERDF) to extend support within the framework of Objectives 1 and 2, and defined (sub-)objectives for the ERDF specifically⁴⁴. These include:

- Productive investment to create and safeguard sustainable jobs;
- Investment in infrastructure which contributes, in regions covered by Objective 1, to development, structural adjustment and creation and maintenance of sustainable jobs, or, in all eligible regions, to diversification, revitalisation, improved access and regeneration of economic sites and industrial areas suffering from decline, depressed urban areas, rural areas and areas dependent on fisheries. Such investment may also target the development of trans-European networks in the areas of transport, telecommunications and energy in the regions covered by Objective 1;
- Development of the endogenous potential by measures which support local development and employment initiatives and the activities of small and medium-sized enterprises; such assistance is aimed at services for enterprises, transfer of technology, development of financing instruments, direct aid to investment, provision of local infrastructure, and aid for structures providing neighbourhood services;
- Investment in education and health (only in the context of Objective 1).⁴⁵





The EU's cohesion policy was again reformed and simplified in 2006⁴⁶, in preparation for programming period 2007-2013. Objectives were merged and the numerous initiatives that used to fall outside the scope of the official objectives have been included. The official EU guide for the 2007-2013 cohesion policy includes a detailed infographic which is shown as figure 1.

⁴⁴ Council of the European Union, "EC regulation of general provisions on the Structural Funds", 7-8.

⁴⁵ Council of the European Union, "Council Regulation (EC) No 1783/1999 of the European Parliament and of the Council of 12 June 1999 on the European Regional Development Fund," OJ L 213, Brussels, 1999.

⁴⁶ Council of the European Union, "Council Regulation (EC) No 1083/2006 of 11 July 2006 laying down general provisions on the European Regional Development Fund, the European Social Fund and the Cohesion Fund and repealing Regulation (EC) No 1260/1999," OJ L210, Brussels, 2006: 25-78.

Figure 1: “The evolution of Cohesion policy from 2006 to 2007.”

The cohesion policy architecture				
2000–06			2007–13	
Objectives Community initiatives Cohesion Fund	Financial instruments		Objectives	Financial instruments
Objective 1 Regions lagging behind in development terms	ERDF ESF EAGGF-Guarantee EAGGF-Guidance FIFG		Convergence	ERDF ESF Cohesion Fund
Cohesion Fund	Cohesion Fund			
Objective 2 Economic and social conversion zones	ERDF ESF		Regional competitiveness and employment	ERDF ESF
Objective 3 Training systems and employment policies	ESF			
Interreg III	ERDF		European territorial cooperation	ERDF
URBAN II(*)	ERDF			
EQUAL (*)	ESF			
Leader +	EAGGF-Guidance			
Rural development and restructuring of the fishing sector beyond Objective 1	EAGGF-Guarantee FIFG			
4 objectives 4 Community initiatives Cohesion Fund	6 instruments		3 objectives	3 instruments

(*) In 2007–13, Urban II and Equal will be part of the convergence objective, as well as of the regional competitiveness and employment objective.

Source: Fig.1. European Commission, obtained from Cohesion policy 2007–13 Commentaries and official texts, (2007): 10⁴⁷. © European Union.

Figure 1 shows that the focus for the 2007-2013 programming period is broader than the objectives of the 2000-2006 programming period, both the second and third objectives from the 2000-2006 period are merged together in the new objective of regional competitiveness and employment. Similarly, other funds and initiatives have been grouped together under more general objectives. Notably, the Cohesion Fund no longer operates independently but is incorporated into the Convergence objective. Interreg III, which was an initiative fostering cross-border cooperation between regions, is now part of the European territorial cooperation objective, similarly for Urban II (which focused on urban areas facing social and economic challenges) and Equal (which focused on combatting discrimination in the labour market). Additionally, the Leader+ program and

⁴⁷ European Union, *Cohesion Policy 2007-2013 Commentaries and official texts* (ISBN 92-79-03805-2), Luxembourg: Office for Official Publications of the European Communities, 2007.

the European Agricultural Guidance and Guarantee Fund (EAGGF) are replaced by the European Agricultural Fund for Rural Development (EAFRD), and the Financial Instrument for Fisheries Guidance (FIFG) became the European Fisheries Fund (EFF)⁴⁸.

Following the conclusion of the 2007-2013 programming period, the European Union built on lessons learned to reform the framework once again⁴⁹. The transition from the 2007-2013 programming period to the 2014-2020 period introduced several significant changes aimed at enhancing the effectiveness and strategic alignment of the European Structural and Investment Funds. One of the most notable changes was the alignment of the ESI Funds with the Europe 2020 strategy, replacing the previous link to the Lisbon Strategy. Thematic concentration rules were established, mandating minimum resource allocations for thematic objectives and setting a baseline allocation for the European Social Fund (ESF)⁵⁰. The thematic objectives were also unified to cover all of the structural funds, while in the 2007-2013 period each fund had their own objectives. Other significant changes included the introduction of progress reports in 2017 and 2019, covering all ESI Funds and which were integrated into the European Semester⁵¹.

⁴⁸ European Union, *Cohesion policy 2007–13 Commentaries and official texts* (Luxembourg: Office for Official Publications of the European Communities, 2007), 10.

⁴⁹ M. Ferry and S. Kahl, *Research for REGI Committee – Lessons learnt from the Closure of the 2007-13 Programming Period*, (Brussels: Policy Department for Structural and Cohesion Policies, 2017), 47.

⁵⁰ European Commission, *The Blue Guide: The Implementation of EU Product Rules 2016*, (2022/C 247/01, Luxembourg: Office for Official Publications of the European Communities, 2016), 16-28.

⁵¹ European Commission, *The Blue Guide: The Implementation of EU Product Rules 2016*, 22.

Chapter 2: Policy alignment analysis of the ERDF Flanders work programme

2.1 Introduction

In order to understand the manner in which national or regional governments can significantly influence ERDF implementation, it is necessary to consider the work-programmes that are created and submitted by Member states to the European Commission. These work programmes need to be approved by the European Commission before the funds are allocated and periodically released. The 2014 ERDF work programme for Flanders was allocated a total of 435 million euro, of which 210 million would be drawn from the ERDF and the remainder was funded nationally/regionally. This chapter will firstly outline the conditions that are set for the ERDF in the Europe2020 strategy and in the EU regulations, and then assess whether the goals and targets of the Flanders 2014-2020 work programme are aligned with the overall EU frameworks. Therefore, this chapter assesses overall policy alignment of the work programme with the broader EU policies and regulations for the ERDF. Additionally, this chapter will analyse the specific targets and conditions set in the work programme and determine if those targets have been met, the role of the ERDF in achieving these targets, and if the work programme is consequently supportive of the thematic objectives set by the EU and described in the work programme.

One other factor that must be mentioned is the consequence of the COVID-19 pandemic's economic impact on the ERDF. In 2020 EU GDP declined by 6.6%, while in 2021 real GDP was still 4.9% below pre-pandemic levels⁵². In response to this crisis, the EU distributed additional resources to the structural funds⁵³. Within the ERDF, the four mentioned priority axes were supplemented with the "REACT-EU" initiative, amounting for Flanders to approximately 30 million euro in additional funds⁵⁴. These 30 million are in addition to the 180 million euro ERDF contribution for Flanders in the 2014-2020 period. The available ERDF funds (including REACT-EU) were allocated to numerous projects by the Agency for Innovation & Entrepreneurship (VLAIO). The allocation and distribution occurred through project calls spread over time. Promoters of projects submitting a project application for ERDF funds could apply for a maximum support percentage from the ERDF of 40% of the total project cost, while for projects under REACT-EU, this could go up to 100%⁵⁵. This chapter will not analyse the alignment of

⁵² Philip Muggenthaler, Joachim Schroth and Yiqiao Sun, "The heterogeneous economic impact of the pandemic across euro area countries," *ECB Economic Bulletin*, no. 5 (2021).

⁵³ Vlad Makszimov, "Lawmakers strike deal on first recovery funds as vetoes loom," *Euroactiv*, November 19, 2020.

⁵⁴ Flanders Audit Authority, "REACT-EU in Flanders," *Vlaamse Auditautoriteit nieuws*, April 21, 2021.

⁵⁵ European Union, "Regulation (EU) 2020/2221 of the European Parliament and of the Council of 23 December 2020 amending Regulation (EU) No 1303/2013 as regards additional resources and implementing arrangements to provide assistance for fostering crisis repair in the context of the COVID-19 pandemic and its social consequences and for preparing a green, digital and resilient recovery of the economy (REACT-EU)," OJ L 437, Brussels, 2020.

REACT-EU funds with overall thematic or Europe2020 objectives, instead focusing on the original allocation of 180 Million euro for the 2014-2020 programming period.

2.2 Alignment between the Europe 2020 strategy and the Flanders 2014-2020 work programme

The Flemish work program for the 2014-2020⁵⁶ period was titled “Investing in Growth and Job Opportunities”, which were indicative of the priorities for the Flemish government. The program was structured around four main priorities: **promoting research and innovation, enhancing the competitiveness of SMEs, encouraging the transition to a low-carbon economy, and focusing on sustainable urban development.** These general goals were then complemented with specific objectives that guide and clarify the trajectory of the program. Overall, the objectives and priorities should be in line with the broader Europe 2020 strategy for European economic and social development and the relevant EU regulations.

The Europe 2020 strategy⁵⁷ was published in March 2010 and sought to foster economic growth and social cohesion in a Europe that was grappling with the aftermath of the 2008 financial crisis. The crisis had nullified years of economic and social progress and exposed inherent structural weaknesses in the European economy⁵⁸. The Europe 2020 strategy hoped to strengthen the European economy and society, aiming to create a smart, sustainable, and inclusive economy that ensured high levels of employment, productivity, and social cohesion.

