To Be

Towards sustainable wellbeing: Integrated policies and transformative indicators.

Deliverable D1.3

Report on transformative indicators initiatives for a sustainable wellbeing paradigm

WP1 – Theories and indicators for the transformation towards a 'sustainability paradigm'

Grant Agreement 101094211

Version 2.1 | June 2024

HORIZON-CL2-2022-TRANSFORMATIONS-01
Towards sustainable wellbeing:
Integrated policies and transformative indicators.

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Funded by the European Union in the framework of the Horizon Europe Research and Innovation Programme and UK Research and Innovation under grant agreement N° 101094211.

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Acknowledgements

We thank Géraldine Thiry for her valuable feedback and contributions which have significantly enhanced the quality of this deliverable. We also express our gratitude to the members of the Horizon Europe projects SPES and WISE Horizons for their constructive discussions on beyond GDP indicators. Their insights have helped refine our methodologies and outcomes. Additionally, we are thankful to the participants of the "Beyond GDP: Alive and kicking?" seminar (UCLouvain on May 24, 2024), whose feedback contributed to sharpening our results.

Version history

Deliverable Title	Report on transformative indicators initiatives for a sustainable wellbeing paradigm.
Brief Description	This report summarizes the work from ToBe Task 1.4 Transformative indicators of a sustainable wellbeing economy
WP Number	1
Lead Beneficiary	ICHEC Brussels management School
Authors	Fanny Dethier (ICHEC Brussels Management School), Philippe Roman (ICHEC Brussels Management School)
Deliverable Due Date	30.06.2024
Dissemination Level	Public

Date	Ver	Contributors	Comment
29.05.2023	1.0	Dethier, F., Roman, P.	First draft
12.06.2024	1.1	Bleys, B., Büchs, M., Hirvilammi, T., & Soupart, C.	Internal review
30.06.2024	2.1	Dethier, F., Roman, P.	Final version

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Executive Summary

Recognizing that each indicator set, or index emerges from specific initiatives with distinct goals, actors, and contexts, this research sets out to examine the initiatives themselves to uncover the broader implications and uses of the metrics they generate. In doing so, this deliverable explores the potential of Transformative Indicators Initiatives (T-IIs) to reshape policymaking within the European Union (EU), aiming to overcome the pre-eminence of conventional socio-economic evaluations such as GDP. As the national initiatives analysed in this study as well as the relevant literature on "beyond-GDP" indicators demonstrate, the biggest challenges related to enforcing sustainable wellbeing metrics at top levels of governance do not lie in the ex-ante definition of "the right" or "the best" indicators, but in being aware of a series of technical quality, theoretical adequacy, and potential of amplification challenges. This is why, rather than proposing a definit(iv)e list of indicators to be readily adopted, we craft a framework for the elaboration of a dashboard that keeps up with the theoretical as well as practical state of the art in transformative sustainable wellbeing indicators. The report is structured around three main phases: conceptualization, empirical analysis, and recommendations, with a focus on defining, analysing, and proposing pathways toward a T-II for the EU. By integrating theoretical insights with practical examples, this study aims to establish a foundation for a future where indicators not only measure but also inspire and enact change.

Conceptual phase – Defining Transformative Indicators Initiatives

The study begins by defining T-IIs through a combination of quality criteria, theoretical adequacy criteria, and impact reach criteria, grounded in sustainable transition studies. This phase characterizes T-IIs not just as measurement tools, but as sets of norms, rules, principles, actors, and institutions that support alternative measurement practices oriented toward transformations aligned with sustainable wellbeing paradigms. The conceptualization emphasizes that T-IIs should influence socio-economic realities beyond merely measuring them, aiming to reshape or replace prevailing paradigms to better align with sustainable wellbeing.

Empirical phase – Illustrating Transformative Indicators Initiatives

The analysis involved a comprehensive review of eight existing IIs[1], assessing their alignment with T-II criteria developed in the conceptual phase. This phase revealed three distinct groups of IIs—informist, reformist, and transformist—, each displaying varying degrees of proximity with our quality, theoretical, and impact criteria. The review highlighted strengths and areas for improvement in these initiatives, particularly in terms of their ability to integrate ecological considerations and their effectiveness in influencing policy and socio-economic norms.

[1] The eight IIs are the Measuring What Matters Dashboard of Australia, the Gross National Happiness Index of Bhutan, the Canadian Index of Wellbeing of Canada, the New Indicators of Wealth of France, the Equitable and Sustainable Wellbeing Indicators of Italy, the Living Standards Framework Dashboard from New Zealand, the National Performance Framework Dashboard of Scotland, and the National Wellbeing Indicators of Wales.

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Recommendation phase – Designing an EU Transformative Indicators Initiative

Drawing on insights from the two previous phases, and a roundtable dialogue with EU practitioners, the third phase worked out the concept of a feasible and desirable T-II for the EU. The discussion emphasizes the integration of the T-II into the EU's Impact Assessment mechanisms, advocating for a co-constructed approach with institutional stakeholders and citizens, and enhanced resource optimization among existing agencies.

Conclusions

Our final proposition for an EU T-II consolidates the findings from the theoretical, empirical, and recommendation phases of this study into a framework designed to guide EU policymaking towards the design of a transformative sustainable wellbeing indicators initiative.

The final proposition for an EU T-II integrates theoretical and empirical insights with the practical realities shared by EU practitioners. For quality criteria, we advocate for standards that ensure accuracy, reliability, robustness, timeliness, coherence, comparability, accessibility, and clarity. The theoretical framework should be holistic, boundary-limited, systemic, and integrate individual, societal, and planetary wellbeing domains. For the impact criteria, we suggest drawing on the roundtable's recommendations but also pushing closer to an ideal T-II, inspired by the transformative approaches observed in the "transformist" group of IIs identified in our analysis. This involves integrating the T-II into the EU's Impact Assessment mechanisms to enhance decision-making processes, establishing a mix of quantitative and qualitative indicator targets, and optimizing resources to foster synergies among existing frameworks and agencies.

This comprehensive approach aims to position the EU at the forefront of global efforts to integrate sustainable wellbeing into policymaking. By adopting this transformative framework, the EU can catalyse significant socio-economic changes that align with long-term sustainability goals, setting a global standard for others to follow.

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Abbreviations

ABS Australian Bureau of Statistics

AUS Australia

BES Equitable and Sustainable Wellbeing Indicators

BHU Bhutan

CBS Centre for Bhutan & GNH Studies

CAN Canada

CIW Canadian Index of Wellbeing

CNEL National Council for Economics and Labour of Italy

DEF The Economic and Finance Document in Italy

EFTA European Free Trade Association

EPSR European Pillar of Social Rights

EU European Union

EU-GD Statistics for the EU Green Deal

EU-MS EU Member State

EU-RD Resilience Dashboards

EU-SDG The EU Sustainable Development Goals Indicator Set

EU-SPI The EU regional Social Progress Index

EU-SSC Social Scoreboards

FR France

GDP Gross Domestic Product

GNH Gross National Happiness

II Indicators Initiative

INSEE French National Institute of Statistics and Economic Studies

ISTAT Italian National Institute of Statistics

IT Italy

JRC Joint Research Centre

LSF Living Standards Framework

MLP Multi-Level Perspective

MWM Measuring What Matters

NPF National Performance Framework

NIW New Indicators of Wealth of France

NWI National Wellbeing Indicators of Wales

NZ New Zealand

OECD Organization for Economic Cooperation and Development

PSB Public Service Boards

SCOT Scotland

SDGs Sustainable Development Goals

SNM Strategic Niche Management

SPI Social Progress Index

UN United Nations

WAL Wales

WEAll Wellbeing Economy Alliance

WEGo Wellbeing Economy Governments

WTO World Trade Organization

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About ToBe

ToBe is a 3-year project funded by the European Union through the Horizon Europe framework programme. Tampere University (Finland) acts as a coordinator for the project.

The ToBe project aims at studying the way in which mindsets, indicators, innovations, and policies could better work together towards a sustainability paradigm. The need for moving toward a sustainability paradigm has been widely called for, yet the path to achieving that is not clear. ToBe aims to contribute to filling this gap and create an understanding of a sustainable wellbeing economy through integrated policies and transformative indicators.

The ToBe consortium brings together acknowledged scholars with previous high-quality research on the topic and with diverse backgrounds from social sciences, ecological and political economy, environmental and innovation studies, science and technology, data science, AI and machine learning.

All partners represent well-known and established universities, other research institutions and nongovernmental organisations (NGOs). Table 1 lists the members of the consortium, which consists of 13 beneficiaries and one associated partner.

Table 1. *ToBe Consortium Members*

No	Role	Short Name	Legal Name	Country
1	COO	TAU	TAMPEREEN KORKEAKOULUSAATIO SR	FI
2	BEN	SU	TAMPEREEN KORKEAKOULUSAATIO SR	SE
3	BEN	VTT	TEKNOLOGIAN TUTKIMUSKESKUS VTT OY	FI
4	BEN	EURADA	ASSOCIATION EUROPEENNE DES AGENCESDE DEVELOPPEMENT	BE
5	BEN	SciencesPo	FONDATION NATIONALE DES SCIENCES POLITIQUES	FR
6	BEN	ICHEC	HAUTE ECOLE ICHEC - ECAM - ISFSC	BE
7	BEN	IPE	INSTITUT ZA POLITICKU EKOLOGIJU	HR
8	BEN	UB	UNIVERSITAT DE BARCELONA	ES
9	BEN	Ugent	UNIVERSITEIT GENT	BE
10	BEN	EPC	EUROPEAN POLICY CENTRE	BE
11	BEN	UAB	UNIVERSIDAD AUTONOMA DE BARCELONA	ES
12	BEN	EPN Ecuador	ESCUELA POLITECNICA NACIONAL	EC
13	BEN	CHAL	CHALMERS TEKNISKA HOGSKOLA AB	SE
14	Associated partner	UnivLeeds	UNIVERSITY OF LEEDS	UK

The main objective of ToBe is to contribute to a clearer understanding of how to move to a sustainability paradigm. More specifically, ToBe aims at achieving the following objectives:

- Construct a theoretical framework for a sustainable wellbeing economy by providing a systemic and dynamic understanding of how changing policy goals, mindsets, indicators, innovations and policies work together towards a sustainability paradigm.

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- Identify different processes of economic growth by analysing their social and environmental implications.
- Evaluate and compare alternative growth initiatives as systemic innovations with a focus on drivers and barriers to implementation and impacts.
- Develop an ecological macroeconomic model combining conventional macroeconomic variables with indicators of wellbeing and sustainability to assess policies from a multidimensional perspective, and to reveal the synergies and trade-offs inherent in the transition to sustainability.
- Co-create policy solutions together with stakeholders to help institutionalise the new policies and indicators in Europe and beyond (potentially including South American and African countries).

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1. Introduction

In the ever-evolving landscape of policy-making and societal developments, the European Union (EU) stands at a critical juncture, seeking innovative and effective ways to gauge progress towards sustainable wellbeing. In this context, the concept of "transformative indicators" can be seen as a promising approach to go beyond shallow uses of indicators, offering a relevant lens through which to assess and drive change. This deliverable explores the relatively uncharted territory of transformative indicators, aiming to redefine the criteria on which these indicators rely and their role for shaping actions that align with the EU's goal of "a green transition that leaves no one behind".

Fundamentally, transformative indicators, as proposed in this research, extend beyond the traditional object of macroeconomic or macrosocial evaluation metrics. Indeed, these indicators are not merely tools for measurement but also catalysts for societal change, embedded within initiatives that actively contribute to alter societal norms, practices, and structures towards sustainable wellbeing. Therefore, their transformative potential does not solely arise from their intrinsic properties but also from how they are utilized within broader policy contexts and embedded within initiatives that actively drive changes in societal norms, practices, and structures towards sustainable wellbeing. By adopting a perspective rooted in the sociology of quantification, this research highlights the importance of the institutionally situated sociopolitical initiatives underlying the indicators. It emphasizes that the effectiveness of transformative indicators depends not just on their design but on their implementation and integration into wider policy frameworks, highlighting the dynamics of social constructions, narratives, and power relations that shape their impact. In this research, we analyse the transformative power of not only the metrics themselves but also the initiative that underlies them.

Indeed, while significant strides have been made in understanding the methodological and theoretical underpinnings of sustainable wellbeing indicators, the knowledge of their practical influence and the determinants shaping their effectiveness remains limited. This gap hampers the ability to fully grasp how sustainable wellbeing indicators can be utilized and designed to serve as true catalysts for change. Despite the rich foundation of knowledge regarding their construction and intended objectives, the nuanced dynamics of how these indicators are employed in real-world scenarios and the extent to which they can drive societal transformation are areas that have received relatively little attention. This oversight constrains our capability to use the full potential of sustainable wellbeing indicators, limiting our progress in creating effective strategies that utilize these tools to promote significant change.

This deliverable aims at filling this gap. It does so by first, offering a detailed definition of transformative indicators initiatives (T-IIs), grounded in studies of sustainable transformation. It then proceeds to shed light on the concept through a comprehensive examination of eight real-life examples of potential T-IIs. These case studies were selected through meticulous desk-based research, and analysis was enriched by semi-structured interviews with key stakeholders involved in each initiative. This dual methodology allowed for a broad-based understanding of each initiative, examining its alignment with our definition of T-IIs and the extent of its potential impact.

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The analysis of these initiatives reveals their multifaceted natures, demonstrating, with varying intensity, their capacity to rally communities, influence policy, and foster a shared vision for change. These real-life examples serve not only as illustrations of the T-II concept but also as a foundation for developing recommendations tailored to the EU's context. The insights garnered from this study highlight the opportunities and challenges inherent in designing and implementing T-IIs, reflecting on the deficiencies of the EU's current metrics of progress. Importantly, our objective is not to rank or benchmark these initiatives but rather to identify inspiring examples of practices within existing IIs that could inform and enhance our understanding of transformative potential within IIs.

Building on these findings, the deliverable presents our recommendations for the EU to consider in its pursuit of establishing its own T-II. These recommendations are informed by a deep understanding of the current gaps in EU sustainable wellbeing indicators. To ensure the relevance and feasibility of these recommendations, we subjected them to further scrutiny and refinement by discussing them with field practitioners within the EU framework. This iterative process of consultation and revision has culminated in a set of refined recommendations that aspire to guide the EU towards a more nuanced and effective approach to measuring sustainable wellbeing and catalysing transformation.

The journey of exploring and defining transformative indicators is both a challenge and an opportunity for the EU. As this deliverable unfolds, it explores the complexities and potential of T-IIs, aiming to contribute to a paradigm shift in how sustainable wellbeing is conceptualized and pursued. Through a balance of theoretical insights and practical examples, it seeks to lay the groundwork for a future where indicators do more than measure—they inspire and enact change.

This deliverable is organized in the following manner: after this introduction, Section 2 defines the core concept of T-IIs, laying the foundation for the subsequent analysis. In Section 3, we detail the methodology adopted for the empirical part of the study, we present the findings, and we engage in a discussion on the illustrative examples that highlight the central concept. Section 4 outlines the process used to develop recommendations for the EU's own T-II, including a summary of the outcomes of this process. The document concludes with Section 5, which offers a concise overview of the study's key findings.

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2. Defining transformative indicators initiatives for sustainable wellbeing

2.1. Introduction

The pursuit of sustainable wellbeing stands as one of the defining challenges of our time, calling for a profound re-evaluation of how we measure progress and prosperity. At the heart of this paradigm shift lies the need for metrics that extend beyond the traditional confines of Gross Domestic Product (GDP)-centric measurement, commonly known as "beyond GDP indicators". Those indicators can be defined as "*indicators and indicator sets that have been proposed as necessary and central to the measurement of societal progress in a broad sense, other than those indicators, such as GDP or the unemployment rate, that are already playing this role*" (Whitby et al., 2014, p. 3)[1]. Beyond GDP indicators refer to various terms (including wellbeing, happiness, sustainability, social progress, and quality of life). They come in numerous forms, and efforts have been made to categorize them. For instance, the WISE Horizons project classifies them according to three conceptual dimensions: wellbeing, inclusion, and sustainability (Jansen et al., 2023). In Figure 1 each metric is positioned according to the dimension(s) it approaches.

[1] Examples of well-known sustainable wellbeing indicators are available in the WISE Horizons database: https://beyond GDP.world/wise-database/wise-database. Another database of sustainable wellbeing indicators, resulting either from global or local initiatives, is also proposed by the Cap bien vivre: https://capbienvivre.org/explorer-existant/.

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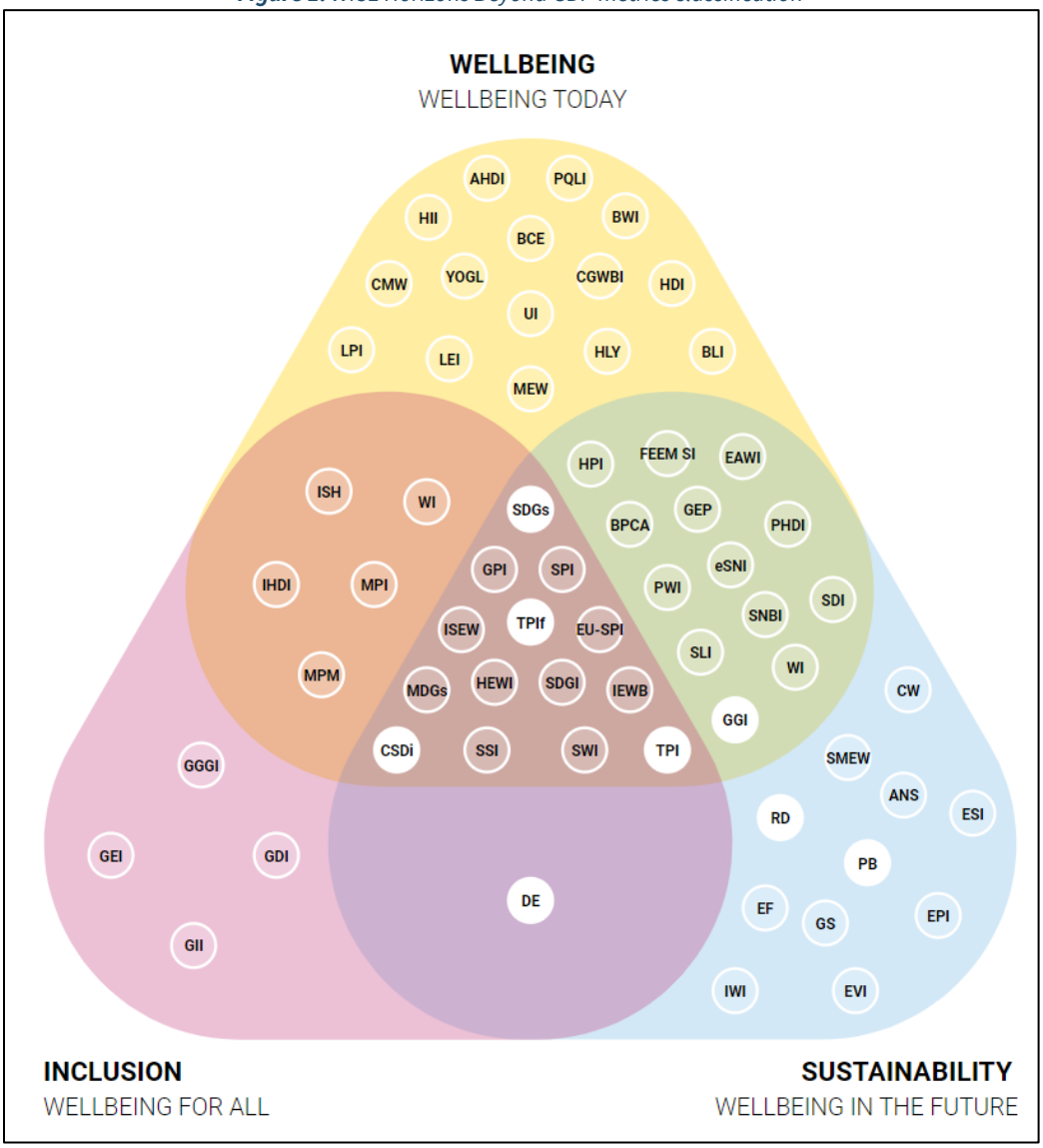
Figure 1: *WISE Horizons Beyond GDP metrics classification*



Source*: Jansen et al. (2023).*

Focusing on the environmental beyond GDP indicators, Roman and Thiry (2017) categorize what they call "sustainability indicators" based on two dimensions: the extent to which they are monetized and their level of aggregation. In doing so, they identify seven families of indicators: (1) extended national accounts, (2) distance to targets, (3) eco-efficiency indicators, (4) comprehensive wealth accounting, (5) economic welfare and sustainability, (6) composite indices, and (7) biophysical indicators. A representation of this taxonomy if available in Figure 2.

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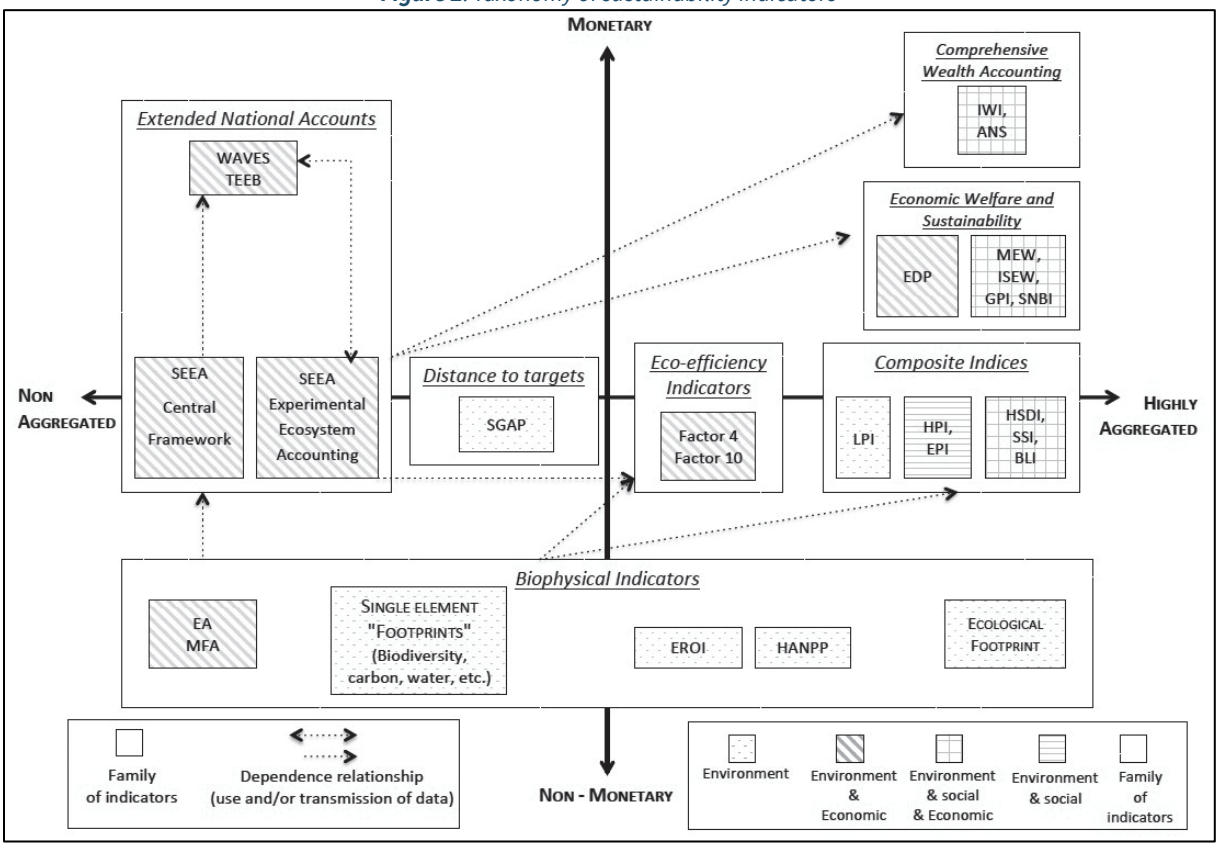
***Figure 2**: Taxonomy of sustainability indicators*



***Source:** Roman & Thiry (2017)*

***Abbreviations.** Adjusted Net Savings: ANS; Better Life Index : BLI ; Energy Accounting: EA; Energy Return On Energy Investment : EROI ; Environmental Performance Index : EPI ; Environmentally-adjusted net Domestic Product: EDP; Genuine Progress Index: GPI; Happy Planet Index : HPI ; Human Appropriation of Net Primary Production : HANPP; Human Sustainable Development Index : HSDI ; Index of Sustainable Economic Welfare: IWES; Living Planet Index : LPI ; Material Flow Analysis : MFA ; Measure of Economic Welfare: MEW; Sustainability Gap: SGAP; Inclusive Wealth Index: IWI; Sustainable Net Benefit Index: SNBI; Sustainable Society Index : SSI ; System of Environmental-Economic Accounting : SEEA; The Economics of Ecosystems and Biodiversity: TEEB; Wealth Accounting and Valuation of Ecosystem Services : WAVES.*

In this research, we focus on **sustainable wellbeing indicators** which we understand as beyond GDP indicators that share the following four common characteristics (Hayden et al., 2022):

(1) A critical assessment of the dominance of economic indicators like GDP in public policy discourse;
(2) A commitment to considering social and environmental dimensions often overlooked in current information systems;
(3) A goal of identifying actionable insights to enhance public policies; and
(4) A reflection on the construction of indicators and their socio-political implications.