The Europe 2020 initiative outlined three key priorities: **smart growth through innovation and knowledge-based development, sustainable growth via resource efficiency and environmental responsibility, and inclusive growth by fostering employment and social cohesion.** To realise this vision, the EU set ambitious targets for its member states as shown in Table 1.

Table 1: The Europe2020 targets

Target	Description
Employment Rate	Achieving a 75% employment rate for those aged 20-64
Research and Development	Dedicating 3% of GDP to research and development
Greenhouse Gas Emissions	Reducing greenhouse gas emissions by 20% compared to 1990 levels

⁵⁶ Vlaams Agentschap voor Innovatie en Ondernemingen, “EFRO Operationeel Programma Vlaanderen 2014-2020,” *VLAIO* (2014).

⁵⁷ European Commission, *Communication from the Commission Europe 2020: A strategy for smart, sustainable and inclusive growth* (COM(2010) 2020 final), Brussels, 2010.

⁵⁸ Marcin Szczepanski, *A decade on from the crisis. Main responses and remaining challenges* (PE 642.253, Luxembourg: EPRS, 2019), 6-8.

Renewable Energy Use	Increasing the share of renewable energy use to 20%
Energy Efficiency	Improving energy efficiency by 20%
School Dropout Rate	Reducing school dropouts below 10%
Tertiary Education	Ensuring 40% of young people attain tertiary education
Poverty Reduction	Reducing the number of people at risk of poverty by 20 million

Source. Adapted from *EUROPE 2020 A strategy for smart, sustainable and inclusive growth*⁵⁹.

The 2014-2020 work program for Flanders is specifically designed to use the limited resources to a maximum effect in order to realise the economic and social objectives in the Europe2020 strategy. Firstly, the thematic objectives in the work program align closely with the three thematic objectives of the Europe 2020-strategy. As shown in the Table 2 below, every objective is matched with their corresponding Flemish one, on some occasions even multiple objectives correspond. For example, promoting research and innovation promotes the ‘Smart Europe’ objective and the promotion of sustainable development is an integral part of the ‘Sustainable Growth’ objective.

Table 2. Alignment of Europe2020 objectives and the Flanders 2014-2020 work program

Europe 2020 Objectives	Matched Flanders 2014-2020 Work Program Objectives
Smart Growth: Innovation and knowledge-based development	Promoting research and innovation
Smart Growth: Innovation and knowledge-based development	Enhancing the competitiveness of SMEs
Sustainable Growth: Resource efficiency and environmental responsibility	Encouraging the transition to a low-carbon economy
Sustainable Growth: Resource efficiency and environmental responsibility	Focusing on sustainable urban development
Inclusive Growth: Employment and social cohesion	Enhancing the competitiveness of SMEs (which contributes to job creation and social cohesion)

⁵⁹ European Commission, *Communication from the Commission Europe 2020: A strategy for smart, sustainable and inclusive growth*, 5.

Source: Data from VLAIO, *EFRO Operationeel Programma Vlaanderen 2014-2020*.⁶⁰

Table 2 shows the alignment of the Flanders 2014-2020 work programme with the Europe2020 objectives. However, the Europe 2020 goals are broad enough to enable national or regional governments to customize their strategies to meet specific national or regional needs. For Flanders, a Strengths and Weaknesses (SWOT) analysis by the Catholic university of Leuven⁶¹ identified several structural issues in areas such as innovation, competition, and demographic changes. Consequently, as visible in Table 2, the priority objectives of the Flanders Work programme are much narrower and refined than the overarching Europe2020 objectives, as they are tailored to address particular regional needs. As a result of the deliberate broadness of the Europe2020 thematic objectives, aligning a work programme towards these objectives should not pose a significant challenge for most nations or regions and it is therefore a relatively weak measure of assessing alignment.

Another method of assessing the alignment of the Flanders work programme with the Europe 2020 strategy is examining the results and achievements by 2020. Under the assumption that the Flanders work programme was the core tool for achieving these objectives we can draw on their results to assess if the work programme was also in practice aligned with the EU strategy. The idea that the Europe2020 objectives should be achieved primarily through the use of EU structural funds is alluded to in the Europe2020 strategy itself: “*Cohesion policy and its structural funds, while important in their own right, are key delivery mechanisms to achieve the priorities of smart, sustainable and inclusive growth in Member States and regions*”⁶². In Flanders, the two main structural funds active are the ERDF and ESF+, with the ESF focusing mostly on social inclusion, educational training and sustainable employment.⁶³ When removing the Europe2020 targets that thematically fall under the ESF+, we are left with the employment rate target, research and development target, greenhouse gas emissions target, renewable energy target and the energy efficiency target. Due to the reasons stated above, achievement of these targets can be considered dependent on the ERDF for inclusion and implementation.

Notably, the Europe2020 targets were adapted into national work programs such as the ‘Vlaanderen in Actie’ (Flanders in action) strategy⁶⁴. The strategy translates the Europe2020 objectives into regional objectives. This is best shown by taking a closer look at the 20-20-20 target. While mostly echoing the objectives in the Europe2020 strategy, there is a notable exception. The 20-20-20 objective refers to the all sectors of the economy, however the European Union took responsibility of the emission reductions in

⁶⁰ Flemish Region of Belgium, *Operationeel Programma "Investeren in groei en Werkgelegenheid" Vlaanderen 2014-2020* (4th Version: 2014BE16RFOP002, Brussels: VLAIO, 2021), 52.

⁶¹ Cathy Lecocq, Jo Reynaerts and Marieke Vandeweyer, “EFRO 2014-2020: een sterke-zwakke analyse van Vlaanderen,” *Vlaams Instituut voor Economie en Samenleving (VIVES)*, (2014): p 11-96.

⁶² European Commission, “EUROPE 2020: A strategy for smart, sustainable and inclusive growth,” COM(2010) 2020, (2010): p20.

⁶³ European Commission, “Operational Programme ESF Flanders 2014-2020,” European Commission Website, 2024, https://ec.europa.eu/regional_policy/in-your-country/programmes/2014-2020/BE/2014BE05SFOP002

⁶⁴ Flemish Region of Belgium, *Vlaanderen in actie: Toekomstplan voor 2020* (Brussel: Afdeling Communicatie, 2009).

the Emission Trading System (ETS) sectors while member states took responsibility for the rest. In Flanders, the target for non-ETS sector reductions was decided on 15% and the share of renewable electricity on 13%⁶⁵, which are significantly lower than the targets in the Europe2020 strategy. Table 3 shows the achievements of Flanders by 2020.

Table 3: ERDF relevant Europe2020 targets and results in Flanders (2020)

Sector	Goal	Base value (2005)	Realised value in 2020	Percentage change	Target achieved?
non-ETS emission reductions	15% decrease (base year 2015)	91.54 Megatons of CO2 equivalents	70.02 Megatons of CO2 equivalents	23.51% decrease	Yes
Share of renewable energy	13% of total energy production from renewable energy	N/A	9%	N/A	No
Energy productivity	20% increase in energy productivity (Euro per Megajoule)	0.16	0.27	68.75% increase	Yes
Research and Development	Dedicating 3% of GDP to research and development	N/A	3.57%	N/A	Yes
Employment rate	Achieving a 75% employment rate for those aged 20-64	N/A	75.4%	N/A	Yes

⁶⁵ Vlaams Agentschap voor Innovatie en Ondernemingen, “EFRO Operationeel Programma Vlaanderen 2014-2020,” *VLAIO* (2014):p 71

Source. Data from the Europe2020 strategy⁶⁶, the Flanders environment agency⁶⁷, Flanders environmental department⁶⁸, Digital Flanders Department⁶⁹, STATBEL⁷⁰ and the Centre for Research & Development monitoring⁷¹.

Table 3 above shows the significant progress that has been made on all targets. Notably, by 2020, Flanders achieved a total decrease in non-ETS emissions of 23.51%, overshooting the target significantly. In terms of Energy productivity, the target was also reached with a result of 68.75% compared to base year 2005. However, the third target, regarding the share of renewable energy in use, was failed. By 2020, only 9% of the energy share came from renewables while the target was 13%. Notably this target was already lowered before as the Europe2020 target was 20%. Flanders spend 3.57% of GDP on R&D, and achieved an employment rate of 75.4%, succeeding both those targets.

Given the close alignment between the Europe2020 objectives and the Flanders 2014-2020 priority axes, and the successful achievement of most Europe2020 targets, of which the ERDF was a core driver for success, it is clear that the Flanders 2014-2020 work programme is in alignment with the Europe2020 strategy. However, member states of the European Union are not fully free in their priority choices, each investment priority decision and eventual allocation has to be additionally aligned with European Union ERDF regulations, as explored in the following section.

2.3 Alignment between the ERDF regulations and the Flanders 2014-2020 work programme

The regulations that lie at the basis of the objectives and goals of the ERDF are regulation 1301/2013⁷² which covers the ERDF specifically, and regulation 1303/2013⁷³ covering

⁶⁶ European Commission, “EUROPE 2020: A strategy for smart, sustainable and inclusive growth,” COM(2010) 2020, (2010): p20

⁶⁷ Flanders Environment Agency, “Greenhouse gas emissions fell by 25% between 2005 and 2022,” (date n.a.) Accessed on 09/06/2024, <https://www.vlaanderen.be/en/statistics-flanders/environment-and-nature/greenhouse-gas-emissions>

⁶⁸ Environment Department (Flanders), “Energieproductiviteit,”(2022), accessed on 10/06/2024, <https://indicatoren.omgeving.vlaanderen.be/indicatoren/energieproductiviteit>

⁶⁹ Digital Flanders, “Aandeel hernieuwbare energie,” (2022), accessed on 09/06/2024 <https://www.vlaanderen.be/vlaamse-regering/vlaamse-veerkracht/dashboard-vlaamse-veerkracht/duurzame-groei/aandeel-hernieuwbare-energie>

⁷⁰ STATBEL, “Employment and unemployment,” (date n.a.), accessed on 12/06/2024 <https://statbel.fgov.be/en/themes/work-training/labour-market/employment-and-unemployment#figures>

⁷¹ Centre for Research & Development Monitoring, “Indicators Book- The resources for R&D,” *Vlaams indicatorenboek*, (2021).

⁷² European Union, “Regulation (EU) No 1301/2013 of the European Parliament and of the Council of 17 December 2013 on the European Regional Development Fund and on specific provisions concerning the Investment for growth and jobs goal and repealing Regulation (EC) No 1080/2006,” OJ L 347, 2013: 281-333.

⁷³ European Union, “Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional

the general provisions of the Structural funds. These regulations set out the thematic objectives for the ERDF and the corresponding investment priorities. The eleven thematic objectives that each ESI fund is meant to support are⁷⁴:

- (1) Strengthening research, technological development and innovation;
- (2) Enhancing access to, and use and quality of, ICT;
- (3) Enhancing the competitiveness of SMEs, of the agricultural sector (for the EAFRD) and of the fishery and aquaculture sector (for the EMFF);
- (4) Supporting the shift towards a low-carbon economy in all sectors;
- (5) Promoting climate change adaptation, risk prevention and management;
- (6) Preserving and protecting the environment and promoting resource efficiency;
- (7) Promoting sustainable transport and removing bottlenecks in key network infrastructures;
- (8) Promoting sustainable and quality employment and supporting labour mobility;
- (9) Promoting social inclusion, combating poverty and any discrimination;
- (10) Investing in education, training and vocational training for skills and lifelong learning;
- (11) Enhancing institutional capacity of public authorities and stakeholders and efficient public administration.

The outlined objectives are relatively broad, encompassing a range of economic and social factors from enhancing the competitiveness of SMEs to combating discrimination and investing in the institutional capacity of public authorities. This broad scope aims to provide a common framework for all European Structural Investment Funds, ensuring that member states with diverse economies can find relevant aspects.

For example, the strategy includes goals such as boosting SME competitiveness and addressing social issues like discrimination.

To implement these goals efficiently, the thematic priorities are tailored into specific priorities for each European Structural Investment Fund. For the ERDF, these objectives are specified in Regulation 1301/2013, Article 4. This article distinguishes between 'more developed regions,' 'transition regions,' and 'less developed regions'. Regions are defined according to the Nomenclature of Territorial Units for Statistics (NUTS) level 2 classification established by EC Regulation 1059/2003⁷⁵ and amended by EC Regulation

Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006," OJ L 347, Brussels, 2013: 320-469

⁷⁴ European Union, "Regulation 1303/2013 on the provision for the Structural Funds," OJ L 347: p343.

⁷⁵ European Union, "Regulation (EC) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS)," OJ L 154, Brussels, 2003: 1-41.

105/2007⁷⁶. In Flanders, Level 2 NUTS regions correspond to its five provinces, meaning each province's category is determined separately, and ERDF investment rules may vary between provinces. Regions are considered more developed when their GDP per capita is above 90% of the EU-27 average, in transition when it is between 75% and 90%, and less developed when it is below 75%. Each category of region has distinct targets based on their classification.

In Belgium the divide between North and South is stark in terms of development⁷⁷. Flanders in the North is fully part of the ‘developed regions’ category while in Wallonia all provinces except one fall in the ‘transition regions’ category. The exception being the province of Brabant Wallon which is also placed in the ‘developed’ regions category. As all provinces of Flanders are considered ‘developed regions’, this analysis only considers the ERDF criteria of ‘developed regions’.

These criteria are threefold:

- Firstly, at least 80% of the resources from the ERDF, allocated at a national level, should go to two or more of the first four thematic objectives of the ERDF.
- Secondly, at least 20% of the resources should be allocated to thematic objective four.
- Lastly, given that cities act as crucial hubs for innovation and are the driving force of the European economy, at least 5% of the allocated ERDF funds had to be directed towards projects for integrated and sustainable urban development⁷⁸. Several of the thematic objectives in the EU ERDF regulation can be matched to one of the four priority axis in the Flanders work program, as shown in Table 4.

Table 4. Alignment between ERDF Thematic Objective and the Flanders work programme

Priority Axis in Flanders work program	Matched ERDF Thematic Objective
1. Promoting research and innovation	1. Strengthening research, technological development and innovation
2. Enhancing the competitiveness of SMEs	3. Enhancing the competitiveness of SMEs, of the agricultural sector, and fisheries

⁷⁶ European Council, “EC Regulation 105/2007: Commission Regulation (EC) No 105/2007 of 1 February 2007 implementing Regulation (EC) No 1059/2003 of the European Parliament and of the Council on the establishment of a common classification of territorial units for statistics (NUTS),” OJ L 39, Brussels, 2007: 1-55.

⁷⁷ Ivan Broeckmeyer, “Welzijnskloof tussen Vlaanderen en Wallonië steeds dieper,” *DeTijd*, December 28, 2011.

⁷⁸ European Union, “Regulation (EU) No 1301/2013 of the European Parliament and of the Council of 17 December 2013 on the European Regional Development Fund and on specific provisions concerning the Investment for growth and jobs goal and repealing Regulation (EC) No 1080/2006, 2013, 281-333.

Priority Axis in Flanders work program	Matched ERDF Thematic Objective
3. Encouraging the transition to a low-carbon economy	4. Supporting the shift towards a low-carbon economy in all sectors
4. Focusing on sustainable urban development	5. Promoting climate change adaptation, risk prevention and management
4. Focusing on sustainable urban development	6. Preserving and protecting the environment and promoting resource efficiency
4. Focusing on sustainable urban development	9. Promoting social inclusion, combating poverty and any discrimination

Source: Data from VLAIO, *EFRO Operationeel Programma Vlaanderen 2014-2020*⁷⁹.

The total amount of ERDF resources that were allocated to Flanders for the 2014-2020 period was 180 Million euro, which is without the REACT EU package (+- 30 Million euro) and which was added later in 2021. In order to comply with the ERDF regulation the 2014-2020 Flanders work programme would be required to allocate at least 80% (144 Million euro) to priority axes 1, 2, and 3⁸⁰ (which correspond with thematic objectives 1, 3, and 4). This requirement was fulfilled as the work programme allocates 87.630.435 euro for priority axis 1, 28.875.995 euro for priority axis 2, and 35.210.590 euro for priority axis 3. In total that means 151.717.020 euro was assigned to these thematic objectives, surpassing the 80% requirement by some margin.

Although meeting the first requirement comfortably, the Flemish government has narrowly failed the second requirement, which was that at least 20% of the ERDF funds (36 Million euro) had to be allocated to supporting the shift towards a low-carbon economy (thematic objective 4). The corresponding priority axis to thematic objective four is ‘encouraging the transition to a low-carbon economy’ (3), which was allocated funding to the amount of 35.210.590 Million euro (or 19.56%). Given the proximity to the required amount, it is reasonable to assume that the Commission greenlighted the program in spite of the minor misallocation, which was around 800.000 euro, showcasing that there is some flexibility in the allocation of funds.

The third requirement, which stipulates that 5% of ERDF funds should be allocated to urban areas, was met with a significant margin. While projects from all priority axes could be situated in urban areas, priority axis four specifically targets urban sustainable investment. Consequently, if this axis alone meets the spending criteria, it can be inferred that the overall planned expenditure in urban areas has surpassed the required threshold. 5% of the resources allocated would translate into nine Million euro, and the fourth priority axis has been allocated 16.932.469 euro (or 9.4%), significantly surpasses the

⁷⁹ Flemish Region of Belgium, Operationeel Programma "Investeren in groei en Werkgelegenheid" Vlaanderen 2014-2020" (4th Version: 2014BE16RFOP002, Brussels: VLAIO, 2021), 27-31.

⁸⁰ European Union, "Regulation No 1301/2013 on the ERDF," 293.

requirement. In reality the resources allocated to this urban projects are likely to be much higher as the analysis has not accounted for the other priority axes.

In sum, the Flanders work program is directly aligned with 6 out of the 11 thematic objectives and reaching almost all requirements. One requirement that was not reached was failed by a small margin 0.44%. While 6 out of 11 thematic objectives barely crosses the 50% threshold, a lower alignment rate is to be expected in this area as the thematic objectives encompass all funds, not simply the ERDF. It is likely that objectives 10 and 9 were also prominent in the ESF+ program⁸¹ and objective 11 was featured strongly in priority axis 5⁸², which concerns improving monitoring and management systems, but which falls out of the scope of this thesis. Taking the ESF+ and priority axis 5 under consideration, as well as the general success in meeting ear-marking requirements, the analysis shows that the Flanders work policy is aligned with ERDF regulation, both thematically and in requirements.

⁸¹Flemish Region of Belgium, “Europees Sociaal Fonds (ESF+),” *VLAIO*, (2024). Accessed on 10/06/2024.