Further, in the context of this paper, we prefer the expression « **sustainable wellbeing indicators initiatives** » instead of « sustainable wellbeing indicators » as, more than the technical indicator tool—the metric, we focus also on the context in which and on the experiment from which the indicator has

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been developed, and the process used for constructing the indicator. Indeed, we acknowledge that "numbers are the fruit of stories, constructions, and sometimes even battles" (Keiff, 2022, p. 24), thereby aligning with the sociology of quantification approach (Espeland & Stevens, 2008; Mennicken & Espeland, 2019). This perspective critically examines quantification, including its normative implications, how it is socially constructed, and the power dynamics it may perpetuate. Therefore, similarly to other scholars (Keiff, 2022; Ottaviani et al., 2021; Whitby et al., 2014), our focus of interest is larger than the resultant indicator itself. We focus rather on transformative indicators **and the underlying initiatives**—which reflects the construction of a community around the interpretation of a common object—from which they originate. We believe that concentrating solely on the impact of indicators overlooks the reality that the actions and dynamics of the parties involved often exert a more significant influence than the indicators do per se.

Following this approach, we consider, in addition to the metric, the processes, methodologies, and intentions behind the development and application of the indicators. This includes, among others:

- the specific approaches, frameworks, or methodologies used to design, collect data, and analyse information for the indicators;
- the overarching intentions and objectives behind the development and use of the indicators, including whether the initiative aims for transformative change or specific societal impacts;
- the involvement of various stakeholders throughout the initiative, including how diverse perspectives are considered and discussed in indicator selection and application;
- the ways in which the results and insights from the indicators are communicated to different audiences, ensuring transparency and accessibility;
- the extent to which the initiative has an influence on policies, decisions, and actions in society based on the indicators;
- and the initiative's long-term vision toward societal change and its commitment to sustainability and wellbeing beyond immediate or short-term goals.

This perspective stems from our consideration that sustainable wellbeing IIs become **transformative** not only because they present a transformative vision of sustainable wellbeing but also because they actively contribute to its realization. In scenarios where sustainable wellbeing IIs achieve this level of impact, **they evolve into what we term "Transformative Indicators Initiatives" (T-IIs).** Therefore, within the context of sustainable wellbeing, a T-II is characterized as a metric—and its underlying initiative—that fulfils three critical sets of criteria:

1. **Quality criteria: Fulfilling statistical high-quality standards**
   T-IIs should meet rigorous quality criteria because their effectiveness depends on the accuracy and reliability of their measurement tools and the robustness of their underlying methodologies. Ensuring that these indicators are built on solid foundations, with timely, coherent, and accessible data, not only supports their credibility but also enhances their potential to challenge prevailing paradigms and drive meaningful changes.

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2. **Theoretical criteria: Representing a radical vision of sustainable wellbeing**
   A T-II should provide a representation of sustainable wellbeing that fundamentally challenges and departs from conventional conceptions of progress and prosperity, such as GDP-focused measurements. It should offer a holistic view of wellbeing and sustainability that includes psychological, social, and ecosystemic domains. This representation goes beyond mere incremental changes and reflects a profound shift in societal values, priorities, and definitions of wellbeing and prosperity.
3. **Impact criteria: Inducing transformative change**
   A T-II should have the capacity to induce and/or support real-world change in society. It must actively contribute to shifting societal behaviour, policies, and practices towards the envisioned sustainable wellbeing society. Through its measurement and communication, the indicator should raise awareness, challenge existing paradigms, and inspire collective action. It should exert substantial legitimacy, visibly impacting how individuals, institutions, and policymakers make decisions, allocate resources, and prioritize goals. Ultimately, the indicator (and its underlying initiative) should be a catalyst for transforming the current landscape and pushing it closer to the representation of sustainable wellbeing.

In essence, a T-II acts as more than just a solid measurement tool; it serves as a driver of change. It challenges the status quo by offering an alternative vision of sustainable wellbeing, and its influence extends beyond numerical values to inspire societal shifts and actions that align with this transformative vision. Therefore, a T-II comprises not only the metric itself but also the initiative that underlies it. This initiative encompasses the indicator methodology, intentions and objectives, stakeholders' involvement, communication of results, influence on policies, and the long-term vision of the initiative. For a graphical representation of the definition of a T-II, see Figure 3.

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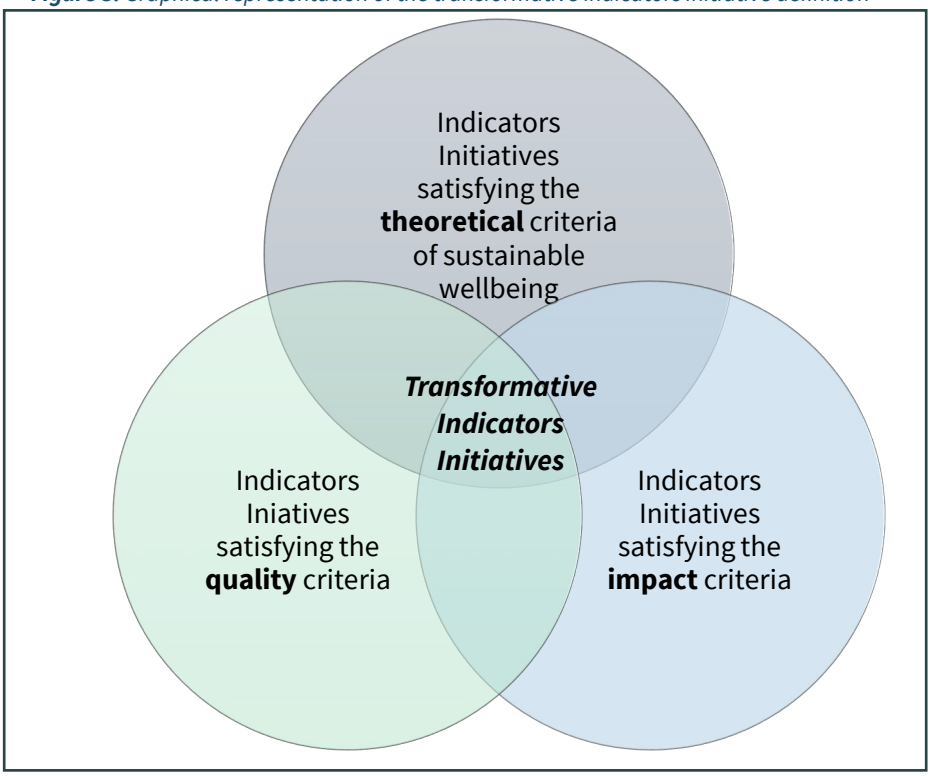
Figure 3: *Graphical representation of the transformative indicators initiative definition*



2.2. Quality criteria

To achieve levels of quality and standardization at least as high as the traditional indicators

One of the weaknesses of sustainable wellbeing indicators is that they suffer from some technical drawbacks compared to more traditional indicators (e.g., lack of harmonization, not calculated frequently enough, result from one-shot survey, not endorsed by statistical institutes…) (Purvis & Genovese, 2023). Thus, to ensure the effectiveness and credibility of any indicator, including T-IIs, a set of technical quality criteria must be met (e.g., Sébastien & Bauler, 2013). Here, we examine these criteria and highlight their significance in the context of T-IIs.

T-IIs, like any high-quality measurement tool, must exhibit a high degree of **accuracy** and **reliability**. They should provide precise measurements that faithfully represent the phenomena they intend to capture. Reliable data and methodologies encourage confidence in users, facilitating informed policy decisions and public discourse.

The methodologies used to collect and analyse data nurturing of sustainable wellbeing indicators must be rigorously designed and tested to withstand scrutiny and challenges. **Robust** methodologies enhance the validity and reliability of the indicators, ensuring that they produce consistent results over time.

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Timeliness is critical for policy and decision-making. T-IIs should be updated regularly and promptly. Timely data enable policymakers to monitor trends, assess the impact of policies, and respond promptly to emerging challenges, contributing to effective governance[1].

Coherence and **comparability** are fundamental aspects of the quality criteria. T-IIs should align with existing statistical systems and international standards to ensure consistency and facilitate cross-country comparisons. Coherence ensures that indicators fit into the broader statistical landscape, while comparability allows for meaningful benchmarking.

T-IIs should be accessible to a wide range of users, including policymakers, researchers, civil society, and the general public. **Accessibility** involves not only the availability of data but also user-friendly formats and platforms for dissemination. Transparent access promotes inclusivity and informed decision-making.

Clarity in communication is vital. T-IIs should be presented in a clear, understandable manner. This involves using common language, intuitive visualizations, and explanatory materials to facilitate comprehension. Clear communication ensures that the insights derived from these indicators can reach a broader audience, contributing to its accessibility.

Overall, to fulfil their potential, T-IIs must meet technical quality criteria, including accuracy, robustness, timeliness, coherence and comparability, accessibility, and clarity. These criteria collectively ensure that T-IIs serve as robust and informative tools for enhancing sustainable wellbeing in our societies.

2.3. Theoretical criteria

To present a radical vision of sustainable wellbeing, aligned with the ToBe theoretical framework

For transformative change within a system, a fundamental redirection is necessary—a concept Göpel (2014) has termed a “paradigm shift”. This idea resonates with the insights of Meadows (1999), who identified twelve strategies for influencing systemic change. Meadows (2008) emphasized the importance of shifting the system’s goals (its purpose or function) and the underlying paradigm (the mindset from which the system’s goals, structures, rules, and parameters emerge) as the most effective leverage points for systemic transformation. In our conceptualization, T-IIs are not exempt from this principle. Consequently, we argue that T-IIs should embody a radical vision of sustainable wellbeing, aligning with the ToBe theoretical framework for sustainable wellbeing[2] (see Figure 4). Therefore, this section is dedicated to summarizing this perspective and discussing its implications for TIs.

[1] In cases where timely updates are challenging, indicators could also be nowcastable. Nowcasting allows for the estimation of current or very recent developments in the absence of up-to-date conventional data, providing a near real-time analysis that can enhance decision-making processes. This approach ensures that policymakers have access to the latest information even when formal data releases face delays.

[2] For more information on the ToBe theoretical framework, see Deliverable 1.1. of the ToBe project « Report on the theoretical framework on sustainable wellbeing and transformation ».

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The ToBe theoretical framework of sustainable wellbeing operates on three interconnected domains—individual, societal, and ecological, each playing a crucial role in understanding and assessing the overall state of sustainable wellbeing in a society.

In the **individual domain**, the framework draws from needs-based theories of wellbeing and identifies three fundamental categories of needs: health, relatedness, and autonomy. These three needs are selected based on the review and synthesis of many theories, in particular, the theory of human need (Doyal & Gough, 1991), self-determination theory (Deci & Ryan, 2000) and the multidimensional view on wellbeing (Allardt, 1976A). Following the needs-based theories perspective, these needs can be satisfied by a multitude of culturally and temporally changing needs satisfiers. Indeed, needs tend to remain the same, but the ways of meeting them (i.e. satisfiers) vary over time and in different cultures. As such, needs satisfiers represent the core aspects of the way to satisfy objective and cross-generational human needs.

The first need is **the need for health**, a fundamental aspect of human existence, stemming from our biological imperative to avoid illness and aspire for longevity. This necessity is deeply rooted in our mammalian nature, requiring us to maintain our health to survive within the genetic and biological limits that shape our wellbeing. Recognized universally across diverse cultures and local contexts as crucial, health not only serves as an essential resource enabling other dimensions of wellbeing but also acts as a prerequisite for fulfilling a variety of practical daily tasks by supporting manual, mental, and emotional capacities.

The second need is **the need for relatedness**, an intrinsic element of human psychology, crucial for growth and healthy development through the fulfilment of love and belongingness. Participation in communities and everyday interactions is essential for wellbeing, reflecting our interdependence not only with fellow humans but with all species that inhabit our shared biosphere. This need underscores the importance of nurturing close relationships and engaging in social activities, embodying the essence of belonging and forming identities within various collectives. It encompasses the deep, meaningful connections with others that safeguard against isolation, fostering trust, reliance, and care within these relationships. Recognized in theories of human needs as foundational to “minimally impaired social participation”, the need for relatedness is vital for human wellbeing, as it enables individuals to forge social identities and maintain connections with family, friends, associations, workplaces, and their local communities.

Thie third and final need is **the need for autonomy**, which emphasizes self-direction and the alignment of actions with personal values. The need for autonomy is facilitated by a capacity for self-regulation and critical evaluation of cultural norms. It is not synonymous with independence but involves a deep sense of choice and self-endorsement, shaped by social interactions and cultural understandings. Autonomy supports meaningful participation in society and personal growth, being essential for wellbeing and enabling individuals to navigate and influence their social and natural environments effectively.

Collectively, these three needs underscore a holistic and multidimensional approach to wellbeing, blending physical and psychological dimensions to reflect a comprehensive, subjective experience

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shaped by individual and societal factors. This domain focuses thus on individuals and their experiences, recognizing that wellbeing is deeply personal.

Moving to the provisioning systems (Fanning et al., 2020) **societal domain**, the ToBe framework acknowledges that individual wellbeing is influenced by the broader societal infrastructure. Provisioning systems encompass the various interconnected elements that work together to transform resources into outcomes that either satisfy or fail to satisfy universal human needs. These systems take the form of institutions, including households, markets, the commons, and the state, and they also include technological components such as infrastructure and manufacturing processes. This domain emphasizes the role of societal structures in mediating the use of the planetary resources for the fulfilment of individual needs (Vogel et al., 2021).

The **ecological domain** within the ToBe framework refers to the planetary boundaries (Rockström et al., 2009) that set limits on human activities. These boundaries define the safe operating space within which provisioning systems must operate to ensure sustainable wellbeing. Crossing these boundaries could have harmful consequences for both the environment and human society. The ecological context, therefore, serves as the overarching framework within which provisioning systems must operate while respecting the ability of individuals to satisfy their needs across different temporal and geographical contexts.

Furthermore, the ToBe framework adopts **a systemic and relational approach**, emphasizing the need for balance and limited compensation between the domains (and their constituent dimensions). This approach recognizes that these aspects are intricately interconnected and that efforts to improve one should not come at the expense of another. Achieving sustainable wellbeing requires harmonizing the fulfilment of individual needs with the functioning of provisioning systems within the safe boundaries of the ecological context.

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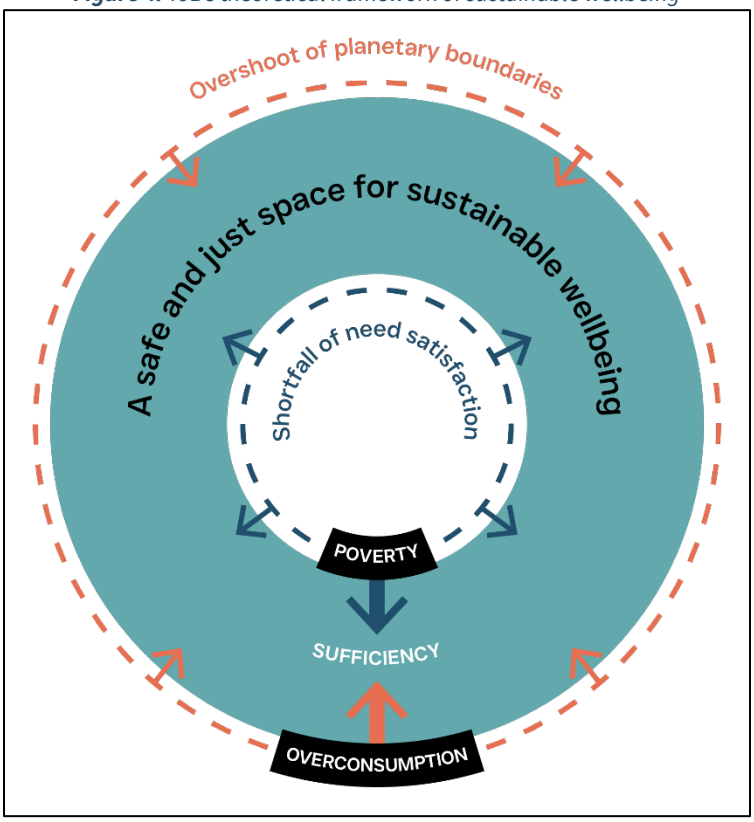
Figure 4: *ToBe theoretical framework of sustainable wellbeing*



The development of indicators (or indicators sets) aligned with the ToBe theoretical framework of sustainable wellbeing necessitates certain critical characteristics to effectively measure and assess the complex nature of human sustainable wellbeing. These **characteristics** are fundamental in constructing a holistic, context-sensitive, boundary-limited, systemic, and integrated approach to sustainable wellbeing evaluation.

Sustainable wellbeing is multifaceted, encompassing a wide array of dimensions that extend beyond the mere material aspects of life. Indicators should, therefore, be **holistic**, delving into the various facets of sustainable wellbeing[1]. This comprehensive approach ensures that no essential component is overlooked, offering a more accurate reflection of an individual's overall quality of life. Additionally, it accounts for the societal and ecological contexts in which wellbeing unfolds, recognizing their integral role in shaping human thriving.

[1] The Alkire-Foster method is a valuable approach within an indicator dashboard to propose a comprehensive picture of a multidimensional concept. Examples of multidimensional wellbeing indexes using the Alkire-Forster method are available in Multidimensional Wellbeing Index (Clausen & Barrantes, 2022), the Bhutan's GNH index (Centre for Bhutan Studies and GNH Research, 2016), the Thai Happy Index (Senasu et al., 2019), as well as the research of Benvin et al. (2016) on four Latin American countries—Colombia, Ecuador, Mexico and Uruguay, or the Multidimensional Wellbeing Index for the UK proposed by Alkire and Kovesdi (2020).

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Recognizing the dynamic and context-dependent nature of needs satisfaction is vital. Indicators should be adaptable and **sensitive** to variations in individual needs satisfiers across different temporal and geographical settings. Wellbeing satisfaction is profoundly influenced by cultural, social, and environmental factors. Hence, indicators must consider these contextual nuances to provide meaningful insights into the diverse ways people experience and perceive wellbeing satisfaction in varying circumstances.

Sustainable wellbeing is not an isolated concept but is intricately linked to provisioning systems and social and ecological boundaries. This concept of **boundaries** emphasizes the need for societal negotiation on how needs are fulfilled, underlining that the provisioning of need satisfiers must be socially just and ecologically safe, ensuring sustainable wellbeing within societal and environmental boundaries. Integrating the concept of limit or boundary into an indicator system involves designing measures that explicitly account for the finite nature of resources and the ecological and social thresholds within which human activities must be constrained to ensure sustainability and wellbeing for all. This could take the form, for example, of **developing indicators that include explicit thresholds** which activities should reach "to leave no one behind", **and limits**[1] which activities should not exceed to avoid detrimental impacts on the environment. Additionally, indicators should be able to **reflect the distributional impacts** of exceeding ecological or social thresholds, for example by highlighting how different groups may be disproportionately affected by environmental degradation or resource depletion.

This boundary-oriented approach to sustainable wellbeing leads us to the concepts of sufficientarianism, limitarianism, and sufficiency. **Sufficientarianism** advocates that every individual should achieve a basic threshold of wellbeing, focusing on ensuring that no one falls below a dignity floor. This principle acknowledges and tolerates social inequalities as long as everyone meets this sufficiency threshold. However, by itself, sufficientarianism might not consider the ecological constraints or the upper limits of resource use, which are critical for sustainability. **Limitarianism** complements this by setting an upper bound to wealth and consumption, challenging the accumulation that exceeds what is necessary for a flourishing life and can exacerbate socio-economic disparities and environmental stresses. Therefore, integrating sufficientarianism with limitarianism creates a comprehensive framework (Gough, 2020). This combined approach defines a "**sufficiency** space" that lies between the dual thresholds of necessity (poverty) and excess (overconsumption), advocating for lifestyles that are adequate for a good life but restrained to avoid ecological degradation. Building on Laurent's insights (2024), sufficiency can also be conceptualized as both a shared origin and a common objective across three post-growth paradigms—degrowth, doughnut economics, and the wellbeing economy. This underscores its pivotal role in the identification of robust sustainable wellbeing

[1] For the transformative power of ambitious and aspirational target oriented indicators at the company level, see Yi et al. (2022).

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indicators. The sufficiency approach also provides a theoretical basis for embedding principles of justice and ecological awareness into the design of sustainable wellbeing indicators[1].

This boundary-limited approach also relates to the **systemic conception of sustainable wellbeing** which accounts for the complex interdependencies and feedback loops that characterize the relationship between human activities and the broader ecological and social contexts. Actions and policies aimed at enhancing wellbeing can indeed have far-reaching effects, potentially impacting ecological balance, resource availability, and social equity, and vice-versa. To achieve a harmonious balance without resorting to trade-offs, indicators must adopt a **systemic** perspective. Using thoughtful aggregation methods could help metrics in taking into account, to some extent, interconnections among sustainable wellbeing domains and dimensions (Pollesch & Dale, 2015). However, given the reductionist nature of indicators, the existence of trade-offs between competing constituent factors is generally considered to be inherent to indicator approaches (Purvis & Genovese, 2023).

Lastly, **indicators should draw upon data and insights from multiple sources and disciplines, reflecting the intricate and interconnected nature of sustainable wellbeing**. This **integration** allows for a comprehensive understanding of the factors defining sustainable wellbeing and facilitates a more accurate evaluation of progress or regress in achieving sustainable wellbeing goals. By weaving together information from various domains, indicators can provide a more robust basis for informed decision-making and policy formulation.

Incorporating these characteristics into the development of indicators ensures that the evaluation of sustainable wellbeing remains true to its theoretical underpinnings and is better equipped to guide efforts aimed at enhancing, with respect to the natural resources, the quality of life for individuals and societies as a whole.

2.4. Impact criteria

To become a catalyst of change

In the following sections, we begin by providing an overview of the current state of the research field of the influential capacity of (sustainable wellbeing) IIs. Subsequently, we examine the suitability of sustainability transition research, particularly the Multi-Level Perspective (MLP) and the Strategic Niche Management (SNM) concept, for describing the impact criteria of T-IIs.

2.4.1. State of the art

Research on sustainable wellbeing IIs often emphasizes the inherent features of the indicators rather than exploring their application within institutions and their impact. While numerous studies have laid out frameworks to analyse the conceptual (Bleys, 2012) or the technical and political aspects of indicators (Gadrey & Jany-Catrice, 2007), more recent literature (Lehtonen et al., 2016; Sébastien et al.,

[1] For more information on the ToBe's perspective on the concept of sufficiency, see Deliverable 1.2. of the ToBe project "Sufficiency as a confluence for post-growth streams. Report on the integrated analysis of the different schools of thought".

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2014; Whitby et al., 2014) has started to shift focus towards understanding how these indicators are used and the influence they exert. This literature distinguishes between the "use" and the "influence" of indicators. This distinction implies recognizing that "**use**" refers to the practical handling of indicators within policy contexts, encompassing activities such as receiving, processing, communicating, and reporting them across various policy venues. Distinctly, "**influence**" refers to the ways in which indicators (and their underlying initiative), or the dialogues and arguments they generate, including during their construction process, impact different facets of the policy process. This distinction emphasizes that simply using an indicator does not guarantee significant influence, just as an indicator (or its underlying initiative) can generate substantial impact on policy and society, even in the absence of conscious and explicit "use" by individuals or organizations.

For instance, in France, scholars (Jany-Catrice & Méda, 2021; Méda, 2020) have considered the enactment of the "Sas Law" in 2015 as a failure in terms of influence. This law requires the Government to present the evolution of "new indicators of wealth" to Parliament for subsequent discussion. Scholars attribute this failure to the process of the "new indicators of wealth" selection which resulted in a list of indicators that appeared to be more of an extension of GDP, rather than a genuine alternative to them.

The separation of use and influence describes how an indicator's impact is not limited to its direct application but extends to its capacity to shape the discourse, steer public opinion, and set the stage for future decisions. Therefore, assessing the performativity of an indicator (and its underlying initiative) necessitates a nuanced evaluation that considers both its use in practical contexts and its broader influence on society and policy, recognizing that these dimensions can operate independently and sometimes interact in complex ways. This is the reason why, in the framework, we focus both on the indicator object as well as its underlying initiative. For a graphical representation of this distinction between "use" and "influence" of an indicator, see Figure 5.