⁸² Vlaams Agentschap voor Innovatie en Ondernemingen, “EFRO 2014-2020 Programma Vlaanderen,” 51

Chapter 3: Analysis of output indicators and results of the Flanders 2014-2020 ERDF work programme

3.1 Introduction

As established in chapter 1 and 2, the Flanders 2014-2020 ERDF work programme is aligned thematically with the Europe2020 strategy and corresponding EU regulations. However, the question remains whether the work programme's results support its thematic objectives and consequently the Europe2020/ERDF regulations objectives. The following sections will examine the results of each of the priority axes for alignment with the objective. The analysis uses output indicators and where suitable other data sources to assess the success of each priority axis in achieving its objectives.

3.2 First priority axis: Research, technological development, and innovation

Research, technological development, and innovation

The first priority axis of the ERDF 2014-2020 program for Flanders focused on fostering research, technological development, and innovation to meet the Europe 2020 innovation targets. Three criteria were established to ensure efficient resource utilization: the projects needed to align with EU and Flemish innovation policies, the funding had to be supplementary to existing Flemish funding, and the projects had to adhere to the principles of 'smart specialization'⁸³. Additionally to the focus on the sectors derived from the smart specialisation strategy, article five of the ERDF regulation⁸⁴ highlighted two investment priorities for the strengthening research, innovation and technological development thematic objective.

- Firstly, there should be a focus on enhancing research and innovation infrastructure with the purpose of fostering centres of competence and R&I excellence.
- Secondly, investments should focus on the valorisation of innovations by fostering the marketability of research and innovation. This gap between producing innovation and the bringing of innovative technologies on the market is a significant challenge in Flanders and many other regions in Europe⁸⁵.

The work program then narrows down on promising areas where the region can utilize its comparative advantages over others. This "smart specialization principle" aims to

⁸³ Vlaams Agentschap voor Innovatie en Ondernemingen, "EFRO 2014-2020 Programma Vlaanderen," 32

⁸⁴ Regulation (EU) No 1301/2013 of the European Parliament and of the Council of 17 December 2013 on the European Regional Development Fund and on specific provisions concerning the Investment for growth and jobs goal and repealing Regulation (EC) No 1080/2006, 2013.

⁸⁵ Zappe H, "Innovation: Bridging the market gap," *Nature* 501, 483–485 (2013): 2. <https://doi.org/10.1038/501483a>

enhance the efficiency and effectiveness of innovation efforts⁸⁶. Smart specialization in this context refers to a manner of policy-making where you assess the sectors which are most promising and where you hold a comparative advantage before focusing your resources on these areas. This policy approach is additionally employed to utilise local diversity in fostering innovation by focusing on regional comparative advantages.

In 2013, the Flemish department of the Economy, Science and Innovation (EWI) published a Strategic policy framework for “Smart Specialisation” which narrowed down the priorities for the 2014-2020 ERDF programme to the eight key sectors where Flanders seeks to establish international leadership. These included sustainable chemistry, specialised manufacturing, specialised healthcare, specialised logistics, specialised agro-food, integrated construction-environment-energy cluster, smart systems, and creative industries and services.

In 2019, this strategy was slightly revised and expanded to include ten priority sectors with the addition of advanced materials. And the replacement of specialised manufacturing with smart manufacturing, smart systems with electronic systems – Internet of Things – photonics, and integrated construction-environment-energy cluster with energy, cleantech, and blue economy. However, given that the large majority of the program was implemented before 2019, as the program officially ran from 2014 until 2020, this thesis primarily considers the 8 original key sector.

This thesis will analyse the alignment of the Research and Development axis with its smart specialization priorities by conducting a database analysis. The database in question is the project database of the VLAIO⁸⁷, which contains the 95 ERDF projects that have been conducted in the 2014-2020 period. The database is organised around themes which are matched with the 8 priority sectors in Table 5.

Table 5. Matched Smart specialization priority sector with the VLAIO database themes

Smart specialization priority sector	Aligned database Themes
Sustainable Chemistry	bio-based economy, biomass, renewable energy storage, renewable energy production, circular economy
Specialized Manufacturing	manufacturing industry, materials, industry 4.0, innovation

⁸⁶ Department Economie; Wetenschap & Innovatie, “Strategy for Smart Specialisation in Flanders: First draft document,” *VLAIO*: 7.

⁸⁷ Vlaams Agentschap innoveren & ondernemen, “*EFRO-projectendatabank*”, *VLAIO*, Accessed on 10/06/2024. <https://www.efro-projecten.be/nl/zoek-een-europees-project/>

Specialized Healthcare	care and health, care innovation, personalized healthcare, life sciences
Specialized Logistics	transport & logistics, mobility, personal mobility
Specialized Agro-Food	agro-food, food industry, greenhouse horticulture, algae
Integrated Construction-Environment-Energy Cluster	construction, low-carbon economy, circular economy, energy, water management, water quality, ecosystem management
Smart Systems	artificial intelligence, autonomous vehicles, digitization, data, ICT, e-mobility
Creative Industries and Services	Services, skills
Themes that do not directly align with a priority	labour market, soil, clusters, internationalization, SME support, entrepreneurship, research and innovation, urban development, vessels

Source. Data obtained from the Flemish department of Economics, Science and Innovation⁸⁸, 7 and the VLAIO, EFRO-projectendatabank⁸⁹.

As shown in Table 5, some themes do not directly link with any priority sector. Undoubtedly, there is the possibility that projects in these themes have secondary effects on key sectors, however, this thesis will only examine direct links. Table 6 shows how many projects are aligned to the priority sectors in the database, using the corresponding themes above. Projects with more than one theme which fall under multiple priority sectors are allocated to both sectors.

Table 6. Number of projects aligned with the relevant priority sectors

⁸⁸ Department Economie; Wetenschap & Innovatie, “Strategy for Smart Specialisation in Flanders: First draft document,” 7.

⁸⁹ Vlaams Agentschap innoveren & ondernemen, “EFRO-projectendatabank”, VLAIO, Accessed on 10/06/2024. <https://www.efro-projecten.be/nl/zoek-een-europees-project/>

Priority	Aligned Themes	Number of projects
Sustainable Chemistry	bio-based economy, biomass, , circular economy	12
Specialized Manufacturing	manufacturing industry, materials, industry 4.0, innovation	58
Specialized Healthcare	care and health, care innovation, personalized healthcare, life sciences	19
Specialized Logistics	transport & logistics, mobility, personal mobility	3
Specialized Agro-Food	agro-food, food industry, greenhouse horticulture, algae	15
Integrated Construction-Environment-Energy Cluster	construction, circular economy, renewable energy storage, renewable energy production, low-carbon economy, energy, water management, water quality, ecosystem management	16
Smart Systems	artificial intelligence, autonomous vehicles, digitization, data, ICT, e-mobility	26
Creative Industries and Services	skills, services	4
Does not directly align with a priority	labor market, soil, clusters, internationalization, SME support, entrepreneurship, research and innovation, urban development, skills, vessels	21

Source. Data obtained from the Flemish department of Economics, Science and Innovation⁹⁰, 7 and the VLAIO, EFRO-projectendatabank⁹¹.

In Table 6 it is shown that out of 95 projects, a large majority (58) are aligned with the specialized manufacturing priority, while the specialized logistics and creative industries and services sectors have the least number of projects totalling 3 and 4 respectively. 21 projects are not directly aligned with any of the priority sectors, representing 22.11% of the total amount of projects. Consequently almost 80% of projects are aligned with the Smart specialisation requirement.

Another part that is crucial to the measurement of success of an ERDF work programme is the inclusion of result indicators. As mentioned in the introduction, result indicators are

⁹⁰ Department Economie; Wetenschap & Innovatie, “Strategy for Smart Specialisation in Flanders: First draft document,” 7.

⁹¹ Vlaams Agentschap innoveren & ondernemen, “EFRO-projectendatabank”, VLAIO, Accessed on 10/06/2024. <https://www.efro-projecten.be/nl/zoek-een-europees-project/>

the current go-to solution for accessing the effectiveness of ERDF programs. The first priority axis of the Flanders ERDF 2014-2020 program has two priority specific indicators, which correlate to the two investment priorities, and six common or program specific indicators which all have specific units of measurements and targets.

The first a priority-specific indicator that was included is the percentage of SME’s with product, process, marketing or organisational innovation. The exit value being 62% of SME’s in 2013 and the target being 70% in 2023. In other words, the goal is to increase the number of SME’s with innovation by 8%. This target was already reached by 2018, and according to the last available data (from 2021) the current percentage of SME’s with product, process, marketing or organisational innovation climbed to 74%⁹² and is likely to have risen even more by the time the program ended in 2023.

The second priority specific indicator considered the share of revenue realised by new or improved (read innovative) products or services. The exit value in 2013 was 8% and the goal for 2023 is 10% of revenue. A rise in the share of innovative products and services would provide validation that the projects are likely to have contributed to the first and second investment priority. Data from 2022 show that the current share is 14%, indicating that the target has also been reached by a significant margin. It should be noted that for both the first and the second priority investment indicators, some measurements are out of date (Several measurements are from 2021 or 2020), and the sample number is sometimes limited to only handful of measurements. The second axis only has 2 specific result indicators and achieved success in both of them, as shown in Table 7.

Table 7. Axis 1: Specific result indicators and their realised values in 2022

Indicator ID	Indicator	Unit of measurement	Base value	Realised value (2022)	Target value (2023)	Target achieved?
R.1.1	Total number of SME's with product, process, marketing, or organizational innovation	Percentage	62	74 (2021)	70	Yes
R.1.2	Share of revenue realised by new/improved products or services	Percentage	8	14	10	Yes

⁹² European Union, “ESIF 2014-2020 Achievement Details - ERDF-CF Programme Specific,” *Cohesion Open Data platform*. Accessed on 31/05/2024.

Source. Data from the Flemish Region of Belgium, *Investeren in groei en werkgelegenheid' Jaarverslag 2022*, 15⁹³.