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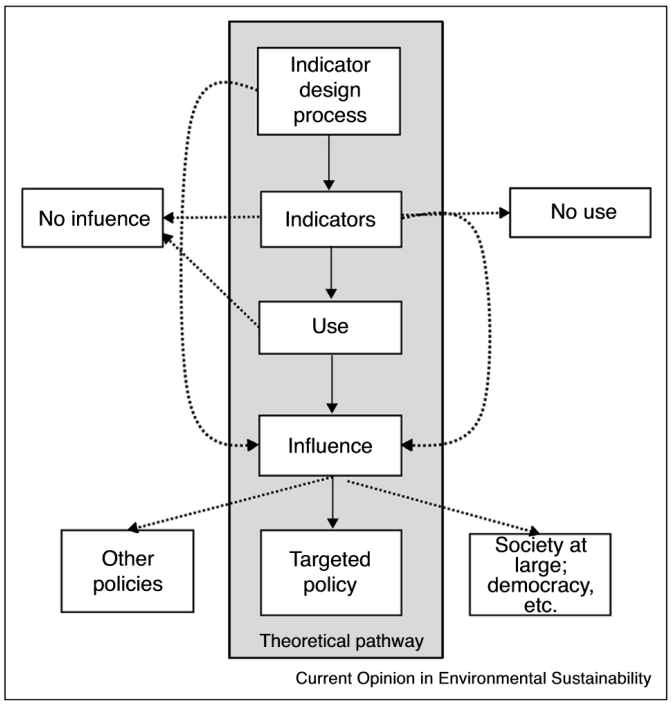
Figure 5: *Relationships between the use and influence of indicators*



Source: *Lehtonen et al. (2016)*

In addition to this distinction between influence and use, scholars (Whitby et al., 2014) have also categorized types of influence and use according to their purpose and intentions. They see three different types of indicators use: instrumental, conceptual, and political:

- The **instrumental use** conceives indicators as tools for decision-making, providing essential knowledge to inform policy formulation and implementation within an 'evidence-based' and 'data-driven' approach. This perspective is founded on the belief that indicators, once made available, can inform policy decisions in a linear and mechanistic way, enhancing decision-making rationality and quality. Despite criticism regarding their socially constructed nature and limited utility in complex or contentious scenarios, the instrumental use remains prevalent in policy practice, often assumed as the dominant and preferable mode of employing indicators.
- The **conceptual use** explores indicators' role in shaping frameworks through dialogue, public debate, and argumentation, offering new insights rather than just factual information for policy decisions. This usage involves creating shared understandings and providing alternative perspectives that contribute to problem framing, influence viewpoints, and stimulate organizational learning. While direct translation of information into policy action might not always be feasible, the conceptual use serves to inform the broader discourse, highlighting the importance of capturing less straightforward uses of knowledge and evidence in policymaking.
- The **political use** addresses indicators' use in justifying and legitimizing policies and decisions, often serving as tools for consensus-building or as means to achieve political support and goals. This application can involve using indicators to justify pre-determined positions or as a facade

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to project rational decision-making. Despite potential for manipulation, the political use is recognized as a necessary element of the decision-making process and advocacy.

The three-dimensional framework of instrumental, conceptual, and political uses provides a comprehensive lens through which to examine the varied applications of indicators, without prescribing a hierarchy of desirability or effectiveness among these uses.

Next, regarding the factors shaping the **capacity of sustainable wellbeing IIs to be influential**, the literature has categorized these elements into three primary domains: (1) indicator factors, (2) user factors, and (3) policy factors (Bleys & Whitby, 2015; Lehtonen et al., 2016; Sébastien et al., 2014; Sébastien & Bauler, 2013; Whitby et al., 2014). These categories, inspired by Pregernig's (2000) typology of knowledge uptake, provide a valuable structured framework for understanding the dynamics that shape sustainable wellbeing IIs type of use:

- **Indicator factors** encompass a range of qualities that determine the suitability of indicators as tools for measurement of high-quality standards, similarly to the quality criteria defining T-IIs. These factors include the quality and structure of data, such as its validity, reliability, specificity, and sensitivity to changes in the factors of interest. Additionally, considerations like the selection of variables, weighting schemes, timeliness, robustness of the methodology, and the availability of accurate and appropriate data sources play a vital role. Methods of indicator construction, aggregation, and presentation are equally crucial in ensuring that sustainable wellbeing IIs effectively convey the intended information.
- **User factors** consider the actors' expectations, belief systems, mental models, and operational codes and practices. A critical aspect of user factors relates to the alignment between the conceptual model underlying an indicator and the conceptual framework of the users and other involved actors. In other words, the extent to which an indicator's framing of reality and the problems it addresses resonates with the perspectives and priorities of its (potential) users greatly influences its impact.
- **Policy factors** encompass the broader context in which indicators are produced and used. The formulation of specific policy agendas is influenced by governance structures, actor coalitions, and the policy issues under consideration. This context, which is subject to changes across different timeframes and geographical locations, plays a decisive role in shaping the indicators' influential capacity. For instance, the legitimacy and credibility of the actors proposing and advocating for indicators play a significant role in determining their potential for influence. Actors with higher degrees of legitimacy and credibility are more likely to accumulate support for their indicators. The characteristics of policy-related elements are pivotal in endorsing and formalizing the principles and methodologies in support of an indicator.

Interestingly, while much of the academic and political discourse surrounding indicators has focused on 'indicator factors,' such as their technical quality and methodological rigor, Sébastien & Bauler (2013) suggest that **these attributes, while important, are not necessarily the decisive factors in determining an indicator's influence**. Instead, conflicts between different worldviews and conceptual frameworks sometimes underlie methodological debates on indicators. Nevertheless, it is essential to

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note that key user groups still consider **high technical and scientific quality as a fundamental prerequisite** for the effective use of indicators.

The distinction between the three types of "use" of indicators (i.e., instrumental, conceptual, and political use), coupled with the three factors that shape their influence (i.e., indicators, use, and policy factors), stresses the complexities of indicators' role in policy, decision-making and societal evolution. Attempting to construct a universal, prescriptive, and complete theory of an indicator impact seems undesirable in light of the insights from research on sustainable wellbeing IIs influence. Instead, our understanding of the influential capacity of indicators should acknowledge the **inherent variability and nuances of policymaking processes and societal transitions**. It should embrace the idea that indicators operate within diverse contexts, where the interplay of factors is unique and constantly evolving. While we will attempt, in Section 3 (p. 29), to identify general principles and factors that shape an indicator's satisfaction of the impact criteria, we must also recognize that the intricate web of politics, culture, institutions, and societal values cannot be neatly reduced to a one-size-fits-all formula.

Hence, a more nuanced and adaptable approach to understanding the effectiveness of indicators in influencing the context is favoured, that is the MLP including the SNM. As developed in the next section, this approach accommodates the context-dependent dynamics that shape the trajectory of indicators' use and influence. It encourages research to take into account the specificities of each sustainable wellbeing IIs case while recognizing that there may not be a universal recipe for indicator success. In the following sections, we develop this approach along with the SNM, both emanating from sustainable transition studies and coming into support of the definition of the impact criteria.

2.4.2. Sustainable transition studies

Within ToBe project, WP3 has been working on theories of change and their relationship with alternative economic initiatives, namely green growth, post-growth (a-growth and de-growth) and post-development paradigms. Results of WP3's research is available in the Deliverable 3.1. of ToBe Project (Angresius et al., 2023) and summarized in Table 2.

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Table 2. *Summary of approaches for understanding change in alternative economic initiatives*

	Approaches						
	Transition studies	**Long-waves**	**Transformative innovation policy**	**Radical sustainability transformation**	**Leverage points in systems theory**	**Political Economy approaches**	**Rights of nature approaches**
Type of change	Socio-technical / incremental	Socio-technical	Socio-technical	Socio-ecological	Systemic – change as an unpredictable, non-linear process	Socio-economic (Systems of production and consumption)	Socio-ecological
Levels of analysis	Macro-Micro	Macro	Meso-Micro	Macro-Micro (global, national or local level)	Macro	Macro-Micro	Macro-Micro
BU/TD	Bottom-Up & Top-Down	Bottom-Up & Top-Down	Bottom-Up & Top-Down	Bottom-up	Bottom-Up & Top-Down	Bottom-up & Top-down	Top-Down
Units of analysis	Socio-technical systems shift to more sustainable modes of production and consumption	Economic (growth) cycles, technologies, infrastructure, and institutions	Innovation policy, policy making. actors, institutions, practices, strategies, and interventions, adoption, and diffusion of innovative solutions and practices, government, academia, industry, civil society, and communities	Values, and norms, and paradigms of development and wellbeing	Feedback-loops, core system elements, e.g. the rules of the system	Production and social reproduction in human societies, and how these processes are shaped by and (re)produce power relations	Paradigm shift in environmental ethics and law
Thematic focus	Sectors such as energy, mobility, cities, and focus on the interactions between social, technological, and institutional changes	Technological development as catalyst for economic growth cycles	Innovation policy, technologies, cross-sectoral policymaking, innovation beyond technology including social, institutional, and organizational innovation	Socio-ecological sustainability, industries, consumption patterns, economic models, and governance systems	Shallow to deep leverage points of systems change	Economic, political and socio-cultural spheres of society, power relations	Nature, relations human-environment, intrinsic value and rights of the natural world
Drivers of change	Disruptive interventions to support emerging changes. adoption of cleaner technologies or practices. Pressures from change in the "landscape"	Technological change and innovations, institutional changes	Social and organizational innovations, "mainstreaming niche innovations" via top-down "orchestration", innovation in governance, business models, social practices, and cultural norms	Change in norms, values, governance and economic models	Shifting values and mindsets towards less materialistic understandings of a good life and more integrated human-nature relations. Changing the processes and framing of knowledge production	Crisis of existing political-economic project. A political project that shows the way out of the crises, comprehensive alliance of social forces promoting the project in political struggles	Reflects a growing awareness of the importance of preserving and respecting the environment for the benefit of current and future generations
Barriers of change	Resistance from old regime, lack of scaling up niches	Financial crises and busts, lack of institutional changes	Focus on short-term efficiency gains, incremental changes, and economic growth	Old mindsets, narrow focus on technologies	Self-reinforcing feedback-loops, sustainability interventions focused on shallow leverage points	Social forces which benefit from the current status quo, path-dependencies in established infrastructures and ways of organizing, capitalist norms of commodification and materialistic values	Traditional view of nature as property to be exploited

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In the context of this research, we refer to **(sustainable) transition studies** to design a suitable framework for defining the impact criteria of the proposed definition of TIs. While we reframe this analytical framework thanks to insight from other theories of change (see Table 2), we believe this field of study is suitable for the purpose of our research considering that sustainable transition studies seeks to provide insights, strategies, and evidence-based recommendations to support the transformation of societies and economies toward more sustainable and wellbeing forms of development. It recognizes that addressing global sustainability challenges requires not only technical solutions but also changes in societal norms, behaviours, and governance structures. In the light of sustainable transition studies, we first describe two relevant approaches commonly employed in the analysis of societal transitions—the MLP and the SNM (Markard et al., 2012)—then, we examine how these two approaches align with our objective of defining the impact criteria of T-IIs.

Multi-Level Perspective

The **MLP** offers insights into the dynamics of (traditionally) socio-technical transitions, where established systems are challenged by emerging innovations (Geels, 2004, 2010). It was initially developed to understand the dynamics of technological transitions, particularly in the context of energy and mobility (Kemp et al., 1998). This framework recently gained momentum in the context of sustainability and societal changes (Geels, 2019).

Depending on the entry point (technological, institutional, social, ecological, economic or cultural), MLP researchers also investigate the question of large-scale societal change in regimes different than socio-technical ones. Overall, Loorbach et al. (2017) distinguish three approaches—socio-technical, socio-institutional and socio-ecological—that are similar in their interest and focus on transitions but different in how they seek to understand these, what the core subject of transition is, and which drivers and mechanisms they attach the most explanatory value to.

The MLP theory suggests that transitions from one dominant regime to another occur through interactions between three key levels: the micro/niche level (individual actors and practices), the meso/regime level (organizational and institutional arrangements), and the macro/landscape level (socio-technical/institutional/ecological and cultural context). In that sense, the MLP theory identifies three main components within these levels (Geels, 2002; Rip & Kemp, 1998) (see Figure 6):

1. **Niches**: Small-scale, innovative, and often experimental initiatives that challenge the existing regime. These niches can be platforms for developing new technologies, practices, and ideas.
2. **Regimes**: The existing dominant socio-technical/institutional/ecological systems, which include established technologies, norms, regulations, and institutions.
3. **Landscape**: The broader socio-cultural, economic, and political context that influences the interactions between regimes and niches. Changes in the landscape can create opportunities for transitions.

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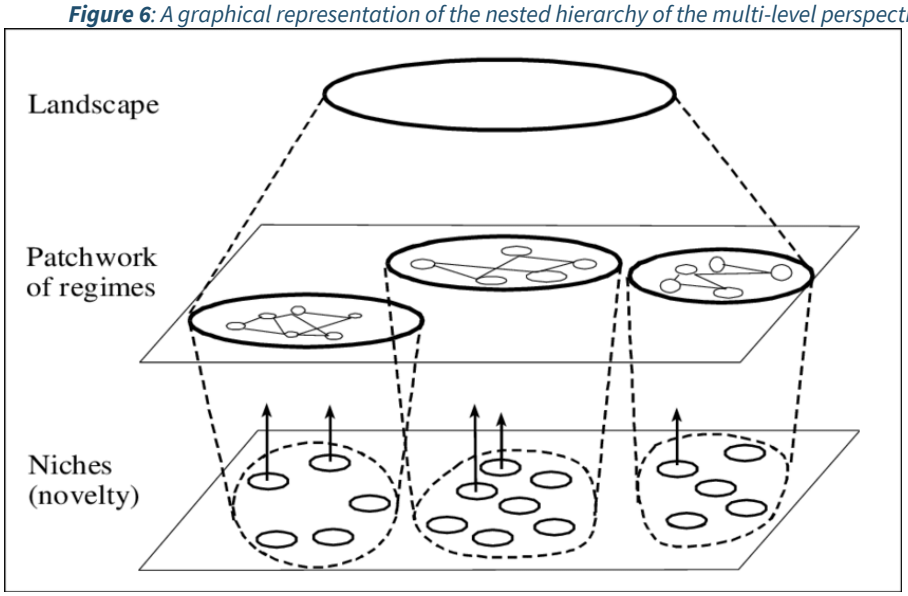
***Figure 6**: A graphical representation of the nested hierarchy of the multi-level perspective*



***Source**: Geels (2002)*

The dynamics and interactions between these three components drive the process of transition from one regime to another, such that MLP considers transitions as responding to the following seven foundational characteristics (Köhler et al., 2019):

1. **Multi-dimensionality and co-evolution:** Transitions of systems involve numerous elements such as technologies, markets, user behaviours, cultural meanings, policies, infrastructures, and supply chains. These elements co-evolve and interact in non-linear, interdependent ways.
2. **Multi-actor process:** Transitions are driven by various actors and social groups, including academia, politics, industry, civil society, and households. These diverse actors have their own resources, beliefs, interests, and strategies, making transitions highly intricate processes that cannot be adequately explained by a single theory or discipline.
3. **Stability and change:** Transitions research centres on the relationship between stability and change within socio-technical systems. While there are innovations and practices aligned with sustainability, deeply entrenched systems with established patterns also persist. Understanding how impulses for radical change interact with forces of stability and path dependence (lock-in mechanisms) is a central concern of transition studies.
4. **Long-term Process:** Transitions unfold over extended periods, often spanning decades. This extended timeline is due to (1) the gradual development and diffusion of innovations, and (2) the time required to disrupt existing systems and overcome resistance from established actors. Researchers often divide transitions into phases like predevelopment, take-off, acceleration, and stabilization for analytical purposes.
5. **Open-endedness and uncertainty**: The future of sustainability transitions remains open-ended and uncertain. Multiple promising innovations and initiatives compete, and it is challenging to predict which will prevail. Uncertainty arises from non-linear innovation processes, political dynamics, and socio-cultural changes, leading to fluctuations, reversals, or unexpected developments.

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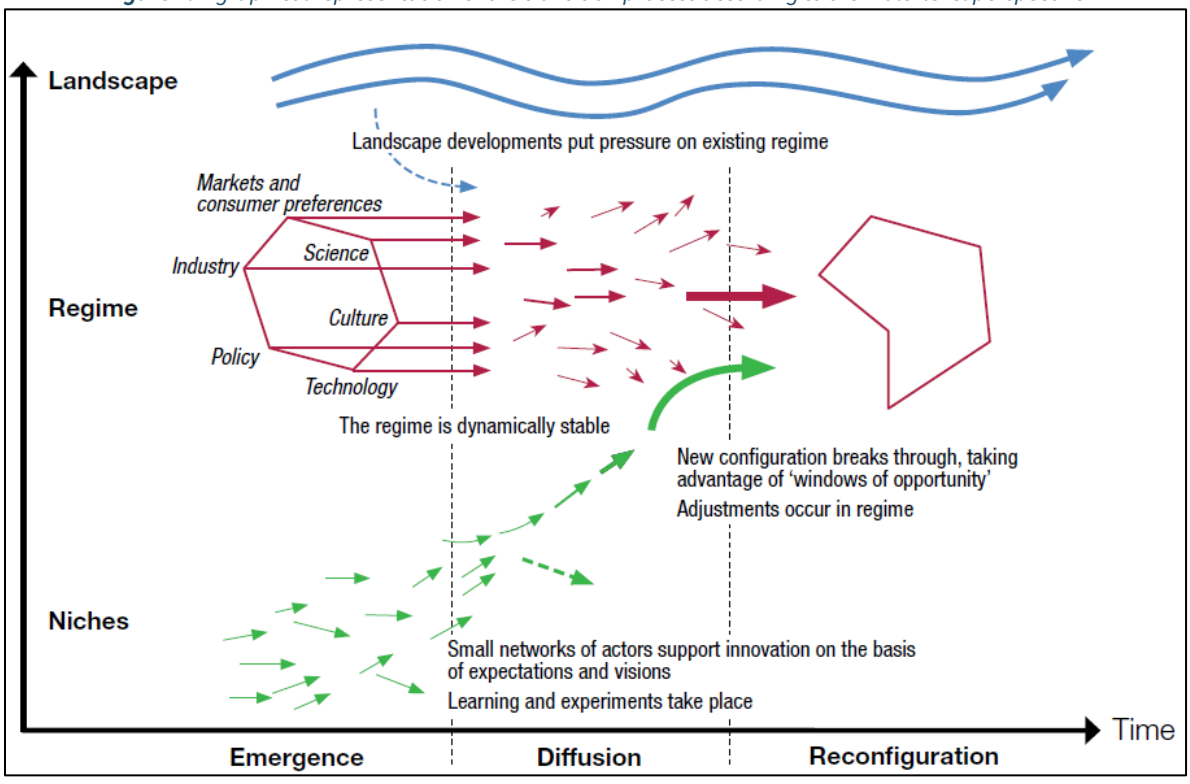
6. **Values, contestation, and disagreement**: Sustainability, as a concept, is subject to significant contestation. Different actors and groups hold diverse views on the most desirable innovations and pathways for sustainability transitions. Incumbent regime elements, that may be affected by transitions, often resist change, leading to disagreements and conflicts over the necessity and speed of transitions.
7. **Normative directionality**: Achieving sustainability requires normative guidance, as private actors may not have sufficient incentives to address sustainability challenges on their own. Public policies, including regulations, standards, taxes, subsidies, and innovation policies, play a crucial role in shaping the direction of transitions, necessitating normative statements about their goals and objectives.

Overall, transitions thus are long-term multi-actors and dimensional processes, characterized by periods of stability and crisis in the existing regime, the emergence and growth of niches, and the potential alignment of landscape factors with niche innovations, leading to the potential disruption and eventual replacement of the existing regime (see Figure 7). The development and amplification of niches are specifically studied by the SNM, a concept which we elaborate on in the next section.

Figure 7: *A graphical representation of the transition process according to the multi-level perspective*



Source: *Transformations to Sustainability (2019), based on Geels (2002)*

Strategic Niche Management

SNM, a concept within MLP, focuses on **nurturing and protecting innovative niches** as they develop and gain momentum (Kemp et al., 1998; Raven et al., 2016; Smith & Raven, 2012). In the context of technological and societal shifts, a niche can be thought of as a protected and experimental space where

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new ideas, technologies, or practices emerge. These innovations often start in niches because they might not fit well within the prevailing regime due to various reasons such as technological limitations, regulatory barriers, or opposition from established actors.

In the framework of SNM, a series of strategies and activities are suggested to **support and develop niche** innovations in a way that maximizes their chances of influencing the broader regime and landscape levels (Schot & Geels, 2008), such that they create transformative change. Based on their examination of existing typologies, Lam et al. (2020) propose an overarching typology which structures these pathways under three macro-processes: **(1) amplifying within an initiative; (2) amplifying out an initiative and (3) amplifying beyond an initiative** (see Figure 8). Here is a list of the mechanisms that support the niches development, structured according to their macro-processes:

- Amplifying within an initiative:
    - **Stabilizing** involves strengthening and more deeply embedding initiatives in their context, making them more resilient to up-coming challenges and ensuring that they last longer.
    - **Speeding up** involves increasing the pace by which initiatives create impact or are brought to fruition.

- Amplifying out an initiative:
    - **Growing** involves the expansion of the impact range. As a result of a growing process, an initiative covers more of its potential impact range by reaching out with its program, product, solution or service, or by opening, in *similar* contexts, *similar* initiatives which are dependent on the existing initiative (affiliates).
    - **Replicating** involves the *copying* of an initiative to a *dissimilar* context with some relations of dependence between initiatives.
    - **Transferring** involves taking an initiative and implementing a similar but *independent* one in a different place, adapted to the new but *similar* local context.
    - **Spreading** involves disseminating core principles and approaches to other places with a *dissimilar* context.

- Amplifying beyond an initiative:
    - **Scaling up** involves processes that aim to impact higher institutional levels by changing the rules or logics of incumbent regimes.
    - **Scaling deep** aims to change people's values, norms, and beliefs through the work of the initiative by fostering new mind-sets, changing perceptions, and introducing new ways of relating and knowing as well as new value systems.

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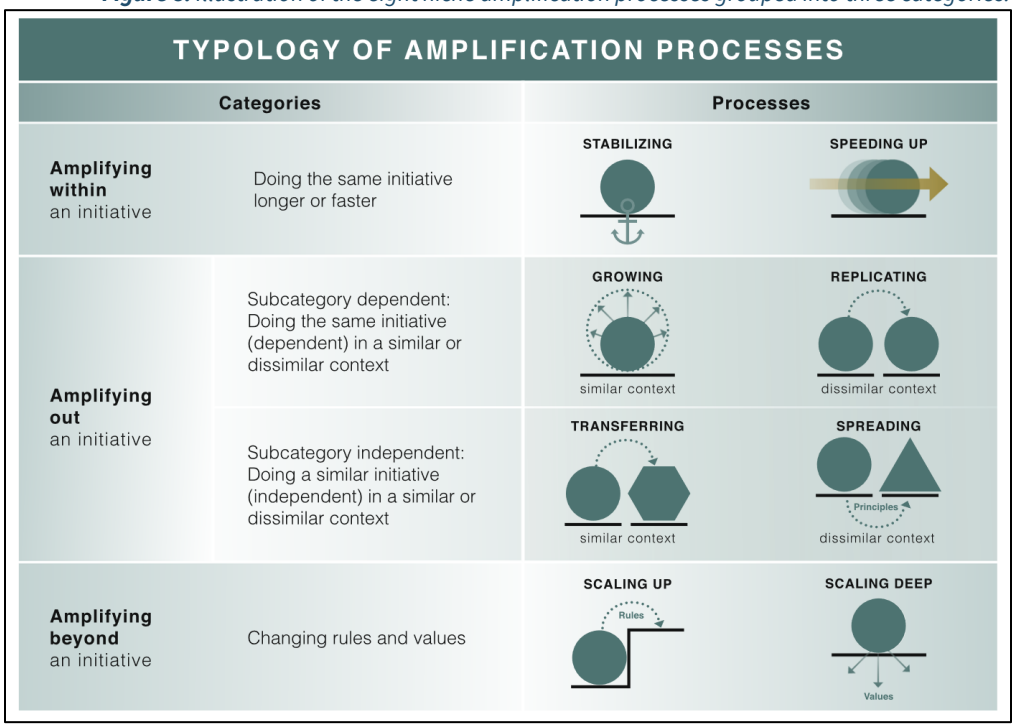
Figure 8: *Illustration of the eight niche amplification processes grouped into three categories.*



Source: *Lam et al. (2020)*

The ultimate goal of SNM is to position niche innovations as potential alternatives to the existing regime. Successful niche innovations, when supported strategically, can challenge, and potentially transform the regime, leading to broader systemic/landscape change.

In this context, the SNM makes the distinction between local and global niches (Geels & Deuten, 2006; Raven & Geels, 2006; Smith & Raven, 2012). A **local niche** refers to a specific context where new practices, technologies, or ideas are being developed. Local niches provide a space for experimentation, learning, and adaptation without the pressures and constraints of the dominant regime. Innovations developed in local niches can be tailored to the unique needs and circumstances of the local context. An example of such a local niche is the "*Indicateurs de Bien-Etre Soutenable Territorialisés*" (IBEST) initiative in Grenoble (Le Roy & Ottaviani, 2015, 2017), which since 2002, has involved a wide range of stakeholders including public policy specialists, scientists, activists, and residents in a long-term effort to redefine how public policies are observed and evaluated. This collective approach has facilitated the development of eight dimensions of sustainable wellbeing tailored to local needs and aspirations, supported by recurring surveys that engage local stakeholders in discussions. A **global niche**, on the other hand, extends beyond a specific context and involves collaborations, knowledge sharing, and networking on a broader scale. For instance, the Wellbeing Economy Governments (WEGo) partnership serves as a prime example of a global niche, connecting governments like Scotland, Iceland, New Zealand, Wales, and Finland, who share experiences and policy practices aimed at promoting wellbeing economies (Trebeck, 2024). These collaborations help in sharing experiences, best practices, and resources, which can accelerate the development and diffusion of niche innovations, such that the niche

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innovation gains in generalizability. Global niches are essential for amplifying innovations and gaining credibility and recognition on a larger stage.

Sustainable transition studies and transformative indicators initiatives

Both the MLP and SNM theories offer strong theoretical foundations to understand how sustainable wellbeing IIs can disrupt established progress measurement systems (currently based mainly on GDP) and participate in the broader societal landscape transformation, and thus satisfying the impact criteria.