Apart from the program specific indicators, the Flanders 2014-2020 work programme includes a number of Common indicators along with their target values. It is important to note that the target values in the table below no longer correspond to the original target values as described in the 2013 work programme but have been changed (generally upwards) during program revisions in 2017 and 2019⁹⁴. Nevertheless, the revisions took place within the same framework as determined in the beginning of the 2014-2020 program period (conform Europe 2020 and the ERDF regulations) and are therefore still an applicable unit for assessing if the implementation of the program was successful in terms of meeting targets. And consequently if the work program was in reality conducive to reaching the policy objectives which we already have determined to be aligned with European objectives and regulations. As shown in Table 8 all common indicators show success in reaching their targets.

Table 8. Axis 1: Table of common indicators and their realised value in 2022

Indicator ID	Indicator	Unit of measurement	Realised approved projects by 2022	Target value for 2023	Target Reached?
CO26	Number of companies collaborating with supporting knowledge institutions to promote co-creation and valorization of R&D results	Firms	874	320	Yes
O.1.2	Number of products and/or services developed and/or tested within a living lab	Number of Products and services	504	96	Yes
CO28	Number of companies supported in introducing new products (new to the market) through knowledge	Firms	532	315	Yes

⁹³ Flemish Region of Belgium, *Investeren in groei en werkgelegenheid' Jaarverslag 2022* (CCI-nr. 2014BE16RFOP002, Brussels: VLAIO, 2022), 10-35.

⁹⁴ KPMG Advisory, "Impactevaluatie van het EFRO 14-20 programma voor Vlaanderen," *VLAIO*, p.13

	valorization and marketing				
CO29	Number of companies supported in introducing new products (new to the company) through knowledge valorization and marketing	Firms	951	420	Yes
O.1.5	Number of company support interventions to promote the valorization of research results	Number of support interventions	1004	525	Yes

Source. Data from the Flemish Region of Belgium, *Investeren in groei en werkgelegenheid' Jaarverslag 2022*, 10-14⁹⁵.

The data in Table 8 shows the indicator used, how it was measured, what the goal was to reach by 2023, the realised value by 2022, and finally whether the target was achieved. As evident in the last column, all the common indicator targets have been achieved and many by a significant margin. This is in spite of many targets being revised upwards while the program was already underway.

In sum, the Flanders 2014-2020 ERDF work programme for research, technological development, and innovation (priority axis one) has demonstrated convincing success in aligning with its policy objectives and achieving its targets. The program, structured around the smart specialisation principle, strategically allocated funds to key sectors where Flanders sought to establish international leadership. Almost 80% of all projects in this axis could be allocated to a key sector. The inclusion of result indicators provided a means to assess the effectiveness of the program, with specific indicators being dedicated to enhancing research infrastructure and fostering innovation valorisation. Analysis of the indicator values reveals a consistent pattern of target (over)achievement across all the common and program specific indicators, despite upward revisions of targets during the program's implementation. The program's success in meeting its targets underscores the overall success in aligning the program European objectives and regulations.

⁹⁵ Flemish Region of Belgium, 'Investeren in groei en werkgelegenheid' Jaarverslag 2022 (CCI-nr. 2014BE16RFOP002, Brussels: VLAIO, 2022), 10-14.

3.3 Second priority axis: strengthening of the competition capabilities of SME's

Strengthening of the competition capabilities of SME's.

The second priority axis in the work program concerns the strengthening of the competition capabilities of SME's⁹⁶. One of the reasons behind choosing this priority was the (relatively) low entrepreneurship rate of Flanders compared to the average of the EU. In 2011, three years before the start of the programme, a Strengths and Weaknesses analysis found that the rate of self-employed individuals in the working age population of Flanders was 8.5%, which was lower than the European Union (EU-27) average of 9.3%.⁹⁷ SME's's were also found to be crucial for the Belgian economy, in 2010 they comprised 99.8% of all enterprises, provided for 65.7% of employment, and were responsible for 58.2% of the added value created in the economy. In sum, the inclusion of this priority axis in the 2014-2020 work programme was driven by the relatively low entrepreneurship rate, the importance of SMEs to the economy, and increasing challenges such as an aging population and high labour costs⁹⁸.

The objectives and priorities in this axis have been inspired by both EU regulations and the Europe2020 strategy, but also by the 2008 'Small Business Act'⁹⁹, which was an European Commission communication establishing guidelines and good practices on designing policy meant to foster SME's. Although the document is non-binding, the Flemish government has adopted its recommendations in the 2014-2020 ERDF work programme. The Small Business Act (SBA) specifies ten principles that should guide policymaking in this sector¹⁰⁰:

1. Foster an environment where entrepreneurship is valued.
2. Provide a second chance for honest entrepreneurs after bankruptcy.
3. Create rules with the 'think small first' principle.
4. Make public administrations SME-friendly.
5. Tailor public policy to SMEs, including public procurement and state aid.
6. Improve SMEs' access to finance and ensure timely payments.
7. Enhance SME participation in the EU single market.
8. Promote skill development and innovation in SMEs.
9. Turn environmental challenges into opportunities for SMEs.
10. Help SMEs benefit from market growth.

⁹⁶ Vlaams Agentschap voor Innovatie en Ondernemingen, "EFRO Operationeel Programma Vlaanderen 2014-2020," *VLAIO* (2014):p52

⁹⁷ Cathy Lecocq, Jo Reynaerts, and Marieke Vandeweyer, "EFRO 2014-2020: een sterkte-zwakte analyse van Vlaanderen," p88.

⁹⁸ Jean-François Dauphin, and Padajma Khandelval, *Addressing Belgium's Economic Challenges* (Brussels: Belgian Financial Forum, 2024).

⁹⁹ European Commission, *Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions: Think Small First" - A "Small Business Act" for Europe* (COM/2008/0394 final, Luxembourg: Office of Official publications of the European Union, 2008).

¹⁰⁰ European Commission, "Small business Act;" 4.

The above priorities are purposefully general and vague, as they are meant as guidelines for member states¹⁰¹.

Flanders 2014-2020 ERDF work programme (SME competition axis) identified three areas of focus which are related to some but not all of the SBA principles including ‘Stimulating entrepreneurship, particularly by supporting the commercial exploitation of new ideas and the establishment of new enterprises, including through business incubators.’; ‘Developing and implementing new business models for SMEs, particularly for internationalization.’; and ‘Supporting the capacity of SMEs to grow and innovate.’¹⁰² After analysing the investment priorities of the second axis, table 9 below shows the alignment between the SBA principles and the priority axes of the Flanders work programme.

Table 9. Alignment of the SBA principles with AXIS 2 investment priorities.

Small Business Act Principles	Matched (Axis 2) Investment Priorities
1. Foster an environment where entrepreneurship is valued.	1) Stimulating entrepreneurship, particularly by supporting the commercial exploitation of new ideas and the establishment of new enterprises.
2. Provide a second chance for honest entrepreneurs after bankruptcy.	Not directly related to any investment priority.
3. Create rules with the 'think small first' principle.	2) Develop and implement new business models for SMEs, particularly for internationalization.
4. Make public administrations SME-friendly.	Not directly related to any investment priority.
5. Tailor public policy to SMEs, including public procurement and state aid.	Not directly related to any investment priority.
6. Improve SMEs' access to finance and ensure timely payments.	3) Support the capacity of SMEs to grow and innovate.
7. Enhance SME participation in the EU single market.	2) Develop and implement new business models for SMEs, particularly for internationalization.
8. Promote skill development and innovation in SMEs.	3) Support the capacity of SMEs to grow and innovate.
9. Turn environmental challenges into opportunities for SMEs.	Not directly related to any investment priority.
10. Help SMEs benefit from market growth.	1) Stimulating entrepreneurship, particularly by supporting the commercial exploitation of new ideas and the establishment of new enterprises.

¹⁰¹ European Commission, “Small Business Act,” 2.

¹⁰² Vlaams Agentschap voor Innovatie en Ondernemingen, “EFRO Operationeel Programma Vlaanderen 2014-2020,” 55-63.

Source. Data obtained from the European Commission¹⁰³, *A “Small Business Act” for Europe*, 4. And the Flemish Region of Belgium¹⁰⁴, *Investeren in groei en Werkgelegenheid” Vlaanderen 2014-2020*, 52.

The investment priorities match several principles as shown in Table 9, but notable exceptions include principle two, five, and nine. Europe has historically struggled to match US levels of entrepreneurship in the population and one of the reasons most often used to explain this disparity is the difference in bankruptcy culture¹⁰⁵. In the US, having tried (and failed) to create a firm is often an asset to an entrepreneurs resume. The culture around entrepreneurship places more importance on traits such as ‘risk-taker’ or ‘self-starter’, as it shows that you are not afraid from taking on significant responsibility and take risks. In Europe the reverse is true, if you lose a firm in Europe it is viewed as irresponsible or incompetent. This discourages risk-taking among potential entrepreneurs, explaining in part the disparity between the US and Europe¹⁰⁶.

Other principles like principle five (Tailor public policy to SMEs, including public procurement and state aid.) and principle nine (Turn environmental challenges into opportunities for SMEs.) are also extremely relevant in the current (2024) context but were not that salient in public discourse in 2014. State aid rules in the EU gained prominence during the COVID-19 pandemic when the European Commission adopted a temporary state aid framework in March 2020. This framework provided financial aid to firms facing solvency issues due to pandemic restrictions and supply chain problems. In response to the Russian invasion of Ukraine, the European Commission introduced the Temporary Crisis Framework in 2022, effective from March 2023, to protect the European economy from the war's impacts. The framework was amended in May 2024, extending measures until 2024. Given the competitive global landscape and supply chain security concerns, it's likely the framework will be extended beyond 2024. However, in 2014, the threat of overseas dependencies was not yet apparent. It took the COVID pandemic and the Ukraine war for European leaders to recognize this danger and consider loosening state aid rules despite risks to the single market. Additionally, principle nine (turn environmental challenges into opportunities for SMEs) was not covered directly by the second priority axis but is addressed in the third priority axis of the work program, which promotes the transition to a low-carbon economy.