The MLP theory proposes three levels of analysis: niche, regime, and landscape. **An application of these three levels of analysis on sustainable wellbeing IIs** would result in considering that:

- **Niche**: The niche level represents the experimental space where novel ideas, technologies, and practices emerge. In our context, **existing indicators satisfying (to a large extent at least) the quality and theoretical criteria** represent the niches. By referring to the different constituent parts of our theoretical framework (see Figure 4), these indicator niches are alternative ways of measuring and assessing, in a satisfactory technical way, societal progress that go beyond GDP. In that sense, indicator niches challenge the dominance of GDP as the primary measure of progress, thus being part of the sustainable wellbeing IIs family.
  Regarding indicators following our quality and theoretical criteria as niches is supported by the **proliferation of sustainable wellbeing IIs**. The surge in sustainable wellbeing IIs (Hoekstra, 2019), reflecting diverse technical and political choices (Forum pour de Nouveaux Indicateurs de Richesse, 2011), is in line with the idea that, according to MLP, the emergence of niches is numerous and a dynamic component of transitions. Thus, just as in the MLP, we suggest that the indicator niches are numerous and can contribute to the broader process of transitioning to a more comprehensive and sustainable approach to assessing wellbeing.
  In addition, among those indicator niches, there are reasons to believe to find both local and global niches such as defined by the SNM. Indeed, from the examination of sustainable wellbeing IIs (Jany-Catrice & Méda, 2021), it can be observed that at the regional/**local level**, public authorities are inclined to favour indicators that reflect the unique characteristics and assets of their regions, emphasizing the need for indicators that resonate with the local context. These indicators, driven by a desire to tell the story of their region, can be considered as local indicator niches. Conversely, at the **global level**, international organizations advocate for universal sustainable wellbeing IIs that transcend specific contexts and promote a standardized approach to measuring wellbeing and sustainability. Among these universal indicators, global indicator niches may be found as soon as the indicators satisfy both our quality and theoretical criteria.
- **Regime**: The regime level represents the dominant way of doing things, the established set of rules, norms, and practices that govern society. In our context, the system we focus on refers to the **current GDP-centric measurement system**. This system has been the established approach for assessing economic success, progress, and prosperity for many decades. However, it does not fully capture the broader aspects of sustainable wellbeing. Although MLP conventionally directs its attention toward socio-technical regimes, the GDP-centric measurement system is more appropriately aligned with a socio-institutional regime, defined

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by institutionalized cultures, structures, and practices (Loorbach et al., 2017). Given that indicators are not only technical but also political normative constructs (e.g., Jany-Catrice & Méda, 2021; Kovacic & Giampietro, 2015; Purvis & Genovese, 2023; Thiry, 2012), the emphasis of MLP in our socio-institutional context is rather on how incumbent routines, powers, interests, discourses, and regulations create path dependencies and how these are challenged by T-IIs.

- **Landscape**: The landscape level encompasses the broader context in which transitions take place. It includes cultural, societal, and institutional factors that shape the potential for change. In our current societal landscape, pressures from global socio-ecological crises are exacerbating tensions between competing paradigms: the traditional focus on neoclassical economic principles, which prioritize economic growth, and an emerging holistic approach that values sustainable development and wellbeing. This conflict is instigating the societal landscape to consider shifting from its entrenched economic priorities towards a broader, more integrated perspective, making room for transformative niches to bring answers to environmental and social urgencies (Fioramonti et al., 2022).

The **process of transition**, according to the MLP theory, involves interactions and tensions between these three levels. Niche innovations emerge in response to perceived shortcomings or problems within the existing regime and landscape. Indeed, as the current societal landscape evolves, there is a well-established recognition of the limitations of traditional indicators (like GDP) in capturing the complexities of sustainable wellbeing (e.g., Stiglitz et al., 2009; Thiry, 2015; van den Bergh, 2009). This recognition drives the demand for new indicators that can better represent the desired society. Following this need for new indicators that would actually align more closely with the new societal priorities and visions, new (potential) T-IIs are created. In short, when traditional indicators no longer resonate with the transformed values, the creation of new, more suitable, indicators is stimulated. Over time, as these innovations gain credibility and support (see the typology of Lam et al. (2020)), they might challenge the dominance of the established regime. The landscape plays a crucial role by either enabling or constraining the diffusion of niche innovations into the broader societal context.

In more details and in line with the seven fundamental characteristics of regime transitions within the MLP framework, the process of transforming the prevailing GDP-centric regime through the introduction of T-IIs is a (1) multidimensional, co-evolutive, (2) multi-actor, (3) nonlinear, (4) long-term, (5) open-ended, (6) varied and (7) selected process.

First, the transition is **multidimensional** and **co-evolutive** in nature. It encompasses numerous dimensions and aspects, extending beyond mere economic considerations. T-IIs are potent catalysts for driving change of the system landscape toward sustainable wellbeing goals but are just one among several driving forces. We acknowledge indeed that T-IIs do not work in isolation; they collaborate with other political, technological, normative, and scientific drivers of transformation within the society. T-IIs work in synergy with other transformative drivers so that their impact and effectiveness is reinforced. These dimensions are not isolated but intricately interconnected and evolve together, reflecting the co-evolutionary dynamics inherent in MLP. The shift towards sustainable wellbeing, driven among other by transformative indicators, involves a profound adaptation across various facets of society.

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Second, this process is inherently **multi-actor**. It does not rely on the actions of a single entity but engages a diverse array of stakeholders. Actors from academia, politics, industry, civil society, and households all play pivotal roles in driving this transformation. Each brings their unique perspectives, resources, and motivations to the table, making it a complex and dynamic journey.

Third, it is important to understand that this transformation is **nonlinear**. Unlike linear progressions, regime transitions are characterized by sudden, non-sequential changes. Despite a desire for change supported by the development of sustainable wellbeing IIs, the existing regime exerts a strong resistance to changes, characterized by stability and path dependence mechanisms (see Bleys & Whitby, 2015 for some lock-in mechanisms). This nonlinear aspect means that progress may be gradual and marked by opposition from the prevailing regime.

Fourth, regime transitions, including the GDP-centric regime transition, are inherently **long-term processes.** They unfold over decades rather than years, as appears to be the case for beyond GDP indicators (Hoekstra, 2019). This extended timeline is a consequence of the time it takes for radical innovations and practices to evolve from niche concepts to widespread adoption, as well as the duration required to destabilize and reconfigure existing systems. Overall, the transition trajectory involves different phases, including the niches emergence, the niches diffusion, and the regime reconfiguration.

Fifth, the transformation process is also **open-ended and uncertain**, allowing for multiple possible pathways and outcomes. Given the complexity of societal change, there is no predetermined endpoint. Instead, it's an ongoing journey influenced by various factors, including innovations, political dynamics, and changing societal values.

Sixth, this transformation is characterized by its **diversity**, contestation, and varying viewpoints. Different actors and social groups may hold contrasting visions of what sustainable wellbeing entails. Thus, different contexts, regions, and communities may adopt unique strategies and indicators solutions tailored to their specific needs and challenges. This diversity is a strength, as it allows for experimentation and innovation from various sources; however, excessive diversity can also lead to the creation of fragmented and weak niches, lacking the cohesion and robustness needed to scale effectively beyond their initial contexts.

Seventh, the transformation process is selective and **normative** in nature. It involves reshaping societal values, norms, and beliefs to align with the principles of sustainable wellbeing. This necessitates not only technical changes but also shifts in the overarching societal mindset.

In essence, the journey towards transforming the current GDP-centric regime into one guided by T-IIs is a complex, dynamic, and long-term process. It involves multiple dimensions, engages diverse actors, unfolds nonlinearly, remains open-ended, embraces diversity, and requires ongoing selection among various approaches. Successfully navigating this transition demands a deep understanding of these characteristics and the ability to navigate the intricate web of factors at play.

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2.5. Bringing together quality, theoretical and impact criteria: Toward a definition

Concluding section 2, here we bring together the quality, theoretical and impact criteria of our definition of T-IIs. We take into consideration quality requirements for robust measures, the theoretical framework of sustainable wellbeing proposed by the ToBe project as well as the MLP perspective of transitions. As a result, **T-IIs can be defined as initiatives which cultivate (1) measurement tools or metrics of high-quality standards that not only provide insights into (2) the theoretical dimensions of sustainable wellbeing but also possess the inherent capacity (3) to challenge, reshape, or replace prevailing institutional and socio-economic paradigms within a given social context, towards inclusive wellbeing within planetary boundaries**[1]**.**

From this definition of T-IIs, it can be assumed that T-IIs need to fulfil three constitutive criteria: the theoretical, the impact and the quality criteria. These indicators extend beyond traditional measurement systems by serving as dynamic agents of change, fostering co-evolutionary interactions between shifting paradigms, political structures, mental models, physical infrastructures, and innovative initiatives at the grassroots level. T-IIs encompass both the theoretical and impact criteria by providing insights into sustainable wellbeing while actively participating in the transformative process by catalysing shifts in societal systems and practices. These indicators serve as instruments in navigating the complex terrain of transitioning towards a more sustainable and wellbeing-oriented socio-economic paradigm. A T-II comprises not only the metric itself but also the initiative that underlies it. This initiative encompasses the indicator methodology, intentions and objectives, stakeholders' involvement, communication of results, influence on policies, and the long-term vision of the initiative.

In justifying the selection of the three criteria—quality, theoretical, and impact—for defining T-IIs, we acknowledge our constructivist approach to the development and evaluation of indicators. This approach emphasizes that indicators are not merely neutral tools but are constructed through social processes that reflect specific values, intentions, and objectives (e.g., Mennicken & Espeland, 2019). The quality criterion ensures that T-IIs are built on robust, reliable measures that stand up to empirical scrutiny. The theoretical criterion demands that these initiatives are grounded in a solid understanding of sustainable wellbeing. Finally, the impact criterion, supported by the MLP understanding on transitions process, assesses the real-world effectiveness of these initiatives in catalysing significant shifts within societal systems and practices. MLP aids in understanding how T-IIs can catalyse systemic changes by interacting across different societal layers and influencing policy and practice. By fulfilling these criteria, T-IIs are positioned not only as measures of current states but as active participants in shaping future socio-economic landscapes. This constructivist lens highlights the transformative potential of T-IIs to influence both policy and public perception, guiding societies toward more sustainable and equitable futures.

[1] This definition is inspired by the definition of transformative social innovation (Avelino et al., 2019).

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3. Illustrating the concept of transformative indicators initiative

3.1. Introduction

Section 3 of this deliverable embarks on an empirical journey to bring the theoretical underpinnings of Transformative Indicators Initiatives (T-IIs) into a vivid empirical context. This section seeks to animate the concept of T-IIs through the lens of real-world examples, showcasing how these initiatives represent more than mere theoretical constructs. They stand as tangible demonstrations, with various degrees of success, of how measurement tools and metrics can break through conventional boundaries to catalyse significant shifts in societal wellbeing and sustainability.

To achieve a comprehensive analysis, we meticulously selected eight cases from an extensive review of sustainable wellbeing indicators initiatives. These selected IIs, analysed at a more general level, are:

1. The Measuring What Matters (MWM) Dashboard of Australia;
2. The Gross National Happiness (GNH) Index of Bhutan;
3. The Canadian Index of Wellbeing (CIW) of Canada;
4. The New Indicators of Wealth (NIW) of France;
5. Equitable and Sustainable Wellbeing Indicators (BES) of Italy;
6. The Living Standards Framework (LSF) Dashboard from New Zealand;
7. The National Performance Framework (NPF) Dashboard of Scotland;
8. The National Wellbeing Indicators (NWI) of Wales.

A thorough description of each of the selected IIs is available in “Annex 1: Overview of the selected indicators initiatives” (p. 136).

IIs were chosen based on their potential to fulfil the three core criteria defined for T-IIs: quality soundness, theoretical alignment with our sustainable wellbeing framework, and impactful transformation. This selection process focused on national initiatives to explore how the unique and context-specific challenges and solutions, that are more pronounced at the national level rather than in broader global efforts, shape the initiatives. This approach allows thus for an examination of how different socio-economic, cultural, and political environments influence the impact and adaptability of these initiatives. The criteria for selection also included diversity in aspects such as the initiative’s longevity and scale, geographical region, development process, and initiator, capturing a broad spectrum of approaches and methodologies. Moreover, some initiatives are affiliated with international networks like WEGo, while others operate independently, offering a rich comparative landscape.

The in-depth analysis that follows aims to dissect each initiative based on the three pillars of our conceptual framework: the quality of metrics, their alignment with the theoretical constructs of sustainable wellbeing, and their capacity to influence societal paradigms. This examination, enriched by desk-based research of more than 240 documents and supplemented with seven semi-structured interviews with field experts of the IIs under analysis, scrutinizes each initiative’s alignment with the

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established quality criteria and their theoretical congruence with our sustainable wellbeing framework. Additionally, leveraging the typology of niche amplification processes proposed by Lam et al. (2020), we explore how these initiatives navigate and practice amplification processes[1] in their mission for societal transformation.

This comprehensive investigation serves a **dual purpose**: to **validate the conceptual framework established for T-IIs** and to **extract actionable insights from these pioneering efforts**. The primary research question guiding this exploration is thus: "How do selected IIs embody the conceptual criteria of quality, theory, and impact, and what can their amplification processes teach us about indicators fostering societal progress towards sustainable wellbeing?" Through this inquiry, we aim not just to assess the relevance of our conceptual model but also to collect lessons that can inspire and guide future endeavours, notably in the EU, in the realm of sustainable wellbeing indicators. Ultimately, this section endeavours to deepen our collective understanding of the transformative potential of indicators and their instrumental role in guiding societies towards a future marked by sustainability and enhanced wellbeing.

Following this introduction, Section 3 outlines our methodology for selecting and analyzing case studies, explaining the criteria and processes used. We then present the results, demonstrating how each initiative aligns with our T-II framework and conclude with key lessons learned about their transformative potential. This structure offers a concise overview of our analysis, from methodological foundations to critical reflections on future T-IIs.

3.2. Methodology

This research's methodology consists of three phases—selection, analysis, and synthesis—applied to potential T-IIs. We start by carefully selecting case studies, then perform an in-depth analysis of their features and impacts, and conclude by synthesizing our findings to highlight implications for sustainable wellbeing.

The methodology for this research began with a rigorous selection of case studies from recent reviews of both international, national and local sustainable wellbeing IIs (Cap Bien Vivre, 2023; Chancel et al., 2014; Exton & Shinwell, 2018; Forum pour de Nouveaux Indicateurs de Richesse, 2011; Gábos et al., 2023; Hayden et al., 2022; Jansen et al., 2023; 'Tour d'horizon', 2023). To accomplish this **selection phase**, an extensive list of more than 100 of such initiatives was compiled, noting specific features including the territory of implementation, the timeline of the initiative (including start and end dates, if applicable), the initiator's name and function, affiliations with other IIs, stated objectives, assessment type (subjective, objective, or mixed), primary audience, relation to GDP (whether adjusting, replacing, or supplementing it), the orientation of the indicator construction process (bottom-up vs. top-down), a description of the overall theoretical structure of the indicator, the presence of participatory processes in the indicator's development, the indicator type (composite vs. dashboard), and the level of scope of

[1] For a detailed rationale behind our decision to prioritize "amplification" over "use", "influence", and "impact", please refer to "Box 1" (p.31).

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implementation (international, national, or local). These features offered preliminary insights into how well initiatives align with our definition, aiding in the selection of case studies.

In selecting initiatives for this analysis, we prioritized those that **measure sustainable wellbeing**, incorporating both socio-environmental aspects to form an overarching framework within their respective territories. Secondly, chosen initiatives needed to be **well-discussed** in both academic and grey literature as well as in media, indicating some degreed of influence (though concrete evidence of amplification and impact remain to be assessed in the analysis phase). Thirdly, we focused on **national initiatives** due to their ability to closely reflect ground realities, and being integrated into national policy landscape, while maintaining relevance for EU-level considerations. Finally, **diversity in longevity, geographical region, development process, and the type of initiator were secondary criteria**, aimed at capturing a broad spectrum of methodologies and approaches. As such, we aimed to capture a broad spectrum of methodologies and approaches that could drive substantial change.

For **the analysis phase,** each selected case study was evaluated to determine how well it met the three main criteria and their sub-criteria of our conceptualization of T-II (see Figure 3, p.8). An analysis grid (see Table 3) was constructed to facilitate this in-depth evaluation. In assessing the **quality criteria**, we examined how each indicator from the initiatives met the quality criteria outlined in Section 2.2 (p. 8), including:

- Accuracy (whether the assessment is close to the true or actual value of the phenomenon it intends to represent),
- Reliability (whether the assessment is consistent and stable over time and across different conditions),
- Robustness (whether the assessment is resilient to changes and adaptable when faced with variations, uncertainties, or challenges),
- Timeliness (whether the assessment is updated regularly and promptly),
- Coherence (whether the assessment fits into the broader statistical landscape),
- Comparability (whether the assessment enables benchmarking),
- Accessibility (whether the assessment is easily available),
- and Clarity (whether the assessment is presented in a clear, understandable manner (language, visualization, explanatory material)).

Regarding the **theoretical criteria**, each indicator's alignment with our sustainable wellbeing conceptual framework detailed in Section 2.3 (p. 9) was scrutinized. Our process began by examining each dimension of the indicator under review, categorizing them into the ToBe theoretical framework as either individual wellbeing (addressing health, relatedness, and autonomy needs), societal wellbeing, or ecological wellbeing, based on our analysis. We allowed for non-exclusive classification, meaning an indicator could simultaneously address multiple needs across sustainable wellbeing (sub-)dimensions. Subsequently, we quantified the proportion of the indicator dimensions that fell into each domain—individual (further distinguishing between health, autonomy, and relatedness), societal, and ecological—using ratios. This approach allowed us to ascertain the primary focus of the indicator by understanding the relative emphasis placed on each aspect of the ToBe theoretical framework. In

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addition to the orientation of each indicator, we also appraised its overall theoretical foundation by evaluating its alignment with a holistic, context-sensitive, boundary-limited, systemic, and integrated approach to sustainable wellbeing evaluation.

For the **impact criteria**, we utilized the typology of amplification processes of niche innovations as proposed by Lam et al. (2020), adjusting this typology based on our case study findings. Specifically, we investigated signs of each initiative undergoing any of the eight processes of amplification. Justifications supporting our choice to focus on "amplification" rather than related concepts of "use", "influence", and "impact" can be found in the Box 1. This analysis was conducted through desk-based research of more than 240 documents, encompassing academic papers, grey literature, national formal communications, and newspapers and blog articles, and was complemented by seven semi-structured interviews with experts from the targeted initiatives. A list of the material analysed is available in the "Annex 2: Material used for the analysis phase" and details on the semi-structured interviews in the "Annex 3: Details on semi-structured interviews".

Box 1: *Distinguishing key terms: Indicators initiatives use, influence, amplification, and impact*

The literature of IIs differentiates between the "use" and "influence" of indicators (e.g., Sébastien & Bauler, 2013). The term "**use**" describes the practical application of indicators within policy environments, which includes receiving, processing, communicating, and reporting these indicators. On the other hand, "**influence**" refers to the broader effect that indicators have on policy processes, which can occur even without their explicit use. Indicators can shape policy decisions and perspectives simply through the ideas and discussions they provoke.

Our research primarily focuses on "**amplification**", another related concept that extends beyond simple use or influence. Amplification refers to actions taken, deliberately or not, by initiatives potentially leading toward enhanced impact. This could involve launching similar initiatives in new contexts or adopting innovative practices that radically alter established ways of thinking, doing, or organizing. Amplification is crucial because it aims at extending the impact of innovations beyond their initial implementations, promoting the adoption of new paradigms among various actors and areas. It focuses on understanding the conditions that foster such expansion and identifying mechanisms that can support and enhance these processes. Amplification is not confined to increasing the scale of initiatives but includes broader transformations such as shifts in values and mindsets. This broad interpretation allows for a more nuanced understanding of how initiatives can effect change without necessarily expanding in size or scope.

While amplification concerns the extent and depth of an II's influence, the ultimate goal of a T-II lies in its "**impact**"—the tangible changes in policies, practices, and societal norms it engenders. Impact assessments are critical in determining whether the changes driven by these initiatives contribute to broader sustainable wellbeing advancements. However, directly linking IIs to specific policy changes can be challenging, which often complicates their evaluation.

Given this complexity, our study evaluates the amplification processes of IIs, as suggested by the MLP, which posits that greater amplification should theoretically lead to greater impact and transformative changes. This approach allows us to investigate how IIs can dynamically interact with and adapt to their

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environments to potentially achieve profound and lasting transformations. It reflects a nuanced understanding of how IIs can effectively influence and reshape their contexts without the need for straightforward evidence of their impact on policy alignment with sustainable wellbeing goals.

In the analysis, each initiative was evaluated against the three main criteria and their respective components. Evaluations were assigned using a three-point scale: "0" indicating "minimal alignment", "0.5" for "moderate alignment", and "1" representing "high alignment" with our conceptual framework of T-II. It is important to note that the scores used are on an **ordinal scale**, indicating position and not magnitude. Therefore, a score of "1" does not imply a degree of alignment that is quantitatively twice as much as a score of "0.5"; it simply positions higher in terms of **alignment with the assessed criteria**. As such, each score reflects the initiative's adequacy with our T-II conceptual framework relative to the specific criterion, both individually and in comparison to other initiatives. This comparative assessment ensured that the scoring was consistent across the entire sample. Results, including the scores and their justifications, were systematically reported in the analysis grid (see Table 3). Each cell in this grid provided a score complemented by a detailed rationale, outlining the reasons for the evaluation based on the initiative's closeness with assessed criteria.

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Table 3: *Analysis grid for transformative indicators initiatives*

Selected sustainable wellbeing IIs				**MWM** (AUS)	**GNH** (BHU)	**CIW** (CAN)	**NIW** (FR)	**BES** (IT)	**LSF** (NZ)	**NPF** (SCT)	**NWI** (WAL)
Conceptual criteria of T-II	Quality criteria	Accuracy									
		Reliability									
		Robustness									
		Timeliness									
		Coherence									
		Comparability									
		Accessibility									
		Clarity									
	Theoretical criteria	Individual domain									
		Societal domain									
		Ecological domain									
		Overall approach									
	Impact criteria	Amplification within	Stabilizing								
			Speeding up								
		Amplification out	Growing								
			Replicating								
			Transferring								
			Spreading								
		Amplification beyond	Scaling up								
			Scaling deep								

Notes*. Every cell within this analysis grid was populated with a score (from 0 to 1) reflecting our evaluation, accompanied by a rationale for the assigned score. To visually represent these evaluations, we utilized a color-coded system: a score of "0" is marked with light colour to indicate "minimal alignment"; "0.5" is shown in medium shaded colour, denoting "moderate alignment"; and a score of "1" is highlighted in dark colour, signifying "high alignment" with our conceptual framework of T-II.*
Abbreviations*. MWM: the Measuring What Matters Dashboard of Australia; GNH: the Gross National Happiness Index of Bhutan; CIW: the Canadian Index of Wellbeing of Canada; NIW: The New Indicators of Wealth of France; BES: Equitable and Sustainable Wellbeing Indicators of Italy; LSF: the Living Standards Framework Dashboard from New Zealand; NPF: the National Performance Framework Dashboard of Scotland; NWI: the National Wellbeing Indicators of Wales.*

In doing so, our aim was not to benchmark or rank countries but to propose an analysis of how closely or distantly these initiatives align with our conceptual framework of T-IIs. This approach, summarized in **Box 2**, aimed to detect both the strengths and areas needing improvement within each initiative, fostering a comprehensive understanding of their transformative potential. Therefore, the scoring system served as a methodological tool rather than a value judgment, enabling us to identify patterns and group initiatives based on their degree of "transformativity". It helped us identify inspiring practices that could stimulate other initiatives and resulted in a toolbox of mechanisms that might enhance the influence of sustainable wellbeing IIs, especially at the European level.

Box 2*: Philosophical underpinnings of Indicators Initiatives' assessment*

This deliverable conducts a detailed assessment to determine how selected IIs **align with our conceptualization of T-II** (see

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Figure 3, p.8). It is important to recognize that alternative classifications of these initiatives could exist; however, our approach is designed to gauge how closely each initiative corresponds to our envisioned model of T-II. Through our analysis, we illustrate the proximity or distance of each initiative from the conceptual framework of T-II, pinpointing specific areas of closeness and remoteness of each initiative. This methodological choice aims to highlight the relative alignment of each initiative with the principles we consider essential for transformation, rather than to rank these initiatives in terms of overall performance.

The **scores** assigned to each criterion and initiative facilitate a **transversal analysis** across the set of initiatives, providing insights into their various strengths and limitations in relation to our T-II criteria. These scores do not convey absolute values of performance; they are on **an ordinal scale**. This means that the scores are used to order the initiatives based on their alignment but do not imply quantitative measures of their relative performance in absolute terms.

By focusing on the degree of alignment rather than definitive performance metrics, this assessment framework emphasizes understanding and interpreting the transformative potential of each initiative within the specific context of its application. This perspective encourages a nuanced view of how each initiative contributes to or diverges from the transformative goals defined within the broader landscape of sustainable wellbeing.

In the **synthesis phase,** the individual analyses were then aggregated to paint a comprehensive picture of the diversity present among T-IIs. Prioritizing the reasoning behind the scores in the analysis grid over the numerical scores themselves enabled us to uncover both the differences and similarities in how these initiatives navigate the complexities of promoting sustainable wellbeing with innovative indicators and methodologies. The detailed examination of each initiative's fulfilment of the quality, theoretical, and impact criteria provided a nuanced understanding of the transformative potential inherent in national-level sustainable wellbeing IIs. Through this methodological approach, the research validated the conceptual framework for T-IIs by demonstrating that initiatives can be distinctly characterized according to their transformative potential. This analysis thus not only confirms the framework's applicability but also provides actionable insights from real-world applications, contributing to the ongoing discourse on sustainable development and wellbeing measurement.

3.3. Results

3.3.1. Results of the selection phase

As outlined in the methodological section, after compiling an extensive list of over 100 different sustainable wellbeing IIs from recent reviews (Cap Bien Vivre, 2023; Chancel et al., 2014; Exton & Shinwell, 2018; Forum pour de Nouveaux Indicateurs de Richesse, 2011; Gábos et al., 2023; Hayden et

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al., 2022; Jansen et al., 2023; 'Tour d'horizon', 2023)[1], we narrowed our focus to 8 national case studies. **Detailed profiles of each chosen initiative can be found in "Annex 1: Overview of the selected indicators initiatives" (p. 136).** Meanwhile, Table 4 succinctly presents the primary characteristics of the selected case studies, showcasing both their diversity and their similarities. The rationale behind these selections is further elaborated in the subsequent paragraphs.

[1] The present research is part of a broader effort to analyze and improve sustainable wellbeing indicators and is complementary to other ongoing EU Horizon research projects. Notably, WISE Horizons provides a comprehensive overview and mapping of sustainable and inclusive wellbeing indicators, focusing on their central themes and potential convergences (Jansen et al., 2023); SPES offers a more theoretical, rather than institutional, analysis based on five sustainability criteria: People, Prosperity, Planet, Partnership, and Peace (Gábos et al., 2023). Our work distinguishes itself by focusing on the amplification and impact of indicator initiatives, aspects not extensively covered in these other projects. These complementarities lead room for synergies between research "sister" projects.

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Table 4: *Selected indicators initiatives main characteristics*

Selected IIs	1st edition	Geographical region	Initiator	Implementation bodies	Legal framework	Main legal obligations	Inside complementary tools	Participatory process	Type	Main theoretical dimensions	# individual indicators	Link to GDP
MWM (AUS)	2023	Oceania	Treasury	Treasury	None	None	Closing the gap information repository; State of the environment report.	Limited	D.	(1) Cohesion; (2) Health; (3) Prosperity; (4) Security; (5) Sustainability	50	Complementing
GNH (BHU)	2008	Asia	Suggested by the King, formulated by the government	GNH Commission; CBS	Article 9 Section 2 of the Constitution	"The State shall strive to promote those conditions that will enable the pursuit of Gross National Happiness."	GNH policy/project screening tools; Five-year plans; GNH checklist; RAF	Extensive	I.	(1) Community vitality; (2) Cultural diversity & resilience; (3) Ecological diversity & resilience; (4) Education; (5) Good governance; (6) Health; (7) Living standards; (8) Psychological wellbeing; (9) Time use	33	Complementing
CIW (CAN)	2011	America	Researchers from Atkinson Foundation	University of Waterloo	None	None	Community wellbeing survey; Canadian child and youth well-being survey	Extensive	I.	(1) Community vitality; (2) Democratic engagement; (3) Education; (4) Environment; (5) Healthy populations; (6) Leisure and culture; (7) Living standards; (8) Time use	64	Complementing
NIW (FR)	2015	Europe	Parliament	INSEE; Parliament	Law no. 2015-411 (i.e., the "Sas Law) (2015)	Initially, INSEE published, and Parliament discussed an annual NIW report. Obligation discontinued in 2018.	None	Limited	D.	(1) Social; (2) Economic; (3) Environment	10	Complementing
BES (IT)	2013	Europe	ISTAT	ISTAT; Ministry of the Economy; Parliament	Law 163/2016, reforming the Budget Law (2016)	Ministry of the Economy produces an annual BES indicators report, covering past 3 years and future projections, included in the DEF and discussed by Parliament.	Appendix to the DEF; UrBES; BesT	Medium	D.	(1) Health; (2) Education and training; (3) Work & life balance; (4) Economic wellbeing; (5) Social relationships; (6) Politics and institutions; (7) safety; (8) Subjective wellbeing; (9) Landscape & cultural heritage; (10) Environment; (11) Innovation; (12) Research and creativity; (13) Quality of services	152 for the long list; 12 for the short list	Complementing

(Continued on next page)

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Selected IIs	1st edition	Geographical region	Initiator	Implementation bodies	Legal framework	Main legal obligations	Inside complementary tools	Participatory process	Type	Main theoretical dimensions	# individual indicators	Link to GDP
LSF (NZ)	2018	Oceania	Treasury	Treasury; Government	Amendments of the Public Finance Act of 1989 (2020)	Treasury produces a wellbeing report every 4 years; wellbeing objectives guide budget policy decisions; annual fiscal strategy reports on alignment with wellbeing objectives.	Wellbeing reports; CBAx; He Ara Waiora; Wellbeing budget	Extensive	D.	(1) Individual and collective wellbeing; (2) Institutions and governance; (3) Wealth of Aotearoa New Zealand	103	Complementing
NPF (SCT)	2007	Europe	Government	Government, Community Planning Partnerships	Community Empowerment Act (2015)	Government must consider National Outcomes in planning; review these at least every 5 years; and publish achievement reports as deemed appropriate (use of NPF in reports is optional).	Equality Evidence Finder; Wellbeing Economy Monitor; Local Wellbeing Economy Monitor	Medium	D.	(1) Children &young people; (2) Communities; (3) Culture; (4) Economy; (5) Education; (6) Environment; (7) Fair work & business; (8) Health; (9) Human rights; (12) International; (11) Poverty;	81	Complementing
NWI (WAL)	2016	Europe	Government	Government; Auditor General; Future Generation Commissioner PSBs	Well-being of Future Generations Act (2015)	Public bodies must set and publish wellbeing objectives aligned with 7 goals, take reasonable steps to meet them; Ministers must publish and present NWI and "milestones" to the National Assembly for Wales, including timelines for achievement.	Reports (Future Generations, Auditor General's Wellbeing, Annual Wellbeing, Future Trends, Local Wellbeing Plans); Toolkits (Visual Essentials Guide, Three Horizons, Future Generations Policy Leader).	Extensive	D.	(1) Prosperity; (2) Resilience; (3) Health; (4) Equality; (5) Community cohesion; (6) Cultural vibrancy; (7) Global responsibility	50	Complementing

Abbreviations. *CBS: Centre for Bhutan & GNH Studies. D. : Dashboard; I. : Index. DEF: the Economic and Finance Document in Italy. PSB: Public Services Boards. RAF: Resource Allocation Formulas.*

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The initiatives exhibit a range of **longevity**, with the **NPF originating in 2007 and the GNH index following in 2008**, marking them as the most longstanding. However, all the initiatives considered are relatively recent, having been launched in the late 2000s or later, with **MWM being the most recent addition**. It is important to note, though, that many of these initiatives are part of broader, more long-standing strategic considerations and reflections. For example, the principles underpinning the GNH have a deep-rooted history within Bhutanese culture and the idea of the GNH index has actually been suggested by the King already in the 1970s. Additionally, other initiatives like the LSF evolved from internal discussions to receiving formal government endorsement, indicating a richer heritage than their initial publication dates might suggest. Similarly, despite its recent inception, the MWM builds on Australia's previous experiences with wellbeing frameworks—such as the Measures of Australia's Progress, initiated by the Australian Bureau of Statistics (ABS) in 2002 and discontinued in 2014 due to budget constraints, and the Treasury's wellbeing framework that started in 2004 and was officially phased out in 2016, although it had fallen out of active use prior to that (Gaukroger, 2023). Therefore, although MWM is a recent initiative, the various selection criteria and its historical context suggest that the initiative has the potential to amplify, hence its inclusion in our sample.

The selection of initiatives primarily from the **Global North** is strategic, given our research project's ultimate aim of elaborating recommendations for the EU. The prevalence of cases from this region ensures that our findings are contextually pertinent, given the shared economic, cultural, and regulatory environments. However, it is worth acknowledging that the Global South has been a source of innovative and thought-provoking developments in this indicators field, offering unique perspectives that challenge and enrich the global discourse on sustainable wellbeing. These innovative approaches provide compelling reasons to consider their inclusion more substantially in future research. The incorporation of Bhutan's GNH index into our study is a deliberate choice to ensure we do not overlook such valuable global insights. The GNH serves as an inspiration, showcasing how initiatives from the Global South can offer alternative paradigms and contribute meaningfully to the conversation on sustainable wellbeing.

The development of the selected IIs primarily **stems from governmental institutions**, except for the CIW, which is an academic initiative. Governmental initiatives are often spearheaded by the government itself or by separate institutions such as the treasury or national statistical institutes. Initiatives developed outside of governmental institutions, such as the CIW, may benefit from being less politicized or influenced by government direction. Conversely, initiatives developed by governmental institutions but operating independently still enjoy **some level of autonomy**, contributing to their stability over time. Initiatives explicitly developed by the government tend to gain traction and publicity more easily, although they may be susceptible to shifts in political leadership or institutional priorities.

Selected IIs are also implemented by a **diversity of institutional frameworks and bodies** across different countries. For example, Bhutan's GNH is supported by the specially established GNH Commission and the Centre for Bhutan & GNH Studies (CBS), indicating a dedicated institutional setup for its approach. Similarly, Wales' NWI is overseen by the Future Generations Commissioner, a role created specifically to guide sustainable development practices. In contrast, initiatives like Australia's

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MWM and New Zealand's LSF are managed within existing structures like the Treasury, integrating them into broader national economic planning. Some initiatives, such as Scotland's NPF and Wales' NWI, involve collaborations between multiple governmental bodies to ensure a wide-ranging impact.

Table 4 further demonstrates the **varying degrees of formal institutionalization** across different initiatives. For most of them, there are specific legal statutes that formalize their roles and objectives within national governance. All the initiatives, except for the MWM and CIW, are grounded in specific legal framework which provide a clear mandate and guidelines for their implementation. In contrast, Australia's MWM and Canada's CIW operate without a formal legal framework, reflecting a more flexible or emergent approach to developing and integrating sustainable wellbeing indicators.

For instance, Bhutan's GNH is deeply embedded within its Constitution, which obliges the state to promote GNH. Similarly, in Italy, the BES initiative is supported by legal requirements for the Ministry of the Economy to produce and discuss an annual report on BES indicators, ensuring regular scrutiny and dialogue within parliamentary settings during the Budget cycle. New Zealand's LSF is also strongly institutionalized, with the Treasury required to produce a wellbeing report every four years and integrate wellbeing objectives into the budgetary and fiscal policy-making process. Conversely, the initial legal mandate for France's NIW to have its indicators discussed annually in Parliament was discontinued in 2018, showing a retreat from stringent legal obligations. Wales' NWI perhaps illustrates the most structured legal framework among the initiatives, with specific obligations for public bodies and ministers to not only set but also publicly account for their wellbeing objectives, aligned with the Act's seven wellbeing goals (see column "Main theoretical dimensions" of Table 4). This includes the requirement to publish and lay milestones before the National Assembly, ensuring a continuous and transparent review process.

Table 4 highlights the **diversity of complementary tools** utilized by the selected IIs, showcasing the range of approaches employed to deepen the implementation of sustainable wellbeing indicators. For example, Australia's MWM leverages resources such as the Closing the Gap information repository and State of the Environment report to enrich its data framework, while Bhutan's GNH index benefits from the GNH policy screening tools and Five-Year Plans, integrating GNH philosophy deeply into its policy-making processes. In Canada, the CIW employs community-focused surveys to address local data needs, enhancing the granularity of the CIW insights. Italy's BES integrates its measures into the economic planning cycle through an appendix in the Economic and Finance Document. New Zealand's approach includes the Wellbeing Budget and CBAx tools to optimize policy evaluation and design. Similarly, Scotland and Wales utilize dedicated monitoring tools and detailed reports to place well-being at the forefront of policy considerations. This array of tools not only enriches the data available for each initiative but also illustrates a commitment to embedding these IIs within their operational frameworks, promising insightful results from their analyses in the analysis phase of this research.

Throughout the development of IIs, there is an opportunity to involve various stakeholders in the process. **Participation** can occur at **multiple phases of the development** of an II—from the selection of indicators, data collection, and aggregation to quantification (where applicable) and the dissemination of results (Le Roy et al., 2015). Moreover, engagement can vary along the participation

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spectrum (IAP2 International Federation, 2018) and thus take various forms, from simply informing stakeholders to consulting, involving, collaborating with, and empowering them. The **degree of stakeholder participation** is a critical factor in classifying IIs, ranging from limited to medium or extensive in terms of the participation spectrum. Our selection of IIs demonstrates a variety of participatory approaches.

For instance, some IIs feature a more **constrained level of stakeholder engagement**, like NIW, which involved stakeholders primarily at the indicator selection phase and in a consultative form. At first sight, this looks rather similar to other selected IIs, such as MWM or CIW. However, critiques have been raised regarding the depth of the NIW's engagement, suggesting that despite an ostensibly participative phase of indicators selection, the process was largely top-down and only nominally consultative in nature (e.g., Méda, 2020; Pagnon, 2023). Conversely, **at the other end of the spectrum**, we observe the NWI where a national dialogue—termed "The Wales We Want"—significantly informed and shaped the overarching framework of the dashboard. This reflects a more intensive and grassroots level of stakeholder engagement in shaping the initiative (Abrar, 2021).

Our sample includes both **types** of indicators—dashboards that present a range of indicators separately and indexes that consolidate various indicators into a single composite figure. This variety is crucial to consider, given the ongoing debate about the effectiveness of each type. Indexes offer clear benefits in terms of simplicity and ease of comparison, yet they may sacrifice the subtlety required to accurately capture multifaceted concepts like wellbeing. Additionally, the **methodologies** indexes employ for normalizing, aggregating, and weighting data can lead to contentious decisions that potentially undermine their credibility. Furthermore, composite indexes, dependent on their particular method of aggregation (Pollesch & Dale, 2015), can be less effective at mitigating the issue of trade-offs, which is an intrinsic challenge for indicators (Luzzati & Gucciardi, 2015; Saltelli, 2007; van den Bergh, 2022). Conversely, dashboards, while offering a more detailed and nuanced picture, have their own drawbacks. They can be intuitive for stakeholders to understand and describe, but there can be difficulties for researchers and tool designers in interpreting how stakeholders actually use and make sense of them. Moreover, the wealth of information they provide can lead to an overload, making it hard to discern key takeaways. Recognizing the shortcomings inherent in both approaches, Costanza et al. (2016) suggest a hybrid model that leverages the strengths of both dashboards and indexes to create a more effective tool for measuring and communicating complex phenomena such as wellbeing.

Table 4 also presents a comparative view of the **main theoretical dimensions** and the **number of individual indicators** across the various IIs selected for this analysis. Each initiative showcases a unique set of dimensions that underline their focus areas within sustainable wellbeing. For example, Australia's MWM includes dimensions such as Cohesion, Health, Prosperity, Security, and Sustainability with a total of 50 indicators. In contrast, Bhutan's GNH encompasses a broader spectrum with nine dimensions like Community vitality and Psychological wellbeing, utilizing 33 indicators. Canada's CIW is even more extensive with 64 indicators spread across eight dimensions including Leisure and culture, and Environment. Italy's BES stands out with the most comprehensive list, having 152 indicators in a long list covering dimensions from Health to Quality of services, and a focused short list of 12 indicators, used in the framework of the Appendix of the DEF. This diversity in theoretical dimensions and the number

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of indicators reflect the unique approaches each country adopts towards measuring (and promoting) sustainable wellbeing through their national initiatives.

In the context of beyond GDP metrics, three methodologies—adjusting, replacing, and complementing GDP—can be employed depending on specific objectives and the broader context in which they are applied. **Adjusting GDP** means modifying the traditional GDP calculation to provide a more comprehensive measure of economic progress. This method seeks to refine GDP rather than replace it, offering a more nuanced view of economic health that integrates both GDP growth and its societal impacts. **Replacing GPD** advocates for the complete abandonment of GDP as the primary economic metric, proposing instead entirely new measures that focus on well-being and sustainable development. Under the **complementing GDP** approach, GDP continues to be used as a significant economic indicator, but it is paired with additional metrics that capture aspects of well-being and sustainability that GDP does not. This method does not alter the GDP calculation but supplements it with other indicators to provide a fuller picture of a country's progress.

Among the initiatives we have analysed, none has chosen to adjust GDP in the manner of the Genuine Progress Indicator developed by Cobb et al. (1995). They also fall short of entirely replacing GDP, even though some do not incorporate GDP directly into their dashboard or index, preferring other standard macroeconomic indicators. In essence, all the initiatives under consideration aim to complement GDP. This is evident either in the way these initiatives are discussed and promoted, highlighting their intent to broaden the economic narrative, or through the actual inclusion of standard macroeconomic indicators within their frameworks.

This section has outlined the key characteristics of the eight selected national sustainable wellbeing IIs, which are summarized in Table 4 and further detailed in “Annex 1: Overview of the selected indicators initiatives”. It has highlighted their varied strategies for complementing GDP and illustrated the trade-offs between employing detailed dashboards and consolidated indexes, as well as the different extents of participatory processes used in developing their indicators. In the following section, we will assess how these case studies align with our conceptual framework for T-IIs.

3.3.2. Results of the analysis phase

In this section, we systematically evaluate the alignment of the selected sustainable wellbeing IIs with each criterion, and its components, that defines our conceptual framework of T-IIs. We begin by assessing the quality of the IIs from the case studies, proceed to analyse their alignment with our theoretical framework of sustainable wellbeing, and conclude by examining their influence and impact based on the niche amplification processes typology proposed by Lam et al. (2020). At the end of each of the three subsections, we provide a concise summary of the findings using the structured format of the reading grid.

Quality criteria

This section presents the analysis of the selected case studies with regard to the established quality criteria for T-IIs. We evaluate how each II meets standards of accuracy, reliability, robustness, timeliness,

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coherence, comparability, accessibility, and clarity, highlighting both strengths and areas for improvement within IIs.

In evaluating the **accuracy** of the selected IIs, it is evident that most IIs utilize previously validated indicators, which reliably measure the phenomena they aim to capture. These indicators are generally effective in quantifying the specific aspects they are designed to assess, ensuring a fair level of accuracy in representing targeted metrics. However, IIs often strive to encompass broader and sometimes ambiguously defined concepts, which introduces complexities in accurately assessing these expansive dimensions. For example, the **NIW** of France does not rely on a foundational concept or offer clear definitions for the indicators it employs, except to list examples in the legislation known as the "Sas Law", named after the deputy Éva Sas who proposed it. The law indeed stipulates that the government must annually report on trends in these new wealth indicators, including inequality, quality of life, and sustainable development, alongside the traditional GDP metrics. This approach shows an absence of clearly defined parameters for what constitutes "new indicators of wealth". This conceptual vagueness complicates the evaluation of accuracy, as it challenges the **precision with which these phenomena are quantified.** Among the selected IIs, the CIW stands out for its meticulous approach to ensuring accuracy. The CIW includes a technical note that provides detailed insights into the levels of accuracy of its measurements, articulating how closely the indicators reflect the true state of the phenomena (i.e., wellbeing) measured. This level of detail helps clarify the scope and reliability of the CIW's metrics. In contrast, other IIs tend to be less specific about how accurately their frameworks reflect the actual values of the phenomena they intend to represent, often lacking explicit discussions on the proximity of their data to real-world values.

High-quality measurement systems must provide **reliable** evaluations that are consistent and stable over time and across different (geographical) conditions. The selected case studies generally exhibit a good level of reliability; most have been rated highly in terms of performance. For instance, the GNH in and the CIW demonstrate **adaptability** while maintaining core frameworks. The GNH has kept its survey consistent since 2010 to ensure reliable data comparison over time. In contrast, the CIW adjusts its indicators based on relevance and storytelling needs within their domains, maintaining flexibility in its overall framework. Meanwhile, Scotland's NPF and New Zealand's LSF have experienced more substantial revisions. The NPF has expanded and simplified its framework over time, increasing from 45 indicators in 2007 to 81 in 2018, and shifting focus to a broader set of National Outcomes, impacting data consistency and comparability. The LSF, influenced by feedback, has undergone updates to better represent cultural nuances and align with international standards, including significant revisions in 2021 to reflect wellbeing concepts from te ao Māori and Pacific Peoples, as well as minor changes in 2019 in response to OECD recommendations. These adjustments reflect ongoing efforts to enhance the relevance and accuracy of their wellbeing measurements. Furthermore, some IIs also face challenges at lower scales, struggling with regional application. To address the reliability in terms of changed geographical conditions, the NPF has introduced the Local Wellbeing Economy Monitor, and the CIW has developed the Community Wellbeing Survey, both enhancing **geographical disaggregability** of the IIs. Due to its recent inception, the reliability of the MWM has yet to be fully assessed.

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A **robust** measurement system should also withstand changes and adapt when confronted with variations, uncertainties, or challenges. Most of the selected case studies show a high level of robustness, maintaining their application despite governmental changes for example. This **resilience is often legally supported**, as seen in the NIW and NWI, or due to the autonomous nature of the sponsoring institution, as with the LSF and the integration within the Treasury. Although the robustness of certain IIs, such as the **CIW**, may seem less certain due to the use of **placeholder indicators**, these elements serve important functions. Placeholders are often necessary where data collection capabilities are still developing or regulatory conditions demand periodic revisions, such as mandatory reviews every five years. While these factors might raise challenges for the stability of the framework, placeholders also allow the indicators to stay aligned with their foundational concepts more closely. They provide flexibility in the framework, facilitating the gradual integration of more suitable data as it becomes available and encouraging continuous improvement in how well the indicators reflect the intended dimensions of wellbeing.

Timeliness in IIs is another crucial aspect for their effectiveness, depending on their intended use. For long-term monitoring, updates might align with electoral cycles, but more frequent updates might be necessary for assessing specific policy impacts. **Various IIs face challenges related to update frequency**: the MWM has been criticized for using outdated pre-COVID mental health data (e.g., Cockburn, 2023). The GNH index, intended to be recalculated every five years, has experienced delays likely due to resource constraints, questioning its current applicability. Similarly, the CIW last updated in 2016, while it was planned to be updated in 2022. Importantly, the NIW reports have been delayed past legal deadlines, undermining their potential policy influence. These instances underscore the need for timely data refreshes to ensure IIs remain relevant and effective in informing policy decisions.

A measurement system's effectiveness is significantly enhanced by its **coherence**, ensuring that its metrics are well-integrated within the broader national statistical ecosystem. The selected IIs such as the MWM, BES, LSF and NWI demonstrate a commendable level of integration into their respective national statistical landscapes. However, this integration is not without challenges, as observed in roughly half the cases studied (i.e., in the GNH, CIW, NPF, and the NIW). Our primary concern centres around the **insufficient integration of these IIs into other national dashboards and strategic frameworks**. This gap often results in these initiatives existing in isolation, without a robust connection to the wider array of national metrics and strategies. Such isolation hampers the potential for these indicators to serve as a unified basis for collective action. Effective integration would not only enhance the relevance and utility of these IIs but also foster a more cohesive approach to measuring and acting upon various dimensions of national wellbeing, facilitating a more coordinated and impactful policy response.

Comparability is a crucial quality criterion for T-IIs, as it determines whether the metric can facilitate benchmarking against other systems. Most of the selected IIs generally exhibit a satisfactory level of comparability, especially those that align with broader international frameworks. For instance, the LSF intends to reflect the Organization for Economic Cooperation and Development (OECD)'s Well-being framework, and the NFP demonstrates efforts to be aligned with the Sustainable Development Goals (SDGs), enabling these initiatives to benchmark against globally recognized standards. However, the

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pursuit of comparability can sometimes compromise the ability to capture local specificities that are vital for national contextual relevance. This is particularly evident in Bhutan's GNH index, which is deeply rooted in Buddhist values and the local conception of happiness. Such unique cultural embedding makes GNH less comparable with other global indicators but highly relevant and significant for Bhutan's policymaking. This tension highlights a **trade-off between achieving broad comparability and retaining the unique features of an II that resonate with national experiences and values**, suggesting that a balance must be struck to maximize both global alignment and local relevance.

Accessibility, defined as the ease with which assessments can be obtained, has generally been good across the case studies examined, with many reports and datasets readily available online. A prime illustration of exemplary accessibility is the NWI, which features numerous independent reports on the evolution of the NWI and Wales' progress toward achieving sustainable wellbeing. These reports are transparently disclosed, making it easy for stakeholders to access and utilize them. Conversely, **the NIW serves as a counterexample where accessibility has been problematic**. After 2018, detailed reports on the indicators ceased to be produced, leaving only an annual data compilation available. Furthermore, even this data compilation has proven difficult to locate, significantly diminishing the accessibility and utility of the NIW. This lack of availability starkly contrasts with more accessible initiatives, underscoring the importance of maintaining open access to data for effective public and policy engagement.

The **clarity** of the selected IIs is generally moderate; while the assessments they provide are comprehensible, they often lack straightforwardness and ease of understanding. The GNH index and the CIW stand out as they both aggregate their indicators into a single composite score, simplifying the interpretation of overall trends. In contrast, other IIs, such as the BES and LSF, require stakeholders to review each indicator individually to gauge progress, a process that can be time-consuming and cumbersome without a clear, consolidated view of changes. Additionally, the MWM framework not only suffers from **the absence of a comprehensive overview** but also from a lack of clarity in how it incorporates various characteristics, such as its approach to inequality and the integration of supplementary indicators alongside primary metrics. This complexity reduces its usability. Even the **GNH**, which does provide a singular composite number, faces challenges in understandability due to its reliance on **a complex formula** that many may find difficult to interpret. Overall, while these IIs aim to provide clear insights, the extent of their clarity is often diminished by their structural and presentational choices.