Like in the first priority axis, the indicators can be split into two categories. Specific indicators which are aligned with the investment priorities and general or program-specific indicators, which measure the overall success of the program in this axis. For priority one (Stimulating entrepreneurship) the specific indicators include: improving the Entrepreneurial Employee Activity rate, improvement of the services of local

¹⁰³ European Commission, “Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions: Think Small First” - A “Small Business Act” for Europe,” 4.

¹⁰⁴ Flemish Region of Belgium, Operationeel Programma "Investeren in groei en Werkgelegenheid" Vlaanderen 2014-2020", 14-16.

¹⁰⁵McArdle, Megan, *The Up Side of Down: Why Failing Well Is the Key to Success*. New York, Viking, 2014.

¹⁰⁶ Roman Frydman, Omar Khan, and Andrzej Rapaczynski, “ Entrepreneurship in Europe and the United States: security, finance and accountability,” in *Perspectives on the Performance of the Continental Economies* (Cambridge: MIT Press, 2011), p27-64.

governments towards businesses and organizations, and increasing the number of sales points in central shopping areas in Flanders. Success on the second priority (Develop and implement new business models for SMEs) is measured by the total number of SMEs with product, process, marketing, and organizational innovation. And finally the third priority (Support the capacity of SMEs to grow and innovate) is measured by the percentage of rapidly growing enterprises, the Emerging & New Entrepreneurship (TEA) and the number exporting Flemish companies, including SME's. These indicators allow for an analysis of the program's effectiveness in fostering competition of SME's in the areas of the three investment priorities (see Table 10).

Table 10. Axis 2: Specific result indicators and their realised value in 2022

Indicator ID	Indicator	Unit of Measurement	Target Value for 2023	Result in 2022	Result achieved?
R.2.1	Emerging & New Entrepreneurship (TEA): international orientation (% of TEA)	% of enterprising employees actively involved in starting or managing a business	12%	9.50%	NO
R.2.2	Improvement of the service to firms and organisations by local governments	Scale of 0-10	9	Not available	N/A
R.2.3	Sale points in central shopping areas in Flanders	Amount	40 000	50 726	YES
R.1.1	Total number of SMEs with product, process, marketing, and organizational innovation	Number of SME's in % of number of firms in the industry and services sector	70%	74% (last available data from 2021)	YES
R.2.4	Share of fast-growing companies	Share of companies that achieved cumulative growth of 20% annually over the previous 3 years and employed at least 10	4%	2.70%	NO

		people at the start of the observation period			
R.2.5	Emerging & New Entrepreneurship (TEA)	Percentage of respondents actively involved in starting or managing a company.	40%	30%	NO
R.2.6	Number of exporting Flemish companies, including SMEs	Number of firms	20 000	19 504	NO

Source: Data from the Flemish government¹⁰⁷, 'Investeren in groei en werkgelegenheid' Jaarverslag 2022, 20-21.

Apart from the specific investment indicators as shown in Table 10, this priority axis included several common and program specific indicators as well (See Table 8). These indicators are more usually more general and are meant to provide an overview of the overall success on this axis after close to nine years of implementation.

Table 11. Axis 2: Table of common indicators and 2022 results

Indicator ID	Indicator	Unit of Measurement	Target Value (2023)	Realised Value in 2022	Target Achieved?
O.2.1 (C001)	Number of enterprises receiving support (EU indicator)	Number of enterprises	2915	7274	Yes
O.2.3	Number of involved local authorities (own indicator)	Number of municipalities and provinces	236	305	Yes
O.2.4	Number of realizations regarding improved services by a local authority	Number of municipalities and provinces	300	392	Yes
O.2.9	Number of enterprises reached with an international orientation	Number of enterprises	664	4205	Yes

¹⁰⁷ Flemish Region of Belgium, 'Investeren in groei en werkgelegenheid' Jaarverslag 2022 (CCI-nr. 2014BE16RFOP002, Brussels: VLAIO, 2022), 10-35.

Source: Data from the Flemish government¹⁰⁸, 'Investeren in groei en werkgelegenheid' Jaarverslag 2022, 15-19.

As Tables 10 and 11 above show, the picture is much less one-sided in the second priority axis than it was in the first. In the first R&D axis, all targets were already achieved by 2022, and in several circumstances even achieved by a significant margin, which held through for both the common output indicators and the specific result indicators. However, in the second axis there is a significant disparity in results between the common and specific indicators. Similarly to the first axis, all the common indicators were already achieved by 2022, and often by large margins. But there is significantly more variation in the achievement of specific indicator targets.

As Table 10 shows, out of seven indicators, four were not yet achieved by 2022 (although indicator R2.5 and R2.1 are closely linked), two were achieved and one will only be assessed in 2023. Indicators that showed significant shortfalls include the Emerging & New Entrepreneurship (TEA): international orientation indicator which measures the percentage of enterprising employees actively involved in starting or managing a business and only achieved 9.5% with the goal being set at 12%, and the Share of fast growing firms indicator which only achieved 2.70% with the goal being 4%. Notably this data is from 2022, and the program is active until 2023. Therefore, it is possible that the measurement will have improved in the last year, but potential gains in 2023 are unlikely to make up for the overall target shortfall. Up to and including 2022 a total of 291 projects had been approved which accounted for 98.77% of the available ERDF budget¹⁰⁹, and consequently it is unlikely that the use of the remaining 1.23% of the ERDF budget would create a meaningful difference in the indicator data.

In sum, the focus on enhancing the competitive abilities of SMEs in Flanders, as delineated in the 2014-2020 work program, is crucial for shaping the region's economic trajectory. Given that SMEs constitute a significant portion of the Belgian economy, their performance directly influences employment rates and overall economic activity. The prioritisation of this axis stemmed from Flanders' comparatively lower entrepreneurship rate compared to the EU average, indicating a need for policy interventions in order to create a more favourable environment for entrepreneurial ventures.

Aligned with principles outlined in the European Small Business Act and the Europe2020 strategy, this axis aimed to address various aspects pivotal to SME growth, including fostering entrepreneurship, supporting innovation, and encouraging internationalisation. However, while certain common indicators demonstrated significant progress, the significant overshoot of these targets cast doubt on the legitimacy of the target values in this axis, at least in the common indicator section. Specific result indicators showed a much more mixed picture, particularly in metrics related to international orientation and SME growth rates targets where failed by a significant margin.

¹⁰⁸ Flemish Region of Belgium, 'Investeren in groei en werkgelegenheid' Jaarverslag 2022 (CCI-nr. 2014BE16RFOP002, Brussels: VLAIO, 2022), 15-19.

¹⁰⁹ Flemish Region of Belgium, Operationeel Programma "Investeren in groei en Werkgelegenheid" Vlaanderen 2014-2020" (4th Version: 2014BE16RFOP002, Brussels: VLAIO, 2021), 5.

3.4 Third priority axis: Fostering the transition to a low-carbon economy

Fostering the transition to a low-carbon economy

The third priority axis focuses on transitioning to a low-carbon economy. This priority aligns with the stringent emission targets that Flanders needed to achieve to comply with the European Union's 2020 climate and energy package.

This package had three main goals:

- reducing EU greenhouse gas emissions by 20%,
- improving the EU's energy efficiency rate by 20%, and
- ensuring 20% of the EU's energy comes from renewable sources¹¹⁰.

These goals were commonly referred to as the 20-20-20 package.

Under this directive, the EU committed to a 20% reduction target compared to 1990 levels by 2020, in line with the Kyoto climate conference commitments made in 1997¹¹¹. The EU managed reductions in sectors under the emission trading system (ETS), while other parts of the economy were handled at the national/regional level. Flanders set its own national milestones and targets, such as a 15% reduction in CO2 emissions in non-ETS sectors by 2020 (using 2005 as the base year) and increasing renewable energy production to 13% of the total by 2020¹¹².

Among the goals in this priority axis, the Europe2020 emission goals (The 20-20-20 goals) are most notable. Similar to the previous priority axes, this axis is structured around investment priorities. Under the overarching goal of fostering a low-carbon economy, specific investment priorities included: supporting energy efficiency and renewable energy in public buildings and infrastructure, promoting low-carbon strategies in various areas (such as urban), enhancing energy efficiency and renewable energy use in enterprises, and promoting renewable energy production¹¹³. As with the previous sections, the success indicators for this axis are divided into program-specific indicators and common output indicators. Notably, while the targets for these indicators are set for 2023, the Europe 2020 targets were to be met by 2020. A key difference with these

¹¹⁰ European Union, "Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC," OJ L 140, 2009.

¹¹¹ Council of the European Union, "Council Decision (EU) 2015/1339 of 13 July 2015 on the conclusion, on behalf of the European Union, of the Doha Amendment to the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder," OJ L 207, Brussels, 2015.

¹¹² Flemish Region of Belgium, Operationeel Programma "Investeren in groei en Werkgelegenheid" Vlaanderen 2014-2020 (4th Version: 2014BE16RFOP002, Brussels: VLAIO, 2021), 71.