Conclusion: The quality criteria alignment of selected indicators initiatives

Overall, the selected IIs generally meet the quality criteria outlined in our conceptual framework of T-IIs quite satisfactorily (see Table 5). However, **they exhibit certain limitations in terms of accuracy, timeliness, comparability, and clarity.** The shortfall in accuracy highlights the need for improved methodological precision and conceptual clarity in the development of sustainable wellbeing indicators. Timeliness is a traditional challenge for beyond GDP indicators (e.g., Bleys & Whitby, 2015) that are not updated as frequently as GDP. The frequent updating is a significant factor in GDP's prominence; hence, for IIs to be timely, they are constrained to rationalise their data collection

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processes. Comparability also presents challenges, albeit to a lesser extent. This is to some extent due to our decision to focus on national initiatives. These issues primarily arise because enhancing comparability can sometimes reduce the flexibility of the indicators to be tailored specifically to the conditions of the territory being assessed. This trade-off between universal applicability and local relevance can limit the usefulness of IIs in certain contexts. On the other hand, clarity is a quality criterion that seems more readily achievable. While it may require additional resources, the way in which IIs are presented can generally be improved with concerted effort. Effective presentation and straightforward communication of data and methodologies can significantly enhance the clarity and user-friendliness of these indicators, making them more impactful tools for policy-making and public understanding and discussions.

Table 5: *Results of the analysis phase - Quality criteria*

Selected sustainable wellbeing IIs		**MWM** (AUS)	**GNH** (BHU)	**CIW** (CAN)	**NIW** (FR)	**BES** (IT)	**LSF** (NZ)	**NPF** (SCT)	**NWI** (WAL)
Quality criteria	Accuracy								
	Reliability								
	Robustness								
	Timeliness								
	Coherence								
	Comparability								
	Accessibility								
	Clarity								

Notes*. To visually represent results of the analysis phase, we utilized a color-coded system: a score of "0" is marked with light colour to indicate "minimal alignment"; "0.5" is shown in medium shaded colour, denoting "moderate alignment"; and a score of "1" is highlighted in dark colour, signifying "high alignment" with our conceptual framework of T-II. The reliability and robustness criteria for the MWM initiative were left blank because the initiative relatively recent inception made it difficult to comprehensively assess these criteria.*

Theoretical criteria

This section delves into the analysis of how well the selected IIs conform to our established theoretical criteria for T-IIs. We assess the integration of the individual, societal, and ecological domains within each II, alongside their adherence to holistic, context-sensitive, boundary-limited, systemic, and integrative approaches crucial for comprehensive sustainable wellbeing evaluations. The following discussion highlights the strengths and shortcomings of each II in aligning with these dimensions, providing a critical overview of their theoretical robustness.

Individual domain

In general, the selected IIs effectively focus on **individual/human needs**, aligning well with our theoretical understanding of sustainable wellbeing, which includes the needs of health, relatedness, and autonomy. Among these, **autonomy** is the most prominently addressed need, with around half[1] of the individual indicators within the IIs' dashboards targeting this area. This is especially evident in the BES and the LSF, where approximately 60% of individual indicators are dedicated to autonomy-related

[1] As explained in the methodological section (p. 34), the classification of indicators within the sustainable wellbeing (sub-)dimensions is non-exclusive, allowing for overlap among categories.

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measures, including indicators like “Knowledge and skills” and “Share of population living in a dwelling considered overcrowded, coupled with at least one housing deprivation measure.”

The other two needs, **health and relatedness**, are each represented by about 25% of the individual indicators, with a slight predominance for health. The CIW, for instance, emphasizes health, dedicating over half of its individual indicators to this domain. In contrast, the NIW shows a weaker alignment with these needs; it includes only one out of ten indicators focused on health—specifically “Healthy life expectancy”—and lacks any indicators directly addressing relatedness. This deficiency highlights significant shortcomings in the NIW’s alignment with the theoretical criteria of our T-II conceptualization, suggesting areas for critical improvement to better encompass the comprehensive spectrum of human needs essential for sustainable wellbeing.

Societal domain

The **societal domain** of our theoretical framework of sustainable wellbeing pertains to the organization of society, its provisioning systems, and the resulting infrastructure and norms. In analysing selected IIs, we assessed whether these initiatives included indicators related to societal organizations, infrastructures, and their reflection through various indicators. Specifically, we examined the presence of indicators related to distribution and inequality issues because they illuminate the effectiveness of societal infrastructure and provisioning systems to some extent. Additionally, we explored whether the IIs considered the impact of the evaluated territory on meeting human needs beyond its borders, emphasizing the dynamics of globalization, collective interactions, and the external effects of local actions.

Regarding **inequalities and distribution**, the common methodology among the studied IIs involves disaggregating individual indicators by socio-demographic variables such as age, gender, or income class. While this approach provides valuable insights, it often fails to highlight inequalities explicitly or distinctively within the theoretical frameworks which metrics rely on, requiring a more in-depth analysis to uncover disparities. Nonetheless, three distinct methodologies for addressing inequality issues were observed in the selected IIs, each with its own merits and limitations.

First, the LSF from New Zealand places significant emphasis on infrastructure and governance within its theoretical structure with the section “Our Institutions and Governance”, prioritizing the societal domain. This approach aims to scrutinize the efficiency of provisioning systems, by trying to capture how institutions safeguard and build New Zealand’s wealth, as well as facilitate the wellbeing of individuals and collectives. The LSF looks at institutions through six spheres: Central and local government, Families and households, International connections, Civil society, Firms and markets, and Whānau, hapū and iwi[1]. However, the translation of these priorities into specific indicators sometimes

[1] Whānau, hapū, and iwi are fundamental Māori social structures in New Zealand. *Whānau* refers to extended family or community, which can include nonkin friends and associates. *Hapū* denotes a subtribe or clan, a larger collective of whānau with common ancestry, playing a significant role in local governance and community initiatives. *Iwi* represents the largest political grouping in Māori society, akin to a tribe, which consists of multiple hapū and is central to Māori identity and organization on a regional and national scale. In the context of the LSF

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lacks clarity, making it challenging to evaluate their effectiveness directly. For instance, the sphere "International connections" is measured by Inward, outward foreign direct investment, terms of trade, and total trade to GDP ratio, all of which poorly indicating how the sphere of international connections safeguards wealth or contributes to wellbeing. These indicators primarily quantify economic activities and do not capture broader aspects of international relations that could include cultural exchanges, international cooperation, or the influence of foreign relations on national wellbeing. In addition, this layer does assess New Zealand's impact on the global social domain.

Second, the MWM initiative explicitly incorporates "Inclusion, fairness, and equity" as cross-cutting dimensions, thus elevating the profile of distribution issues within its framework. While this categorization helps to foreground these issues, it risks isolating them during the analysis and data reporting phases, potentially diminishing their perceived importance in the broader context of the dashboard.

Thirdly, the NPF employs the Equality Evidence Finder, an annexed **platform that aggregates key statistics, social research, and equality analyses** pertinent to the NPF. This tool is designed for detailed scrutiny of inequalities and provides a concentrated view of these issues. However, its findings are not seamlessly integrated into the main NPF framework, thereby illustrating a **gap in systemic integration**, and potentially limiting its influence on overarching policy decisions.

Overall, while these methodologies introduce frameworks for addressing inequalities, each exhibits specific shortcomings in terms of direct integration and clarity in presentation. These gaps underscore the **need for IIs to not only include inequality measures but also to embed these considerations more deeply within their central analytic and decision-making processes**.

Additionally, there is a notable deficiency in incorporating **"beyond frontiers" social responsibility** into their frameworks. Except for the NWI, which includes indicators like "active global citizenship", most IIs overlook the broader impact of their regional activities on social dimensions outside the national territory. The NIW, in particular, does not to consider the supranational social implications of France's activities (for instance, the working conditions of workers involved in the production of goods consumed in France) and offers poorly disaggregated data, highlighting its limited scope in the societal domain. This oversight underscores a **critical gap in addressing supranational systemic interdependencies in sustainable wellbeing assessments**.

Ecological domain

The **ecological domain** referring to planetary boundaries is addressed in a poorly comprehensive way by the selected IIs. To effectively engage with this domain, an II must consider both the local ecological state and global ecological impacts. Typically, IIs adopt a somewhat fragmented approach when evaluating **local ecological conditions**, often omitting crucial ecological aspects. For instance, soil quality is notably absent in the CIW, MWM, and the GNH index. Generally, these IIs tend to focus on

these entities are recognized as crucial in understanding and integrating the perspectives and wellbeing of Māori communities within national policymaking and development processes

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quantitative metrics such as total energy consumption and production, without assessing the energy sources or the sustainability of these processes (such as in the case of the CIW). Additionally, while they might track the volume of waste generated, the incorporation of recycling and reuse processes is not consistently detailed (such as in the case of the NPF), nor is the assessment of freshwater quality and availability comprehensive (such as in the case of the MWM or the NIW).

Beyond local ecological assessments, our theoretical framework for sustainable wellbeing also recommends considering the **global repercussions** of local activities on the environment. This global perspective is typically encapsulated through **footprint indicators**, which summarize the complete life-cycle ecological impact of a region's consumption in a single metric. However, the **IIs examined tend to neglect this broader view**, favouring, for instance, indicators that measure local greenhouse gas emissions rather than those that account for all emissions tied to local consumption, which would offer a more consumption-oriented perspective of ecological impact.

Among the IIs, only the NIW, NPF and NWI include some indicators that reflect the global effects on the environment of their local actions. This inclusion is key as it aligns with a more holistic understanding of ecological responsibility, emphasizing the need for IIs to adopt frameworks that not only track local sustainability efforts but also their international ecological (or carbon, water, material…) footprints. Enhancing this aspect of IIs would provide a more accurate reflection of their ecological impacts and foster a more integrated approach to ecologically sustainable policy planning. This strategic enrichment is essential for aligning IIs with global sustainability objectives and for promoting ecological accountability on a worldwide scale.

Overall approach

In evaluating whether selected IIs align with our theoretical criteria, we scrutinized the coherence and integration of their frameworks with our concepts of holistic, context-sensitive, boundary-limited, systemic, and integrated approaches.

Generally, the IIs exhibit a **holistic** nature by addressing multiple domains of our theoretical framework, although the emphasis predominantly rests on the individual domain. Both the social and particularly the ecological domains require more rigorous and detailed attention. For instance, while the NIW engages both the individual and societal domains, its approach lacks depth, especially in ecological assessments where comprehensive coverage across all ecological aspects is crucial for a truly holistic and systemic understanding. Some IIs, nonetheless, **integrate individual indicators that are "out of scope"**, either because they do not directly contribute to the core concepts of sustainable wellbeing or because they are characterized as input or output indicators rather than reflecting the actual state of the sustainable wellbeing (such as outcome indicators do).

For instance, the MWM includes indicators like "Number of patent and trademark applications in Australia" to gauge innovation and "All levels of government gross debt as a share of GDP" to assess fiscal sustainability. Similarly, the NPF uses "The value, in GBP millions, of Scottish exports (excluding oil and gas)" as a measure of economic output, which does not match our understanding of sustainable wellbeing, the latter emphasizing outcomes directly reflecting societal and ecological health. Among the examined IIs, all except the GNH incorporate some indicators that fall outside the intended scope.

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In total, the BES is the II that contains the most instances of such discrepancies, but the LSF has the highest proportion of indicators considered out of scope.

Furthermore, inappropriate use of input and output indicators can skew understanding of the current state. For example, the NPF's "Amount of income generated by businesses, measured by Approximate Gross Value Added (aGVA), of the Creative Industries Growth Sector" purports to measure cultural outcomes, which is an output metric. The BES employs "Current expenditure for protection and valorisation of cultural properties and activities in euro per capita" under its "Landscape and cultural heritage" category, which is an input metric, thus misrepresenting the effectiveness of cultural preservation efforts as it does not reflect the actual cultural status and activity. These examples highlight the need for a critical review and possible revision of the indicators used within these frameworks to ensure they accurately measure and reflect sustainable wellbeing in a manner that aligns with established theoretical frameworks.

A **context-sensitive** II should reflect indicators that are specifically relevant to the studied territory, potentially at odds with the comparability criteria discussed previously within the quality criteria section (p. 42). This sensitivity is well illustrated though in the GNH through, for instance, the inclusion of culturally specific indicators like within the "Zorig Chusum skills (artisan skills)" dimension. Similarly, indicators such as "Percentage of fish stocks fished sustainably" for the NPF and "swimmability (rivers)" for the LSF highlight adaptations based on geographical and ecological realities unique to each region, therefore confirming a context-sensitive approach.

To incorporate a **boundary-limited** approach effectively, some IIs set explicit targets for indicators to delineate when conditions are within or exceed sustainable wellbeing thresholds. The NWI, for example, establishes milestones for certain indicators set by the government, though these milestones cover only a fraction of the total indicators (16 out of 50), and the rationale behind these targets is often not clear. The GNH more systematically applies dual thresholds with a clear justification of the threshold: a sufficiency threshold at the individual indicator level and a happiness threshold at the dimensional level, indicating a robust application of boundary limitations which helps gauge both individual and collective progress towards set sustainable wellbeing goals. For understanding further how the GNH index incorporates the concepts of sufficientarianism and limitarianism, see Box 3 (p. 50).

***Box 3**: The GNH index and the concepts of sufficientarianism and limitarianism*

The GNH embodies the principles of sufficientarianism and, to some extent, of limitarianism through its use of sufficiency thresholds simultaneously with happiness thresholds. The sufficiency thresholds approach ensures that individuals are evaluated on whether they achieve a basic level of wellbeing across various life domains. Those who do not meet these sufficiency levels are considered to have "insufficient" fulfilment in specific areas, highlighting where interventions are needed. Importantly, the GNH framework recognizes that not everyone needs to meet every threshold to be happy, which aligns with the diverse ways people achieve wellbeing. Moreover, the GNH employs a happiness threshold that aggregates these individual measures to provide a broader evaluation of wellbeing. This happiness threshold is set so that if individuals meet sufficiency in 66% of the domains, they are classified as "happy"; and as "not-yet-happy" otherwise. In combining both sufficiency and happiness thresholds,

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the GNH index applies a revised version of the Alkire-Foster method of aggregation, and as such, supports targeted policy interventions by identifying the most significant areas of deprivation among the "not-yet-happy" individuals. This dual-threshold system, by emphasizing both individual sufficiency and broader collective happiness, facilitates a policy framework that aims to uplift those below the sufficiency line while ensuring that overall wellbeing remains within sustainable limits. Thus, the GNH index embeds a framework that supports the equitable distribution of resources and sustainable living standards, reflecting both sufficientarian and limitarian values in its approach to measuring and enhancing national happiness.

For a **systemic** approach, measurement tools must clearly articulate the interconnections among various domains and dimensions of sustainable wellbeing. The GNH and the CIW exemplify this by **integrating feedback loops that reflect the cumulative effect of various dimensions into a single overarching value**. This method helps encapsulate the systemic nature of sustainable wellbeing, where changes in one area can affect outcomes in others. In contrast, dashboards, though rich in detail, often compartmentalize data, risking the oversight of crucial inter-dimensional effects, particularly when they manifest negative trends. This could lead stakeholders to focus on isolated metrics improvements, obscuring detrimental cross-dimensional impacts. Unlike the GNH and CIW, most selected IIs lack a synthesis mechanism for these interactions, limiting their ability to inform complex, integrated interventions. However, the LSF and the NWI aim for comprehensive coherence; the LSF aligns its individual, societal, and ecological domains—from individual wellbeing to national wealth—to ensure balanced integration. The NWI employs an overarching principle and five operational methods to embed systemic thinking across its framework. These efforts showcase the **crucial need for meticulously designed systemic structures that adapt to and reflect the complexities of sustainable wellbeing**, ensuring enhancements in one area do not detrimentally impact others.

To fulfil the theoretical criteria, selected IIs must also exhibit a significant degree of **integration**. Our analysis reveals that a fully integrated approach is largely absent among the IIs reviewed, with the notable exception of the NWI. While the CIW and GNH incorporate methods that indeed support a systemic perspective, they fall short of a comprehensive portrayal of sustainable wellbeing, particularly in addressing ecological dimensions comprehensively. In contrast, the NWI not only addresses each theoretical domain—individual, societal, and ecological—effectively and in depth but also enriches its framework with five operational "ways of working" and one overarching principle that guide its comprehensive strategy (see Box 4). This structured approach ensures that the NWI maintains a holistic and systemic view across all domains and dimensions of sustainable wellbeing, setting a benchmark for integration in sustainable wellbeing indicators.

Box 4: *The five "ways of working" under the Well-being of Future Generations Act of Wales*

Central to the Well-being of Future Generations Act of Wales are these five "ways of working" that should guide public bodies towards achieving the seven national wellbeing goals (i.e., prosperity, resilience, health, equality, community cohesion, cultural vibrancy, and global responsibility. See "Annex 1: Overview of the selected indicators initiatives" (p.136) for further details):

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1. Involvement: The importance of involving people with an interest in achieving the wellbeing goals and ensuring that those people reflect the diversity of the area which the body serves;
2. Long Term: The importance of balancing short-term needs with the need to safeguard the ability to also meet long-term needs;
3. Prevention: How acting to prevent problems occurring or getting worse may help public bodies meet their objectives;
4. Integration: Considering how the public body's wellbeing objectives may impact upon each of the wellbeing goals, on their other objectives, or on the objectives of other public bodies;
5. Collaboration: Acting in collaboration with any other person (or different parts of the body itself) that could help the body to meet its wellbeing objectives.

Under the Act, public bodies need to consider these five ways of working when making decisions. To effectively meet these requirements, public bodies should be able to demonstrate how the "ways of working" have been integrated both in setting their specific objectives and in evaluating their progress towards these objectives. As a support, the Future Generations Commissioner has been working with Welsh Government to develop a Future Generations Framework for Service Design, which is a practical tool aiming at helping people working in public services to apply the Act's ways of working to the design and delivery of services. Therefore, these principles are not only innovative in their approach but also instrumental in integrating and operationalizing the national well-being indicators.

Conclusion: The theoretical criteria alignment of selected indicators initiatives

Overall, the adherence to theoretical criteria by the selected IIs varies considerably across different dimensions and IIs (see Table 6). The individual domain, particularly concerning autonomy needs, is well represented across most IIs, demonstrating robust integration. However, **improvements are needed in the societal domain, and the ecological domain exhibits significant deficiencies, particularly in its limited scope and integration of crucial global ecological considerations.**

The structural composition of these frameworks often **lacks a boundary-limited approach**, essential for assessing safe limits and just thresholds. Moreover, many of the frameworks do not employ a systemic methodology that could effectively encapsulate the interdependencies within the domains, thereby weakening the potential for holistic and impactful interpretations. The inclusion of indicators that are out of scope further dilutes the coherence and effectiveness of the initiatives in portraying comprehensive sustainable wellbeing.

However, among the analysed frameworks, the **NWI notably stands out by aligning with the theoretical constructs across most criteria**. It demonstrates a comprehensive integration of the individual, societal, and ecological domains and adheres more consistently to a systemic and boundary-limited approach. This adherence allows for a more coherent and theoretically consistent application of the NWI, setting it apart as an inspiration of good theoretical practice among the selected IIs.

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Table 6: *Results of the analysis phase - Theoretical criteria*

Selected sustainable wellbeing IIs		MWM (AUS)	GNH (BHU)	CIW (CAN)	NIW (FR)	BES (IT)	LSF (NZ)	NPF (SCT)	NWI (WAL)
Theoretical criteria	Individual domain								
	Societal domain								
	Ecological domain								
	Overall approach								

Notes*. To visually represent results of the analysis phase, we utilized a color-coded system: a score of "0" is marked with light colour to indicate "minimal alignment"; "0.5" is shown in medium shaded colour, denoting "moderate alignment"; and a score of "1" is highlighted in dark colour, signifying "high alignment" with our conceptual framework of T-II.*

Impact criteria

In this section, we present the findings of our analysis concerning selected sustainable wellbeing IIs from the perspective of the impact criteria. Our research focused on examining how individual IIs respond to the amplification processes outlined by Lam et al. (2020), specifically identifying the mechanisms at play within these particular niches to facilitate amplification. This exercise allowed us to refine the typology of niche amplification processes to better suit the context of IIs. Each of the macro (amplification within, out and beyond) and micro amplification processes are reviewed systematically.

Amplification within

The process of "amplifying within" involves enhancing the influence and effectiveness of a specific niche (here, an II). This process aims to stabilize the niche's existence by ensuring its impact endures over time (i.e., stabilizing) and to accelerate its effects by streamlining how quickly it can achieve impacts (i.e., speeding up). These amplification efforts are geared toward maximizing the niche's overall effectiveness in its specific area.

Stabilizing

Stabilizing involves fortifying initiatives within their environments, enhancing their resilience against forthcoming challenges and prolonging their viability. This is in general achieved by leveraging existing opportunities, expanding the base of members, supporters, or users, and refining their operations to ensure efficiency and clear communication of their purpose and mission. In the context of IIs, analysis of selected case studies reveals that stabilizing manifests through various mechanisms. These include fostering **collaborations and connections** with other strategies and policies within the same field (here, sustainable wellbeing). Deep **cultural integration** into the II and its underlying framework ensures that the II resonates with local specifics. **Legal frameworks** establish certain obligations that further turn these initiatives as unavoidable, being locked up and enshrined in the law. Together, these mechanisms enhance the stability of IIs, allowing them to maintain consistency and **resist over changes in government** or shifts in political power.

Policy landscape integration

Mechanisms and incentives that encourage collaboration both within and across agencies are crucial for embedding IIs within their sustainable wellbeing policy and institutional landscape, therefore contributing to the II niche stability. Such effective integrations of an II should extend beyond the internal confines of the organization that develops it, reaching out to different types of external agencies. This integration can occur in multiple ways. We distinguish between **vertical and horizontal**

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policy integration. Horizontal integration occurs when the II is linked with other national initiatives spearheaded by different national actors. Vertical integration involves connecting the II with strategies and frameworks at various governmental levels other than the national one, from subnational to supra/international (see Figure 9). This vertical and horizontal integrations help not only in diversifying the interactions and collaborations of an II but also in enhancing its adaptability and resilience, supporting thus its relevance and effectiveness across different governance layers and amidst varied policy shifts. By establishing connections at multiple levels and across different policy areas, the II is better positioned to weather political changes and to leverage broader support networks, thereby stabilizing its position of niche within the landscape of sustainable wellbeing.

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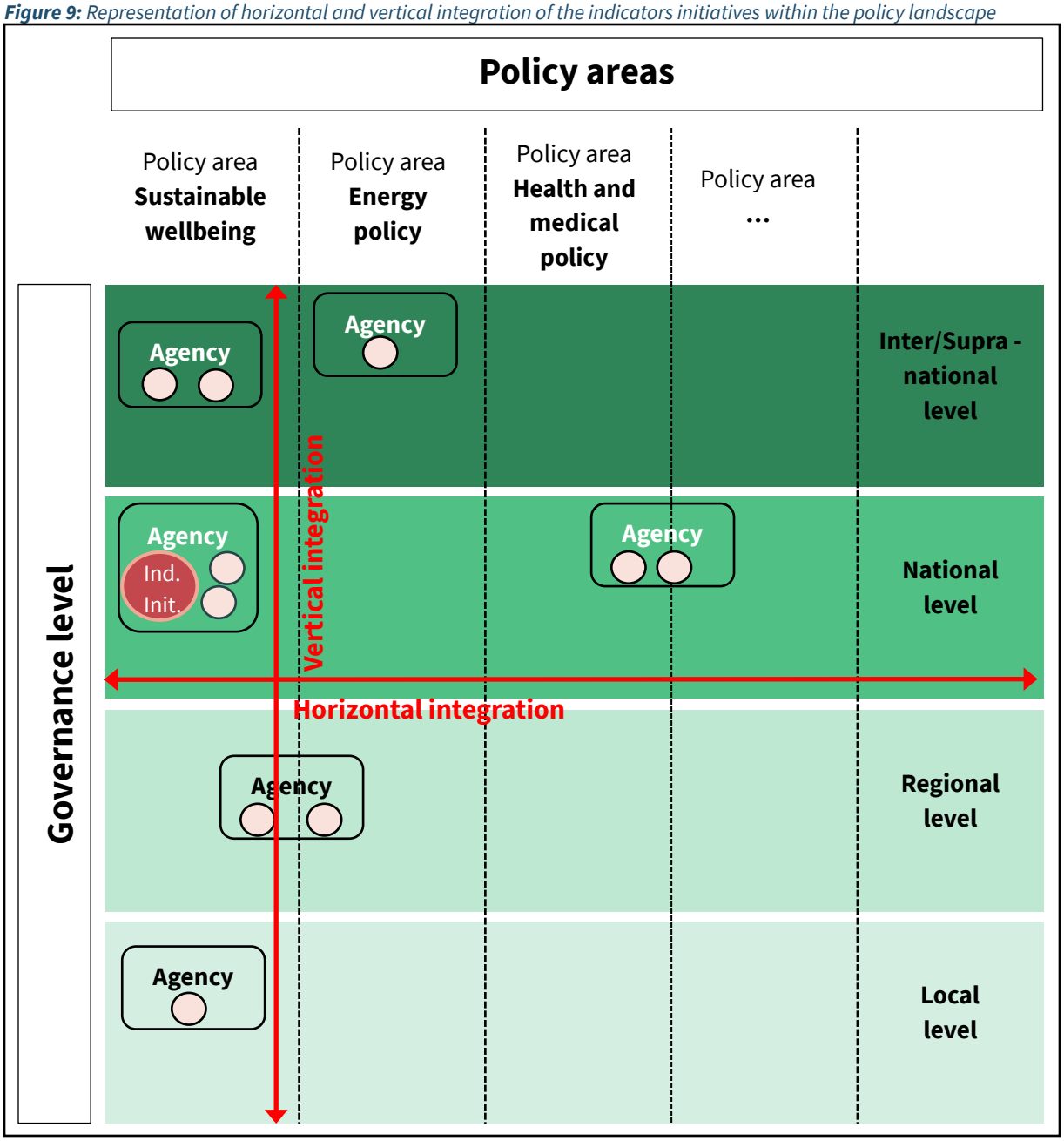
Figure 9: *Representation of horizontal and vertical integration of the indicators initiatives within the policy landscape*



Notes. *Rounded rectangles represent agencies; circles represent strategies or frameworks.*
Source. *Own elaboration. Inspired by Beck et al. (2009) and Kettner et al. (2012).*

Among the eight selected IIs, two stand out for their exceptional commitment to integration with other national and sub/intern-national strategies focused on sustainable wellbeing: New Zealand's LSF and Wales' NWI. These cases exemplify how deeply an II can be anchored within a broader array of strategies, ensuring a robust connection to the overall pursuit of sustainable wellbeing.

The **LSF of New Zealand** exemplifies strong horizontal and vertical integration strategies, deeply embedding the framework within both national and international policy landscapes. **Horizontally**, the

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LSF is seamlessly integrated within the Treasury, aligning with other analytical tools such as the CBAx (see Box 6, p.63) and the He Ara Waiora framework, which incorporates the Māori perspective on wellbeing (Box 5, p.56). This integration has made the LSF a central component of the Treasury's operations. Furthermore, the establishment of the Social Wellbeing Board in 2018, which includes chief executives from key ministries like education, health, justice, and social development, facilitates a coordinated approach across governmental agencies. This board addresses barriers to collaboration within public services. Additionally, the LSF is tied to New Zealand's wellbeing Budget process (see Box 9, p.81), which mandates interministerial collaboration on budget proposals, prioritizing those with joint contributions from multiple ministries for wellbeing funding. Since 2022, the government has also been testing policy "Clusters" in the Justice and Natural Resources sectors, aiming to unify efforts across ministries and agencies to achieve common objectives, supported by multi-year funding. **Vertically**, New Zealand demonstrates its commitment to international standards by actively participating in global wellbeing initiatives, such as the WEGo, and aligning with OECD wellbeing measurement efforts (supported by the Centre on Well-being, Inclusion, Sustainability, and Equal Opportunity[1]). This international engagement ensures that New Zealand's LSF resonate with global best practices and sustainable development goals, fostering a broader impact beyond its borders. Together, the strategies of horizontal and vertical integration play a crucial role in stabilizing the LSF within and outside New Zealand's policy ecosystem. By fostering strong connections across governmental departments and aligning with international wellbeing initiatives, these integrative actions reinforce the LSF's foundation, ensuring it remains a resilient and influential component of both national and global policy landscapes.

***Box 5**: The He Ara Waiora framework of the Treasury of New Zealand*

The Treasury of New Zealand employs both the LSF and He Ara Waiora to guide its advice on public policy, particularly focusing on different cultural perspectives and values around wellbeing. He Ara Waiora, a framework introduced in 2019 alongside the more established LSF, explores wellbeing from the lens of Māori cultural concepts and integrates these insights with broader governmental goals. It presents a holistic and intergenerational approach to understanding living standards. It is based on Māori knowledge systems, placing emphasis on wairua (spirit), te taiao (the natural world), and te ira tangata (the human domain). These domains underscore the importance of spiritual well-being, environmental stewardship, and human relationships and activities, offering a unique perspective to policy-making that complements the LSF's broader measures of wellbeing. Since its integration into government processes, He Ara Waiora has been instrumental in shaping policies, especially through its application in wellbeing assessments and the budgeting process. For instance, from Budget 2021, the framework has been progressively incorporated into value assessments, influencing how budget proposals are evaluated in terms of their potential impact on wellbeing. The Treasury's strategic use of both the LSF and He Ara Waiora underlines a commitment to inclusive, culturally respectful, and forward-looking governance that reflects New Zealand's diverse society.

[1] https://www.oecd.org/wise/

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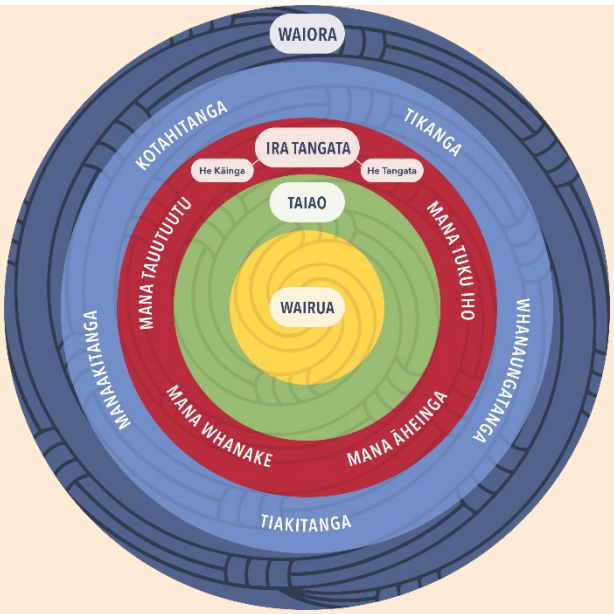

The **NWI of Wales** similarly demonstrates a comprehensive approach to integration, both horizontally across various national frameworks and vertically through different governance levels, ensuring the NWI's stability in promoting wellbeing. **Horizontally**, the NWI is intricately linked with several national frameworks that share a common focus on environmental and social outcomes (e.g., "the Sustainable Social Services for Wales: A Framework for Action" or "The Public Health Outcomes Framework"). Such frameworks interconnect with the NWI, creating a cohesive network that enhances policy coherence and maximizes the stability of wellbeing initiatives across different sectors. **Vertically**, the NWI is integrated at both subnational and international levels. **At the subnational level,** the NWI (and the related Wellbeing of Future Generations Act) implies the creation of local governance structures, PBSs, that aim to implement, adapt, and deliver national priorities at the community level. These boards include representatives from the Welsh Government, local authorities, national parks, and health boards, all working together to identify and achieve wellbeing objectives that resonate with the Act's seven central goals. This local implementation ensures that national priorities are relevant and effective at the community level, fostering a unified vision for Wales' sustainable future. **At the international level,** Wales' membership in the WEGo network and its commitment to the UN (United Nations) SDGs reflect a vertical integration that extends beyond national borders. By aligning the NWI with global sustainability and wellbeing objective, Wales not only commits to international standards but also adapts these global objectives to fit national and local contexts, ensuring that the NWI are both globally informed and locally applicable. Together, these horizontal and vertical integration strategies ensure that Wales' NWI is a dynamic tool in shaping a cohesive and sustainable approach to public policy, effectively linking local actions with national frameworks and international goals.

These cases of New Zealand's LSF and Wales' NWI illustrate the critical importance of strategic integration in stabilizing an II within the broader context of sustainable wellbeing. By anchoring these initiatives firmly within interconnected frameworks at multiple levels—locally, nationally, and internationally—they ensure not only the longevity of these policies but also their adaptability and

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impact in achieving long-term sustainable wellbeing goals. Thus, the high alignment of these initiatives with this aspect serves as a compelling model for other territories seeking to embed sustainable wellbeing into their institutional practices, supporting the transformative power of well-coordinated policy integration.

Cultural embedment

Integrating cultural specifics into an II significantly enhances its coherence within the landscape of sustainable wellbeing, thereby bolstering its legitimacy and stability over time. This cultural integration ensures that the indicators and practices within an II **resonate with the local cultural context**, making them more relevant and accepted by the community they serve. The content of an II that reflects local customs, values, and practices contributes to the II's cultural coherence. For instance, indicators might be designed to measure outcomes that are directly relevant to the community's unique lifestyle or traditions, such as in the case of the GNH's variable on "Driglam Namzha" (Way of Harmony) and "Zorig Chusum skills (artisan skills)". This alignment not only ensures the relevance of the II but also strengthens its impact by fostering a sense of ownership and commitment among local stakeholders. Moreover, IIs that emerge from medium to extensive **participatory processes** (i.e., GNH, CIW, BES, LSF, NPF, and NWI. See Table 4, p.37) are more likely to be culturally embedded. When stakeholders are actively involved in shaping these initiatives, the resulting indicators are tailored to reflect the nuanced realities of the particular cultural environment. This participatory approach not only secures deeper community engagement but also enhances the stability of the II by aligning it more closely with the values and needs of the population.

Three initiatives that particularly stand out in terms of **cultural integration** are Bhutan's GNH, Scotland's NPF, and Wales' NWI,. Each of these examples demonstrates how deeply cultural considerations are woven into the framework of their respective IIs, ensuring that these tools are not only effective in measuring and promoting sustainable wellbeing but also firmly rooted in the cultural fabric of their societies. This deep cultural integration supports the stability and longevity of these initiatives, as they are perceived not merely as external metrics but as integral components of each society's identity and value system.

Bhutan's GNH is a pioneering example of how an institutional innovation can be deeply embedded within a nation's cultural ethos. GNH is rooted in the country's Mahayana Buddhist values, reflecting a unique blend of spiritual and cultural consciousness in its development priorities. The initial phase of GNH focused on preserving these traditional values, ensuring that the index was not merely an intellectual construct, but a practical tool tailored to Bhutan's socio-cultural landscape. However, the GNH faced challenges, such as competing interests and values arising from the emigration of the Lhotshampa population, which required thoughtful integration within the diverse cultural fabric of Bhutan. In its second phase, GNH aimed to mitigate the erosion of traditional values by globalization, adjusting its framework to balance growth with cultural preservation. This evolution of GNH highlights its responsive and dynamic nature, adapting to both preserve and progress Bhutan's cultural identity amidst modern challenges.

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Scotland's NPF demonstrates strong cultural integration through its comprehensive community engagement and empowerment strategies. The framework's development involved a consultation process, led by the Scottish Government, which included both experts and the public. Over 16,000 participants were engaged in person, and more than 400,000 interacted online. Furthermore, Scotland's Community Planning Partnerships and the Community Empowerment Act of 2015 have strengthened the NPF by ensuring continuous citizen participation in public service design and delivery. These efforts provide a "right to be heard", enabling local communities to influence and improve outcomes that matter to them. The NPF's approach of ongoing community involvement not only ensures that the framework aligns with the wellbeing priorities of the Scottish people but also fosters a sense of ownership and relevance across diverse societal sectors.

Wales' NWI is another prime example of how cultural integration can be effectively achieved through inclusive development processes. Initiatives such as "The Wales We Want" (2014) and "Shaping Wales' Future"[1] (2021) played central roles in embedding the NWI deeply within the Welsh cultural landscape. These initiatives promoted a bottom-up approach, engaging communities extensively and aligning the indicators with the specific values and aspirations of Welsh society. This widespread community involvement ensures that the NWI resonates with the real-life experiences and priorities of its citizens, enhancing both its legitimacy and effectiveness. The framework is not merely a static set of indicators; it is a dynamic, evolving entity that reflects and supports the ongoing cultural and social narratives of Wales, ensuring its relevance and sustainability. For instance, this commitment is exemplified by the inclusion of "A Wales of vibrant culture and thriving Welsh language" among the seven national goals. This goal underscores the NWI's dedication to preserving and promoting Welsh national identity, further demonstrating its profound alignment with the cultural values of Wales.

The deep cultural embedding of IIs, such as the GNH, NPF, and NWI, underscores its critical role in maintaining stability and relevance of the II over time. By aligning closely with local traditions, values, and community input, these IIs not only gain legitimacy but also foster a durable connection with the societies they aim to benefit. This alignment ensures that such initiatives are not perceived as external impositions but as integral elements of each society's ongoing narrative and identity, enhancing their effectiveness and sustainability in promoting sustainable wellbeing.

Legislation

Legislation plays a decisive role in supporting the stability and continuity of sustainable wellbeing IIs. By enacting specific laws integrating an II, governments can ensure the long-term implementation of these initiatives. This is evident in several countries where specific legislation has been introduced to "lock in" aspects of the wellbeing approaches adopted.

In 2020, **New Zealand** amended its Public Finance Act to place a permanent duty on the government to annually report its wellbeing objectives during budget presentations and for the Treasury to periodically assess the nation's overall state of wellbeing. This aligns with the legislative approaches seen in **Italy** with the Italian Budget Law of 2016 and in **France**, where the "Sas Law" (2015) mandates government

[1] https://shapingwalesfuture.blog.gov.wales/

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reporting on NIW. However, the effectiveness of such legislation depends on its integration and timely execution within governmental processes, as seen in France where delays in reporting have diminished the impact of the reports on policy discussions and budget allocations.

Wales and **Bhutan** offer additional insights into how legislation can support wellbeing initiatives. Wales' Wellbeing of Future Generations Act of 2015 is a comprehensive piece of legislation that integrates the consideration of current and future wellbeing into policy decision-making across Welsh public bodies. This act ensures that all sectors work collaboratively to meet wellbeing objectives, reinforcing the institutional landscape with a sustainable focus. In Bhutan, the integration of GNH into the country's constitution underlines the national commitment to happiness. Article 9, Section 2 of the Constitution declares that "The State shall strive to promote those conditions that will enable the pursuit of Gross National Happiness", cementing GNH not only as a policy framework but also as a constitutional mandate. This ensures that the pursuit of happiness is perennially embedded in Bhutan's governance model, highlighting the profound impact legislation can have on institutionalizing wellbeing initiatives.

In **Scotland**, the Scottish Community Empowerment Act of 2015 mandates government entities to regularly report on a set of wellbeing objectives or indicators and to review its NPF at least every five years. This legislation not only enforces regular progress reports but also mandates consultations to ensure that the NPF aligns with the public's vision for a flourishing Scotland. However, while the Act institutionalizes the regular revision of National Outcomes, it stops short of mandating the actual use of the NPF or the achievement of specific targets. This creates a framework for accountability in reporting and alignment with public aspirations but does not compel governmental bodies to adhere to the NPF in policy implementation or to meet defined targets.

These examples collectively demonstrate the significant role legislation plays in embedding sustainable wellbeing objectives within the governmental framework, ensuring that these initiatives remain a central focus of policymaking despite potential shifts in political priorities or government leadership. Such legal frameworks provide the continuity and accountability needed for the long-term success and stability of these wellbeing initiatives.

Resistance against political change

The resistance of IIs to changes in government and political parties is significantly bolstered by a multifaceted integration strategy that includes policy landscape alignment, cultural embedding, and legislative frameworks. Firstly, aligning IIs within the existing sustainable wellbeing policy landscape ensures they are deeply interconnected with ongoing governmental processes, enhancing their continuity despite political shifts. Secondly, cultural embedding makes IIs resonate with the local societal values and norms, increasing their acceptance and legitimacy, which in turn supports their persistence. Thirdly, when IIs are enshrined in legislation, they gain a structural protection that mandates their continuation beyond the tenure of any single government or political faction. Additionally, there are other mechanisms that contribute to the stability of these initiatives across political changes, such as their development by institutions independent of the current government, the limited resources allocated to them making them less likely to be seen as political strategic point, and their association with widely respected leaders whose support can shield the initiatives from

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political upheaval. Together, these strategies and mechanisms create a strong foundation for IIs, enabling them to withstand and thrive amidst political changes.

The development of IIs by **organizations that maintain a degree of independence or impartiality from the current government** can significantly enhance their durability through political changes, as evidenced by Italy's BES and Canada's CIW. Despite Italy experiencing eight different governments since the first **BES** report in March 2013, the initiative has remained stable and effective. This resilience is partly due to its oversight and promotion by ISTAT, which operates independently of any specific government. Similarly, the **CIW** has never been directly supported by the Canadian government, functioning independently of political elections. The CIW research team has had to dedicate considerable effort to fundraising and managing small projects to sustain its operations. Despite these challenges, the CIW remains active and continues to produce its index, underscoring its sustainability even without direct governmental support. These examples illustrate how the independence of the overseeing institution can shield IIs from the vicissitudes of political change, maintaining their focus and continuity regardless of shifting governmental priorities.

Despite restricting an II's capacity to develop and achieve more substantial impacts, the **allocation of limited resources** to an II can become a buffer against political interference, as seen with Australia's **MWM**. The MWM operates with a notably small team of just three people, which contributes to its relatively low operational costs. This modest scale not only ensures that the initiative requires minimal financial investment but also lowers its visibility and political significance within broader governmental priorities. Consequently, the MWM has managed to avoid becoming entangled in political disputes or shifts, allowing it to be adopted quietly and effectively by various administrations. This highlights how limiting resource allocation to such initiatives can inadvertently protect them from being perceived as politically valuable targets, thereby fostering their continuity and stability amidst changing political landscapes.

The association of IIs with **highly respected leaders** can provide substantial protection against political upheaval, as demonstrated by Bhutan's **GNH**. The back up of the GNH by the revered monarchy provides substantial protection against political upheaval. Despite Bhutan's transition to democracy and the resulting debates during the 2008 and 2012 elections about focusing GNH domestically or promoting it internationally, GNH remains a respected and integral part of Bhutanese policy. This respect for the monarchy and its close ties with GNH discourages direct challenges from political parties, ensuring the initiative's continued influence and stability in Bhutan's evolving political landscape.

Overall (see Table 7, p.68), the resistance of IIs against the ebb and flow of political changes is significantly enhanced through strategic integration into policy landscapes, cultural settings, and legal frameworks, alongside the independence of their overseeing bodies, minimal resource allocation, and backing by respected leaders. These elements collectively fortify IIs, enabling them to endure amid shifts in political leadership and priorities. By embedding these initiatives deeply within the fabric of governance and society, they become less susceptible to being undermined by political transitions, ensuring their longevity and continued relevance in advancing sustainable wellbeing.

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Speeding up

The amplification process of speeding up refers to the process of accelerating the impact of niches or hastening their completion. This mechanism aims to generate faster change, for instance, by enhancing the efficiency of organizational procedures or streamlining implementation processes, thus increasing the overall impact over time. In the context of IIs, analysis of selected IIs demonstrate that this acceleration can be achieved through three primary mechanisms: refining the underlying framework, developing and enhancing complementary tools, and establishing gatekeepers who oversee and monitor decision-making processes related to the framework. Each of these three mechanisms is systematically reviewed and illustrated by case studies, highlighting their contributions to the acceleration of impact of IIs.

Framework improvement

In general, IIs are designed to encapsulate a framework that conceptualizes the initiative's understanding of sustainable wellbeing or related concepts. These frameworks tend to be crafted to align with the prevailing concerns of their era, capturing the most pressing issues of the time. However, as societal and environmental contexts evolve, the concerns that were initially central to these frameworks may become outdated and other new concerns may also arise. This temporal shift necessitates that frameworks and connected IIs are not static but dynamic entities, capable of evolving to reflect new challenges and insights. This evolution allows an II to speed up its impact by staying aligned with current needs and expectations, thereby enhancing its applicability and effectiveness.

The **CIW** exemplifies how an II and its related framework can evolve effectively to speed up its impact. While the overall framework of the CIW has remained constant, its adaptability is evident in the way indicators are regularly reviewed and updated. This process allows indicators that no longer reflect current realities or priorities to be replaced with ones that are more relevant and impactful. New indicators are selected based on their fidelity to the established domains, their ability to convey a compelling narrative about wellbeing, and their practical applicability. This dynamic approach ensures that the CIW stays relevant and responsive to changes in society, thereby enhancing its effectiveness and accelerating its ability to influence and inform policy decisions and community practices.

The **LSF** of New Zealand illustrates further this process thanks to its **iterative** approach, ensuring that its framework evolves in tandem with its context to remain relevant and effective. For instance, in December 2019, the Treasury adjusted the LSF to enhance its compatibility with Stats NZ's Ngā Tūtohu Aotearoa – Indicators Aotearoa New Zealand, and they also addressed specific recommendations from the OECD. Additionally, in October 2021, the Treasury unveiled a revised version of the LSF, specifically designed to reflect the wellbeing of children more accurately and to culturally integrate the perspectives of Māori and Pacific Peoples. This update highlights the LSF's commitment to inclusivity and its responsiveness to the diverse cultural dimensions of wellbeing within New Zealand.

Recognizing the central role of framework updates for speeding up the impact of an II, Scotland enshrined the review process of the **NPF** into a **legal obligation** through its Community Empowerment Act (2015). Thus, the NPF, akin to a dynamic dashboard, has witnessed iterative adjustments over the years, exemplified by the expansion of indicator numbers from 45 in 2007 to 81 in 2018. Evolving from a

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framework supported by multiple governmental purposes, targets, and objectives, it now centres around a singular purpose, a set of values, and eleven national outcomes, thereby streamlining its focus.

The evolution of IIs and their associated frameworks reflects a dynamic response to changing societal and environmental contexts, ensuring ongoing relevance and effectiveness. This adaptability is crucial for maintaining alignment with current needs and expectations, ultimately speeding up their impact and applicability over time. By embracing this dynamic approach, IIs demonstrate a commitment to staying responsive to emerging challenges and opportunities, thereby maximizing their potential to drive positive change toward sustainable wellbeing.

Complementary tools creation and improvement

Designing and developing complementary strong analytical tools is crucial for effectively translating abstract wellbeing goals, and the related IIs, into practical applications. We observed that in the selected case studies, this process involves refining methods of policy design and delivery to ensure that they align with the overarching sustainable wellbeing objectives. It also encompasses advanced techniques for cost-benefit analysis, various ex-ante appraisals to forecast the potential impacts of different policy scenarios, and ex-post evaluations to assess the actual impacts of policies. These complementary analytical tools are instrumental in bridging the gap between theoretical frameworks and their practical implementation, thereby enhancing the ability of IIs to generate impacts.

The development of such tools facilitates a more systematic and evidence-based approach to policymaking, ensuring that interventions are both effective and efficient in promoting sustainable wellbeing. Although executing these types of analyses can be challenging due to their complexity and the depth of data required, there are notable initial examples that demonstrate their potential. By integrating these analytical tools, policymakers can more accurately predict outcomes, adapt strategies in real-time, and ultimately drive faster and more effective change towards achieving sustainable wellbeing goals. This approach not only speeds up the impact of IIs but also contributes to more robust and resilient sustainable wellbeing policies.

For instance, the **CBAx tool** (see Box 6, p.63), developed by the New Zealand Treasury, significantly complements the LSF by enhancing the assessment of policy impacts beyond traditional fiscal measures. CBAx directly supports the LSF's objectives by ensuring that policies not only consider immediate economic effects but also long-term social outcomes, aligning with the broader wellbeing goals of the LSF. The tool has proven instrumental in improving the quality of budget submissions, promoting rigorous, transparent policy analysis, and fostering a deeper understanding of the broader implications of government initiatives. By integrating detailed quantitative assessments with the LSF's qualitative goals, CBAx helps create a more informed, effective decision-making process that enhances the overall impact of the LSF in promoting sustainable wellbeing.

Box 6: *CBAx: A Treasury tool for improving the consistency of cost-benefit analysis*

To address inconsistencies in cost-benefit analysis across different government departments, the New Zealand Treasury developed the CBAx, a spreadsheet tool designed to standardize assumptions and improve transparency in evaluations. A primary goal of CBAx is to foster consistency by clearly outlining the assumptions regarding effect sizes and valuations of goods and services, allowing for comparison

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across analyses. This is crucial for ensuring that decisions are based on comparable and robust data. CBAx encourages long-term thinking with a 50-year time horizon, aligning analysis with long-range planning and future wellbeing impacts. For the 2019 Budget, CBAx was updated to link impacts directly to wellbeing domains, although its use remained optional. The tool supports a variety of methods to generate monetized values, with over 200 impact values provided in the CBAx Impacts Database. This ranges from healthcare benefits to the social cost of transport accidents. A 2018 evaluation by the New Zealand Institute of Economic Research acknowledged that since the introduction of CBAx in 2015, there has been a notable improvement in the quality of budget initiative analyses. However, the evaluation also noted that the complexity of CBAx may not always be justified, especially for smaller initiatives or those under strong political influence. Despite these challenges, a significant benefit of CBAx has been its role in clarifying intervention logic, which enhances the overall quality of cost-benefit analysis. The Treasury has since updated its guidance on CBAx, now emphasizing more on identifying and quantifying impacts rather than solely focusing on monetization, thus promoting a more nuanced approach to evaluating policy impacts.

In Italy, the advancement of the **BES** initiative has been propelled through the application of modelling and forecasting techniques to a concise set of indicators that are integral to Economic and Finance Document (DEF), in the Annex on equitable and sustainable wellbeing indicators. The Italian Ministry of Economy and Finance is mandated by law to provide in this annex not only the trends from the past three years for the selected BES indicators but also **projections of future trends** and assessments of the potential impacts of various policy scenarios on these indicators. Ideally, each of the 12 indicators should have a bespoke model developed for accurate forecasting over the next three years. However, due to the complexities involved in such modelling techniques, practical forecasts were achievable for only 8 of these indicators in 2023. This improvement from the four indicators forecasted in 2017 underscores the growing capability and application of advanced analytical methods within the BES framework. By directly linking these indicators to policy interventions, the BES framework is transformed into a dynamic tool that not only guides budgetary decisions and policy formulations but also allows for a more nuanced understanding of how policies might impact key aspects of wellbeing. This approach exemplifies how strategic forecasting can effectively inform and optimize policy decisions, ensuring that they are both impactful and aligned with broader wellbeing objectives. However, it is important to note that currently, all forecasting within the BES framework is performed solely by the Ministry of Economy and Finance, without any independent review. This absence of external verification could compromise the integrity of the forecasts, potentially leading to biases that might misguide the policy decision-making process.