¹¹³ Flemish Region of Belgium, Operationeel Programma "Investeren in groei en Werkgelegenheid" Vlaanderen 2014-2020 (4th Version: 2014BE16RFOP002, Brussels: VLAIO, 2021), 70-83.

indicators is that the goals for indicators R.3.1., R.3.2., and R.3.3 (see Table 9) are to remain below the target value, unlike most other indicators where the goal is to reach or surpass the target value for 2023. The specific and common output indicators are detailed in tables 12 and 13.

Table 12. Axis 3: Table of priority specific indicators and 2022 results

Indicator ID	Indicator	Unit of Measurement	Base value	Realised Value of approved projects in 2022	Target Value (2023)	Target achieved?
R.3.1.	Estimated yearly volume of greenhouse gas emissions of residential buildings	Tons of CO2-eq	13 594 000	8 200 000 (2020)	9 723 000	Yes
R.3.2.	Estimated yearly volume of greenhouse gas emissions of transport	Tons of CO2-eq	14 426 000	13 300 000 (2020)	13 369 000	Yes
R.3.3.	emission in non-ETS industries	Tons of CO2-eq	4 289 000	5 700 000 (2020)	4 753 000	No
R.3.4.	Production of green heating	Petajoule	28.4	35.25 (2021)	33	Yes
R.3.5.	Share of energy from renewable sources in final consumption	Percentage	5.90%	9.2% (2021)	8.97%	Yes

Source: Data from the Flemish government, *Investeren in groei en werkgelegenheid' Jaarverslag 2022*, 26-30¹¹⁴.

Table 13. Axis 3: Table of common indicators and 2022 results

Indicator ID	Indicator	Unit of Measurement	Realised Value of approved projects 2022	Target Value (2023)	Target Achieved?
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¹¹⁴ Flemish Region of Belgium, *'Investeren in groei en werkgelegenheid' Jaarverslag 2022* (CCI-nr. 2014BE16RFOP002, Brussels: VLAIO, 2022), 26-30.

O.3.1	Number of supporting demonstrations and pilots which lead to quality improvement and fostering of EE & RE	Number	19	10	Yes
O.3.2 (CO31)	Number of families with improved energy consumption	Number	457	200	Yes
O.3.4	Additional number of people that have been transported sustainably	Number	18.714	40 000	No
O.3.5	Number of SME's that have taken concrete steps for EE	Number	381	267	Yes
O.3.6	Number of eliminated bottlenecks	Number	24	10	Yes

Source: Data from the Flemish government, *Investeren in groei en werkgelegenheid' Jaarverslag 2022, 22-25*¹¹⁵.

The data provided in Tables 12 and 13 show the significant progress in several areas related to greenhouse gas emissions, energy production, and renewable energy usage. Overall, the results for 2022 show mixed success in achieving the targets for 2023, with some areas exceeding expectations while others require further improvement. In terms of greenhouse gas emissions, the goal for indicators R.3.1, R.3.2, and R.3.3 is to remain below the target value, rather than to surpass it. For greenhouse gas emissions in residential buildings (R.3.1), there has been a notable reduction from the base value, though the realized value for 2022 still exceeds the 2023 target. Conversely, the transport sector (R.3.2) has successfully reduced emissions to below the 2023 target. However, emissions in non-ETS industries (R.3.3) have surpassed the target, even though the target value was higher than the base value. This indicates that the Flemish government was not successful in limiting the emissions in non-ETS sectors, or even limit their rise to the target value.

The production of green heating has shown progress, with the 2022 realized value exceeding both the base value and the 2023 target. This indicates a strong shift towards sustainable heating solutions, indicating the success of policies promoting green energy. Similarly, the share of energy from renewable sources in final consumption has increased

¹¹⁵ Flemish Region of Belgium, *'Investeren in groei en werkgelegenheid' Jaarverslag 2022* (CCI-nr. 2014BE16RFOP002, Brussels: VLAIO, 2022), 22-25.

significantly, surpassing the 2023 target and highlighting a positive trend towards the adoption of renewable energy. The common indicators provide further insights into the overall progress, some notable indicators are the number of supporting demonstrations and pilots aimed at improving energy efficiency and renewable energy practices, which has exceeded the target. The number of families with improved energy consumption and the number of SMEs taking concrete steps for energy efficiency have also surpassed their targets. However, both these indicators have targets that considerably lower than what would be required to achieve actual change. In Belgium, the number of households with two parents and children numbers around 5.3 million¹¹⁶ in 2021, which would make the 457 families which have become more energy efficient due to the ERDF almost negligible. Similarly the number of active SME's in Belgium reached a record high of 1.142 million at the end of 2022¹¹⁷, while the achieved number of SME's with EE improvements are 381 firms. The target values were even lower at 267 firms, or just 0.0234% of the 2022 SME number.

One indicator that fell significantly short of target was the number of additional people transported sustainably. The target was 40 000 people transported sustainably while the achievement by 2022 was 18 714 people. Notably, regarding this indicator, the work program notes that multiple projects were signed in 2022 which will eventually raise that number to around 43 000, which is above the target. However, it is unlikely that they will reach completion before 2023.

In sum, the overall analysis of the 2022 results shows progress in several key areas related to greenhouse gas emissions reduction, green heating production, and renewable energy usage. While there are areas that have successfully met or exceeded their targets, some indicators show that the program has failed to reach its targets and continued efforts and improvements are necessary to achieve the set goals for 2023 and beyond. Additionally there is the question of impact that the work program can have on several sectors (such as households and SME's) as the target and achieved values can be considered inadequate compared to the needs.

3.5 Fourth priority axis: Fostering sustainable urban development

Fostering sustainable urban development

This priority axis was concerned with the promotion of green or mixed (green/blue) infrastructure in cities and the transformation of cities to be climate adaptable. The focus of this axis is not so much mitigation as in axis three, but adaptation. The projects under

¹¹⁶ STATBEL, “*Samenstelling van de bevolking in particuliere huishoudens 2021*,” (2021), accessed on 12/06/2024. <https://statbel.fgov.be/nl/nieuws/samenstelling-van-de-bevolking-particuliere-huishoudens-2021#:~:text=In%202021%20leefde%20ongeveer%20de,uit%20de%20Belgische%20Census%202021.>

¹¹⁷ Lauren Walker, “Record number of SMEs in Belgium, number of jobs rising,” *The Brussels Times*, January 22, 2024.

this axis would combat unwanted effects in urban areas such as flooding, water shortages, and heat induced health effects. To that end, the decided priorities for the 2014-2020 period included: Supporting investments for the purpose of adapting to climate change; Improving the urban environment in order to revitalise cities, clean up abandoned industry areas, diminish air pollution and promote measures that reduce sound pollution; and supporting the physical economic and social rehabilitation of disadvantaged communities in urban and rural areas¹¹⁸. The axis includes again numerous indicators such that its success can be assessed. A closer look at the priority specific and the common indicators (see Tables 14 and 15), as well as the data provided in the European Union's indicator database and VLAIO yearly summaries allows for a better assessment of the successes and failures in this axis.

Table 14. Axis 4: Table of priority specific indicators and 2022 results

Indicator ID	Indicator	Unit of measurement	Base value	Realised value (2022)	Target value (2023)	Target achieved?
R.4.1	Satisfaction with green spaces and the overall greenness of one's neighbourhood	Percentage	68.2	67.6 (2020)	70-75	No
R.4.4	Bruto Added value per inhabitant (space productivity)	Euro	49 047	56 516 (2020)	55 913	Yes
R.4.3	Neighbourhood satisfaction	Percentage	72.6	73 (2020)	75-80	No

Source: Data from the Flemish government, *Investeren in groei en werkgelegenheid' Jaarverslag 2022*, 34-35¹¹⁹.

¹¹⁸ Flemish Region of Belgium, *Operationeel Programma "Investeren in groei en Werkgelegenheid" Vlaanderen 2014-2020* (4th Version: 2014BE16RFOP002, Brussels: VLAIO, 2021), 158

¹¹⁹ Flemish Region of Belgium, *'Investeren in groei en werkgelegenheid' Jaarverslag 2022* (CCI-nr. 2014BE16RFOP002, Brussels: VLAIO, 2022), 34-35.

Table 15. Axis 4: Table of common indicators and 2022 results

Indicator ID	Indicator	Unit of measurement	Realised value (2022)	Target value (2023)	Target already achieved?
O.4.1	Squared meters of water management measures	Squared meters	3 481	3 481	Yes
CO38	Open space created or renovated in urban areas	Squared meters	69 899	52 638	Yes
O.4.3	Squared meters of new or transformed areas	Squared meters	39 080	23 345	Yes
O.4.5	Area of completed public interventions and community-oriented business infrastructure in disadvantaged neighbourhoods	Squared meters	26 990	6 440	Yes
CO39	Public or commercial buildings constructed or renovated in urban areas	Squared meters	60	1 300	No

Source: Data from the Flemish government, *Investeren in groei en werkgelegenheid' Jaarverslag 2022*, 31-34¹²⁰.

Tables 14 and 15 of the fourth axis of the priority specific indicators and common indicators demonstrate a mixed level of achievement. While certain targets were successfully met, others fell short. Satisfaction with green spaces and neighbourhood satisfaction both highlight the importance of environmental and social factors in urban development. The data suggests that although there have been efforts to improve green spaces, the overall satisfaction levels did not meet the target values.

On the economic side, Bruto Added Value per inhabitant significantly exceeded the target, showcasing a notable improvement in economic productivity. In terms of urban

¹²⁰ Flemish Region of Belgium, *'Investeren in groei en werkgelegenheid' Jaarverslag 2022* (CCI-nr. 2014BE16RFOP002, Brussels: VLAIO, 2022), 31-34.

development and infrastructure, indicators like open space creation, and public interventions in disadvantaged neighbourhoods have met or surpassed their targets.

However, the indicator for public or commercial buildings constructed or renovated in urban areas did not achieve the target value, with a significant gap. One important aspect to note in this axis is the water management indicator.

As depicted in Table 15, the actual value achieved in 2022 aligns precisely with the targeted value set for 2023. While it may be theoretically plausible that this alignment stems from effective planning and estimation, it is worth noting this has not been the case for any other indicator, and that correctly predicting results ten years into the future down to the last square meter is unlikely. This curiosity follows other surprising target value decisions which are shown through multiple indicators significantly over/under shooting their targets throughout all the axis.

Overall, there is certainly progress in certain indicators, which can be extended to progress on the entire axis in general. In some specific sectors such as the public buildings constructed/renovated in urban areas has failed to achieve its target, and in this instance by a significant margin. The overall picture of progress on this axis is mixed as a result.

3.6 Conclusion

In summary, this chapter delved into the achievements of the first four axes of the Flanders work programme as shown in table 16.

Table 16. Results of target indicators by 2022

Priority axes	Number of targets	Targets achieved	Targets failed	Data not available
First priority Axis	7	7	0	0
Second Priority Axis	11	6	4	1
Third Priority Axis	10	8	2	0
Fourth Priority Axis	8	6	3	0
Total:	36	27	9	1

Table 16 presents an overview of the collective performance of the four priority axes outlined in the Flanders 2014-2020 work program. The first axis, centred on research and innovation, notably surpassed all target values. The second priority axis, aimed at enhancing SME competitiveness, presents a more varied picture as it passes 6 out of 11 targets. The third axis, Transitioning to a 'low-carbon economy, passes 8 out of 10 targets,

and finally the priority axis for sustainable urban development (Axis 4) achieved 6 out of 8 objectives.

Among the set targets, a total of 27 out of 36 were successfully accomplished by 2022, resulting in an achievement rate of 75%. This analysis, building upon the discussions in chapters 1 and 2, underscores the thematic alignment of the priority axes with the overarching goals delineated in both the Europe 2020 strategy and the ERDF legislation.

The reasonable achievement rate observed across the indicators suggests a tangible alignment of the program not only on a theoretical level but also in practical terms. These indicators serve as tangible markers of progress toward the broader objectives set by the European Union. Therefore, it can be concluded that the program has effectively translated strategic alignment into tangible advancements to EU objectives.

Chapter 4: Conclusion

The goal of this thesis was to explore the alignment of the Flanders regional development policy through the ERDF 2014-2020 Flanders work programme with EU-level objectives. In order to do so efficiently the thesis considered three specific objectives:

- to examine the extent to which the strategic objectives and priorities of the Europe2020 and ERDF legislation have been incorporated into the work programme.
- to understand which the specific requirements of the Europe2020 and ERDF legislation have been met.
- to analyse to what extent the results of the work program, as shown through output indicators, confirm this alignment in practice.

Following the document analysis, the Flanders ERDF2014-2020 work programme was established to be closely aligned with the Europe2020 strategy. The thesis considered the thematic objectives and, after establishing that the structural funds are a core driver of the Europe2020's success, analysing the achievement of the specific goals of the strategy by 2020. The three thematic objectives (which can be classified as 'Smart growth', 'Sustainable growth', and 'inclusive growth') can be matched with numerous axis of the Flanders Work programme, indicating that on the policy level the programmes are aligned. Notably, these thematic objectives are purposefully broad such that participating states are able to develop programmes that address specific national or regional needs. Unfortunately, this weakens any alignment analysis.

However, the strategy also includes specific targets for 2020, such as the 20-20-20 climate and energy goals (reducing greenhouse gas emissions by 20% compared to 1990 levels, increasing the share of renewable energy use to 20%, and improving energy efficiency by 20%), which were translated to regional context. Of the 5 specific Europe2020 objectives related to the ERDF, Flanders achieved 4 by 2020. Failing only to increase the share of renewable energy use to 20%¹²¹. In sum, the Europe2020 strategy and the Flanders work programme show close alignment in thematic objectives, which is supported by the significant achievement of Europe2020 targets.

Regulations 1301/2013¹²² and 1303/2013¹²³ laid down the thematic objectives and the earmarking requirements that each work programme needs to fulfil. The thesis has found that the Flanders 2014-2020 work programme was closely aligned to the objectives in the regulations, and generally fulfilled the earmarking requirements. From the total of 11 thematic objectives set out by the ERDF regulation, the work program priorities are directly linked to six of them.

¹²¹ Digital Flanders, "Aandeel hernieuwbare energie."

¹²² European Union, "Regulation (EU) No 1301/2013 of the European Parliament and of the Council of 17 December 2013 on ERDF," 281-333.

¹²³ European Union, "Regulation (EU) No 1303/2013 of the European Parliament and of the Council laying down common provisions on the Structural Funds," 320-469.

Although it should be noted that multiple objectives are in certain aspects interconnected. For example, the fourth thematic objective (supporting the shift towards a low-carbon economy in all sectors) can be seen as overlapping with objective six (preserving and protecting the environment and promoting resource efficiency), progress in one is likely to create progress in the other.

The regulations also stipulate the share of minimum funding allocated to certain thematic objectives. The Flemish government narrowly failed the ERDF requirement of spending 20% of the funds on thematic objective four. The European Commission, which greenlights the work programmes, likely acquiesced to the misallocation as it was of such minor significance. On the other hand, the work programme surpassed the requirement that at least 80% of funds should be allocated to two or more of the first four thematic objectives. In total, 84.29% of the available funds were allocated to priority axis in the work program which corresponded with the relevant thematic objectives. And finally, the last requirement stipulated that at least five percent of funding should be spend on urban areas; which was also achieved. Consequently, as the work program is reasonably aligned in thematic objectives, and the ear-marking requirements are generally met, this thesis concludes that the 2014- 2020 ERDF Flanders work programme is aligned with EU regulations governing the ERDF.

The achievements of the work programme, as assessed through result and output indicators, underscore the alignment with EU-level objectives. The first priority axis, centred on research and innovation, notably surpassed all target values. However, instances of significant overachievement raise questions about certain indicators' validity. Despite this, overall progress underscores the 'smart growth' objective of the Europe 2020 strategy and the first ERDF thematic objective.

The second priority axis, aimed at enhancing SME competitiveness, presents a more varied picture. While there was close alignment between the projects and the smart specialization principle, the program fell short on four targets by 2022. On the other hand, significant advancements were made in areas like sales point expansion and increasing export shares, underscoring alignment with the fostering SME's competitiveness objective of the ERDF and the inclusive growth objective of the Europe2020 strategy.

Transitioning to a 'low-carbon economy,' the third axis, showcased progress in key areas like emissions reduction and renewable energy usage, despite challenges in sustainable transportation and non-ETS emissions reduction. Eight out of ten indicators reached targets by 2022, underscoring alignment with broader ERDF sustainability objectives and the Europe 2020 sustainable growth objective.

Lastly, the priority axis for sustainable urban development (axis 4) achieved five out of eight targets. The results underscore support for the sustainable growth objective of the Europe2020 strategy and alignment with the sustainability earmarking target of the ERDF regulation. Overall progress is evident, with nuances in interpretation, such as small sample sizes affecting indicator outcomes, or indicator targets having been overachieved by a significant margin.

By 2022, out of 36 total targets: 27 were achieved, 9 were failed, and data was missing for one indicator. Table 16 presents an overview of the collective performance of the four priority axes outlined in the Flanders 2014-2020 work program. Among the set targets, 27 out of 36 were successfully accomplished, resulting in an achievement rate of 75%.

In conclusion, this analysis has established that the Flanders regional development policy, through the ERDF 2014-2020 Flanders work programme, is closely aligned with EU-level objectives. Concretely, the thesis established that:

- The strategic objectives and priorities of the Europe2020 and ERDF legislation have been incorporated into the Flanders 2014-2020 ERDF work programme.
- The specific requirements of the Europe2020 and ERDF legislation have generally been met by the work programme.
- The general success of output indicators and alignment within specific priority axes underscores the alignment of the work programme with EU objectives.

The results emphasize the need for regional development policies to contribute to broader national or international objectives. The success of this alignment in Flanders demonstrates the effectiveness of integrating regional development plans with overarching strategic strategies, providing a model for other regions to ensure that local actions are contributing to wider objectives.

Other insights from this thesis include the importance of regional participation with the planning and implementation of broad economic strategies. Without such alignment between regional programs and EU-level objectives, there is potentially diminished progress towards international goals, negatively impacting economic and social convergence in the EU. This would come at a time where the EU might significantly expand in the coming years, with potential member states such as Ukraine and Moldova hoping to join as soon as possible. And consequently, at a time when the functioning and effectiveness of the ERDF will be crucial in maintaining cohesion and economic convergence in an expanding European Union.

This thesis is restricted to the results of a policy alignment analysis, which were achieved through conducting a document analysis of the ERDF regulations and the Europe2020 strategy. As such, this thesis does not seek to draw conclusions on the effectiveness of the ERDF in realizing economic and social convergence. Neither does this thesis analyse the result and output indicators themselves, how they developed, what their strengths and weaknesses are, or how effective they represent economic/social growth.

Future research could explore the repercussions of regional policies not aligning with EU-level objectives and strategies. Additionally, the effectiveness of output/result indicators as measures of success for the European Regional Development Fund (ERDF) warrants further investigation. This includes examining whether strategic alignments and achievements indicated by these metrics are reflected in macro-economic data at the regional level, or analysing the selection process of target values of ERDF work programs.

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