The GNH initiative in Bhutan is also empowered by a suite of tools that profoundly enhance its impact on policy decision-making. These tools are designed to convert the broad, conceptual ideals of GNH into practical, actionable measures, ensuring systematic application across all levels of government. Central to these tools is the **GNH Policy/Project Screening Tool**, administered by the GNH Commission. This body forms ad hoc committees comprised of experts knowledgeable in relevant subject matters to assess and screens policies and projects. Using the screening tool, policies and projects are evaluated against the nine wellbeing domains of GNH. Projects scoring above the neutral threshold of 69 out of

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100 are selected for implementation, provided they also meet equity requirements such as reducing the rich-poor gap and fostering positive societal impacts (for an example of the usage of this tool, see Box 7, p.65). Moreover, Bhutan's strategic use of **Five-Year Plans** has been integral to its development trajectory. Notably, from the 10th Five-Year Plan (2008-2013) onward, these plans have been explicitly structured around the GNH framework. This deliberate alignment ensures that development efforts consistently contribute to the holistic wellbeing of the Bhutanese people as envisioned by GNH principles. Additionally, **the GNH checklist** serves as a vital tool for local governments, offering a set of criteria to evaluate how local initiatives align with GNH goals. These comprehensive tools not only ensure that GNH is a central consideration in policy formulation and project development but also accelerate the practical impact of the GNH index, enhancing the efficiency and effectiveness of government operations in promoting national wellbeing.

Another example on how complementary tools help foster the impact of IIs is the **Wellbeing Economy Monitor** in Scotland. The latter is designed to function in concert with the NPF, enhancing the capacity to measure and accelerate Scotland's progress toward establishing a wellbeing economy. By providing a set of indicators that assess economic progress across multiple dimensions, specifically focusing on four types of capital (human, social, natural, and economic), the Monitor aims to offer a comprehensive view of wellbeing that complements the broader goals of the NPF. Despite its potential to enrich the understanding and implementation of wellbeing strategies, the Wellbeing Economy Monitor shares some challenges with the NPF, particularly in terms of the complexity of its metrics. Both frameworks use a range of interlinked indicators, which can sometimes be difficult to interpret in terms of their collective impact on overall wellbeing and their actual complementarities. This complexity can hinder stakeholders' ability to follow and evaluate Scotland's progress effectively or also see the benefits of using two different measurements tools.

The evaluation of the application of complementary tools across various IIs demonstrates how these tools (e.g., the CBAx, the GNH policy screening tool, the Annex in the DEF, …) can act as a bridge between theoretical frameworks and actionable policy decisions. These tools enrich the decision-making process, enabling a more nuanced understanding and implementation of sustainable wellbeing goals. Particularly in the case of the GNH, BES, LSF and NWI, the strategic integration of these complementary tools into policy contexts is assumed to propel the effectiveness of these initiatives.

Box 7: *The GNH policy screening tool and the World Trade Organization*

One significant application of Bhutan's GNH Policy Screening Tool occurred in 2008 during the country's consideration of joining the World Trade Organization (WTO). Initially, the GNH Commission, which consisted of twenty-four members, largely favoured the idea, with nineteen members supporting Bhutan's entry into the WTO. However, the decision-making process took a turn after a thorough evaluation using the GNH screening tool. The GNH Commission assessed the potential impacts of joining the WTO across various social, economic, and environmental factors according to GNH criteria. After the evaluation, the same nineteen out of twenty-four members who had initially supported joining the WTO reversed their stance, citing significant concerns about the potential risks. The GNH analysis revealed that WTO membership could pose severe risks to local communities and threaten Bhutan's self-reliance and governance autonomy. A particular concern was that the WTO's powerful tribunals

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might undermine national laws designed to protect Bhutanese cultural and social practices, such as the country's complete ban on cigarette sales, by challenging them as barriers to trade. As a result of this comprehensive GNH assessment, Bhutan decided against joining the WTO, a decision that remains in effect to this day. This example illustrates the profound influence of the GNH Policy Screening Tool in guiding major national decisions, ensuring they align with the holistic wellbeing goals of the country (Colman, 2021).

Gatekeepers

Independent oversight is another critical factor in enhancing the impact of IIs, particularly in ensuring that sustainable wellbeing commitments enshrined in legislation are effectively implemented. Gatekeepers, tasked with this oversight, may be formally designated as part of the II's structure, as seen with the NWI and GNH initiatives, or they may arise spontaneously from civil society, as observed in the NIW of France. These gatekeepers, whether official or informal, play a vital role in holding governments accountable, ensuring compliance with sustainable wellbeing policies, and overseeing the accurate reporting on the progress and effectiveness of IIs. However, our analysis indicates that the effectiveness of gatekeepers is significantly enhanced when they are formally integrated and thoughtfully embedded within the II. This formal integration ensures that oversight functions are not just peripheral but are central to the policy implementation process, thereby substantially increasing the strength and impact of the IIs.

For example, in Wales, the **Future Generations Commissioner** plays a crucial gatekeeping role in enforcing the Wellbeing of Future Generations Act, which supports the NWI. Tasked with ensuring public bodies adhere to the Act's provisions, the Commissioner issues recommendations that must be publicly addressed by these bodies, detailing compliance or reasons for non-compliance and alternative actions. This accountability mechanism enhances transparency and rigor in applying the Act's principles. The Commissioner's independent and politically neutral position further enables effective advocacy for sustainable development and long-term policy impacts, fostering a robust framework for implementing wellbeing objectives across Wales. This oversight mechanism, combined with the accountability measures enforced by the **Auditor General for Wales**, which assesses compliance with the Act's "ways of working", significantly strengthens the governance framework surrounding the NWI and ensures that the wellbeing objectives are met with thoughtful and effective strategies.

Box 8: *The influence of gatekeepers: The case of road building in Scotland and Wales*

A comparison of similar initiatives in Scotland and Wales highlights the significant influence that gatekeepers can have on public policy, particularly in the context of infrastructure development. In Wales, the Future Generations Commissioner has played a paramount role in shaping transportation policy by halting new road constructions. This intervention was based on the broader societal and environmental impacts of such projects. For instance, a proposed GBP 1.4 billion motorway expansion was challenged by the Commissioner, who advocated for a more sustainable package of transport solutions. This alternative proposal, costing less than half of the original plan, led to the suspension of new road building and an increase in investment for active travel by 63% in the 2022 budget. The plan aims to boost public transport, walking, and cycling to 45% by 2045, addressing multiple societal goals such as decarbonization, reducing inequalities, and improving public health.

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In contrast, Scotland proceeded with extensive road expansions, including the dualling of the A9 motorway from Perth to Inverness despite its immense £5.6 billion cost and negative environmental implications. This project was greenlit even though strategic assessments and analyses suggested that the environmental and financial costs would outweigh the benefits. The project, slated for completion in 2025, underscores the different approaches taken by the governance frameworks in Scotland and Wales. This divergence illustrates how the presence and actions of a gatekeeper, like the Future Generations Commissioner in Wales, can integrate sustainability considerations effectively into public policy decisions, leading to more cautious and environmentally considerate approaches compared to regions where such roles are less influential or entirely absent.

In Bhutan, the **Centre for Bhutan & GNH Studies** (CBS) and the **GNH Commission** each play key gatekeeper roles that enhance the impact of the GNH index. As an autonomous governmental research centre, CBS conducts all empirical research and surveys related to GNH, disseminating its findings through publications and conferences. This work supports the GNH framework by providing data-driven insights that inform policies and practices. Meanwhile, the GNH Commission, an autonomous institution staffed by experts knowledgeable in relevant fields, is responsible for conceiving and implementing the nation's five-year plans and promulgating policies. It also administers the GNH screening tool across government agencies, ensuring that all government initiatives align with the GNH principles. By closely monitoring and guiding the integration of GNH values into government actions, both the CBS and the GNH Commission significantly bolster the framework's effectiveness and its foundational role in national policymaking.

In France, the **FAIR civil society association** can also be considered as playing the role of the gatekeeper for the "Sas law" (i.e., the law no. 2015-411 of April 13 2015, aimed at taking into account "new indicators of wealth" in the definition of public policies.) and the broader beyond GDP movement. Although the FAIR is deeply committed to these principles, it struggles with limited capacity to significantly influence political and bureaucratic processes. While the French National Institute of Statistics and Economic Studies (INSEE) efficiently produces relevant data on wellbeing and sustainability for the NIW, their impact on public debates and policymaking remains minimal. Thus, despite the FAIR movement's steadfast role and advocacy efforts, the challenge lies in translating this civil society engagement into substantial influence on policy decisions, which is crucial for fully realizing the transformative potential of the NIW.

Overall (see Table 7), analysis of the case studies reveals that the enhancement of initiatives' frameworks, development of complementary analytical tools, and designation of gatekeepers collectively play crucial roles in speeding up the impact of IIs. By refining the framework, initiatives ensure that their structural foundations remain relevant and effectively aligned with current policy goals and societal values. The introduction of complementary tools, such as cost-benefit analysis models or wellbeing assessment projection, enables more precise and expedient decision-making by providing detailed insights into the potential impacts of various policies. Furthermore, the appointment of gatekeepers ensures rigorous oversight and accountability, helping to maintain the integrity and targeted focus of initiatives. Together, these elements not only accelerate the practical implementation

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of IIs but also enhance their effectiveness, ensuring that IIs swiftly adapt to and reflect evolving policy landscapes and societal needs.

Table 7: *Results of the analysis phase - Impact criteria – Niche "amplification within" macro-process*

Selected sustainable wellbeing IIs				MWM (AUS)	GNH (BHU)	CIW (CAN)	NIW (FR)	BES (IT)	LSF (NZ)	NPF (SCT)	NWI (WAL)
Impact criteria	Amplification within	Stabilizing	*Integration*								
			Cultural embedment								
			Legal embedment								
			Stability across governments								
			Overall								
		Speeding up	*Framework improvement*								
			Complementary tools								
			Gatekeepers								
			Overall								

Notes*. To visually represent results of the analysis phase, we utilized a color-coded system: a score of "0" is marked with light colour to indicate "minimal alignment"; "0.5" is shown in medium shaded colour, denoting "moderate alignment"; and a score of "1" is highlighted in dark colour, signifying "high alignment" with our conceptual framework of T-II. Additionally, rows representing a broader category including subcategories are emphasized with double-line borders, helping to visually distinguish between primary and secondary evaluative criteria in our analysis grid.*

Amplification out

In this section, we will explore the results of our analysis of selected IIs with a focus on the macro-process known as "amplifying out". Amplifying out involves strategies aimed at broadening the impact of initiatives by engaging more people and extending to additional places, thereby increasing the range and number of initiatives. To understand the nuances of this process, the process of amplifying out has been categorized into two distinct subcategories based on the dependency of new initiatives on existing ones. The first subcategory, "amplifying out dependent", includes processes where new initiatives are directly derived from and reliant upon existing ones, encompassing both **growth** (where an initiative's impact range expands within a similar context) and **replication** (where an initiative is duplicated in a dissimilar context). The second subcategory, "amplifying out independent", involves the creation of independent initiatives either by **transferring** an existing initiative to a new place with a similar context or by **spreading** the underlying principles to a different initiative in a dissimilar context (see section "Strategic Niche Management" (p. 22) for further explanations of this framework). This analytical framework helps us dissect how IIs propagate their influence and adapt to diverse environments, enhancing our understanding of their scalability and adaptability.

Growing

The process of "growing" within the framework of niche initiatives refers to the expansion of an initiative's impact range across geographical locations, organizations, or sectors. This process allows an initiative to maintain its operational consistency while extending its reach, thereby covering more of its potential impact area. Typically, growth is achieved through scaling out programs, solutions, or services. In the context of sustainable wellbeing measurement, studied IIs have in general experienced significant growth by becoming more entrenched in the decision-making and budgetary planning processes, often gaining prominence through legislation or deeper integration within governmental or

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organizational frameworks. However, not all initiatives analysed show a growth trajectory; for example, the MWM of Australia, the CIW, and the BES of Italy have seen their development processes stall or slightly decrease. Moreover, the NIW in France has notably experienced a reduction in its impact, illustrating the challenges some initiatives face in sustaining growth or expanding their influence within their respective landscapes.

Indeed, the journey of wellbeing measurement in **Australia** has seen significant fluctuations rather than consistent growth. Initiated in the early 1990s with a Senate inquiry into advancing beyond GDP, Australia pioneered new frameworks with the Australian Bureau of Statistics (ABS) developing the **MAP** in 1999 and the **Treasury's Wellbeing Framework** emerging in the early 2000s. However, both frameworks were discontinued by 2016 due to funding cuts and shifting priorities. Interest in wellbeing metrics saw a brief discussion in 2020 around a proposed Wellbeing Budget, which was ultimately dismissed, yet signs of a resurgence appeared in 2021 with the Commonwealth Treasury's "Measuring What Matters" statement and its progress into the **MWM** dashboard released in 2023. This history reflects Australia's complex relationship with wellbeing measurement, characterized by early leadership followed by a period of dormancy and a recent rekindling of interest.

The **CIW** from Canada initially captivated national attention in the early 2010s with its comprehensive national reports. The CIW unveiled its inaugural national report in 2011, with subsequent editions in 2012 and 2016, the former of which coincided with a community wellbeing survey. Despite these initial successes at a national scale, the CIW encountered challenges in broadening its influence throughout Canada. Recognizing the diverse and specific needs of different regions, the CIW strategically refocused its efforts on **more localized applications**. By 2014, this shift had led to the development of a provincial index for Ontario, followed by the creation of similar indices for Nova Scotia and Saskatchewan. The CIW also adapted its community wellbeing survey to address child and youth perspectives. In 2020, the Yukon marked a milestone as the first regional government to undertake a CIW community wellbeing survey. These adaptations illustrate a deliberate transition from a national to a regional focus, aiming to provide more tailored and effective wellbeing measures that resonate with the unique contexts of various Canadian provinces and regions.

The **BES** of Italy has experienced a trajectory like the CIW, reaching a national peak around the time its indicators were formally integrated into the DEF in 2016. This legislative act was a significant milestone, embedding a focused set of BES indicators into an annex of this decisive economic document and underscoring the initiative's national relevance. However, akin to the CIW, the BES has increasingly pivoted towards **more localized implementations**, notably with projects like BesT in 2018, which tailors the BES framework to meet the unique needs and characteristics of territories. On the national stage, the BES now runs parallel to the SDGs, which are often perceived not merely as complementary but as potentially overshadowing the BES. This trend reflects a shift towards more specialized, localized applications of the BES measures, while broader international frameworks like the SDGs increasingly dominate policy discussions, potentially diminishing the distinct impact of national initiatives like the BES.

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Finally, the trajectory of the **NIW** in France has experienced a noticeable decline since the initiative's inception in 2015, marked particularly by the abandonment of the mandatory reporting requirement in 2018. Although the NIW continues to be published, the shift in governmental focus towards environmental concerns is evident in the emergence of the green budget. This new focus reflects a broader pivot in policy priorities, where economic strategies are increasingly intertwined with sustainability goals. The green budget, potentially related to the concepts underpinning the NIW, suggests a realignment of national indicators towards addressing environmental impact within budget policies. This transition indicates a step back from the comprehensive sustainable wellbeing approach initially envisioned by the NIW, with the government perhaps viewing the integration of sustainability into budgetary processes as a more immediate or politically expedient priority.

As we examine the varied trajectories of IIs, it becomes evident that growth is not uniformly achieved (see Table 8, p.73). While some initiatives have successfully expanded and integrated into governmental and legislative frameworks, expanding their influence and scope, others have encountered obstacles that have stalled their development or even led to a reduction in their impact. This divergence underscores the complex interplay between policy priorities, funding stability, and the adaptability of initiatives to local contexts, highlighting the challenges and opportunities in advancing sustainable wellbeing measurement across different geopolitical landscapes.

Replicating

Replicating an initiative involves duplicating the original model in a new, often dissimilar environment while maintaining some level of dependence on the original initiative. This process aims to copy the core aspects of an II's design, strategy, and operation, adapting them minimally to fit the new context. The connection to the original initiative typically provides continuity and guidance, ensuring that the replicated initiative remains aligned with the proven principles and goals of the original. Replication is particularly effective when the fundamental aspects of an initiative are robust across different contexts, and where maintaining a strong link to the original initiative can lend credibility and support to the new implementation.

The process of replicating IIs appears to be **relatively rare** among the selected initiatives, suggesting that while the beyond GDP movement is expanding, it does so often without directly copying existing models. However, a few instances provide insight into how replication can function effectively within this broader context. Notably, the CIW, the NPF of Scotland, and Italy's BES have shown potential for replication.

In Canada, the **Ontario Trillium Foundation**, an Ontarian government agency that annually distributes around $110 million in community grants, has adopted the **CIW** framework. By utilizing a selection of CIW indicators, the Foundation has aligned its grant-making processes with the broader goals of community wellbeing, focusing on six priority areas. This adaptation of the CIW demonstrates how a framework can be replicated in some branches of government to enhance policy coherence and effectiveness in public funding.

In Scotland, the **NPF** has been employed by various **voluntary organizations** as a tool for strategic planning and evaluation. For example, Befriending Networks has integrated the NPF into their funding

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applications, while the Scottish SPCA has utilized it to refine how they report on activities and measure impact. Additionally, Scottish Youth Theatre Arts Scotland has explored how the NPF can aid in demonstrating the non-arts impact of their work, underscoring the framework's versatility across different sectors.

Finally, in Italy, the **region of Puglia** is the first region to have embraced the **BES** framework by incorporating it into its economic-financial procedures through Regional Law No. 47/2019. This law, mirroring the approach of national legislation, integrates sustainable development perspectives directly into the regional budgetary planning process, exemplifying how national initiatives can be replicated at regional levels to foster a uniform approach to sustainable development.

These examples illustrate that while replication may not be widespread (see Table 8, p.73), when it does occur, it effectively transfers the principles and methodologies of an original initiative into new, yet similar organizational or geographic contexts. This not only helps to expand the reach and impact of the original initiative but also fosters a more integrated approach to sustainable wellbeing measurement across different layers of governance.

Transferring

Transferring involves creating a similar but independent initiative that is adapted significantly to fit a new context. This strategy does not just copy an initiative but reinterprets and reconfigures it to better suit the local conditions and needs. While it draws on the core ideas and successes of the original initiative, transferring emphasizes flexibility and customization, allowing for substantial modifications that reflect the new environmental, cultural, or social peculiarities. Unlike replicating, transferring leads to an initiative that operates independently of the original, making it more tailored to the new needs but less tied to the methodologies and exact practices of the original. While replicating seeks to preserve the core model with minimal changes, transferring allows for greater innovation and local relevance, resulting in initiatives that, while inspired by the original, are distinct and autonomously adapted to their specific environments.

Transferring, like replicating, is an infrequent occurrence among the selected IIs, highlighting again the limited interconnection and interdependence within the fragmented beyond GDP movement. Despite its rarity, there are notable instances where transferring has played a role in adapting and applying wellbeing frameworks to new but similar contexts across different geographic locations.

For example, regions within New Zealand such as Otago, Tairawhiti, and Waikato have developed their **local wellbeing frameworks inspired by the broader LSF** national initiative. These frameworks take the core principles of the national models and adjust them to fit the specific needs and characteristics of the local population.

The use of the **Alkire-Foster method** for multidimensional wellbeing assessment shows how the GNH methodology can be transferred across borders. This approach has been adopted in various contexts, including the Multidimensional Well-being Index in countries like Colombia, Ecuador, Mexico, and Uruguay, and in specific applications like the Thai Happy Index and a proposal for a similar index in the UK. These adaptations demonstrate the flexibility of the **GNH** framework to accommodate diverse

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cultural and socio-economic environments, thereby expanding its applicability and enhancing the global discourse on wellbeing measurement. Despite these successes, the process of transferring GNH faces significant challenges, particularly the feasibility of conducting comprehensive surveys in large, densely populated countries. In such environments, the extensive **data collection** required can become prohibitively expensive, complicating the uniform implementation of the full GNH methodology and limiting its scalability.

Overall (see Table 8, p.73), these instances demonstrate transferring potential to enrich the global discourse on sustainable wellbeing measurement. By adapting successful frameworks to new environments, transferring not only extends the reach of these initiatives but also enhances their relevance and effectiveness in different contexts, contributing to the global momentum of the beyond GDP movement.

Spreading

Spreading is the process of disseminating the core principles and approaches of an initiative to very different contexts, sometimes leading to the emergence of similar but independent initiatives. Unlike replicating or transferring, spreading does not involve duplicating the original initiative's exact or closely similar strategies or structure. Instead, it focuses on sharing underlying principles that can inform a wide range of applications, tailored to fit diverse settings.

The process of spreading within the context of IIs appears slightly more represented than replicating and transferring, especially in the context of the GNH of Bhutan and the NWI of Wales. Both initiatives have successfully demonstrated signs of dissemination of their foundational principles across different global platforms, influencing to some extent international policymaking and development strategies.

The GNH, for instance, has profoundly impacted global discussions on sustainable development. In 2011, GNH inspired the **UN General Assembly** to adopt resolution 65/309, which advocated for a holistic approach to development. This led to a significant event in April 2012 at the UN headquarters, where Bhutan hosted a high-level meeting on "Happiness and well-Being: Defining a new economic paradigm", attended by 800 participants including the UN Secretary General and heads of state. The principles of GNH influenced the deliberations that shaped the SDGs for the period up to 2030, marking a substantial contribution to global development frameworks. Additionally, the **CBS** actively promotes GNH through its publications and international conferences, further spreading its influence worldwide.

Similarly, the **NWI** in Wales has extended its reach through initiatives like the **Future Generations Leadership Academy**, which aims to enhance leadership skills in young people and promote the principles of the Well-being of Future Generations Act beyond Welsh borders. The **Network of Institutions for Future Generations**, initially chaired by the Future Generations Commissioner for Wales, exemplifies a diverse collaborative effort to safeguard the interests of future generations internationally. Efforts to establish a future generations commissioner at the UN level and expressions of interest from other countries, such as Ireland, in adopting similar frameworks indicate the spreading influence of the NWI's principles.

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These examples illustrate how both the GNH and NWI have not only gained international attention but have actively participated in shaping policy discourses around the world, embodying the "spreading" process by promoting their core principles in various global contexts (see Table 9). Additionally, the involvement of international networks such as the WEGo further facilitates the spreading and sharing of good practices in sustainable wellbeing measurements. By connecting a wide array of stakeholders across different countries, WEGo has provided a platform for exchanging ideas and strategies, thereby supporting the dissemination of the core principles of IIs mobilized by the movement. This collaborative environment enhances the international reach and impact of initiatives like the LSF, NWI and the NPF.

Table 8: *Results of the analysis phase – Impact criteria – Niche "amplification out" macro-process*

Selected sustainable wellbeing IIs			**MWM** (AUS)	**GNH** (BHU)	**CIW** (CAN)	**NIW** (FR)	**BES** (IT)	**LSF** (NZ)	**NPF** (SCT)	**NWI** (WAL)
Impact criteria	Amplification out	Growing								
		Replicating								
		Transferring								
		Spreading								

Notes*. To visually represent results of the analysis phase, we utilized a color-coded system: a score of "0" is marked with light colour to indicate "minimal alignment"; "0.5" is shown in medium shaded colour, denoting "moderate alignment"; and a score of "1" is highlighted in dark colour, signifying "high alignment" with our conceptual framework of T-II. Additionally, faded colours are used to denote subcategories within a broader category, helping to visually distinguish between primary and secondary evaluative criteria in our analysis grid.*

Amplification beyond

In this section, we explore the application in the field of IIs of the macro-process of "amplifying beyond", a process that diverges significantly from the previous scaling macro-processes of amplifying within and out. While amplifying within and out focus primarily on expanding the reach and replication of initiatives, amplifying beyond aims at transformative change by influencing higher institutional levels and altering deep-seated values and mindsets (towards the paradigm of sustainable wellbeing, in the case of the present study). Changes can be observed both within individual countries where the initiatives are implemented and potentially across a broader, with a more universal scope, depending on the initiative's influence and the interconnectivity of the issues it addresses. This approach is rooted in the growing recognition within recent literature that simply increasing the number of initiatives, as typically emphasized in modernist and growth-centred paradigms, may not suffice for fostering true transformation. Instead, amplifying beyond emphasizes changing the very structures, values, and institutional frameworks that underpin initiatives.

Differing from amplifying within, which focuses on intensifying efforts within existing initiatives, and amplifying out, which seeks to extend initiatives' geographic or contextual reach, amplifying beyond is about paradigmatic shifts that redefine the rules of the game. In the context of this deliverable, our primary focus is on the "amplifying beyond" macro-process because of its potential to transform the landscape of sustainable wellbeing measurement, thereby aligning by the impact criteria of our definition of T-II. However, it is crucial to acknowledge the supportive roles of amplifying within and amplifying out macro-processes. According to the MLP, the spread of initiatives (amplifying out) and the strengthening of these initiatives (amplifying within) are essential in supporting the development of niche-changing regimes. These processes collectively support the broader goal of amplifying beyond,

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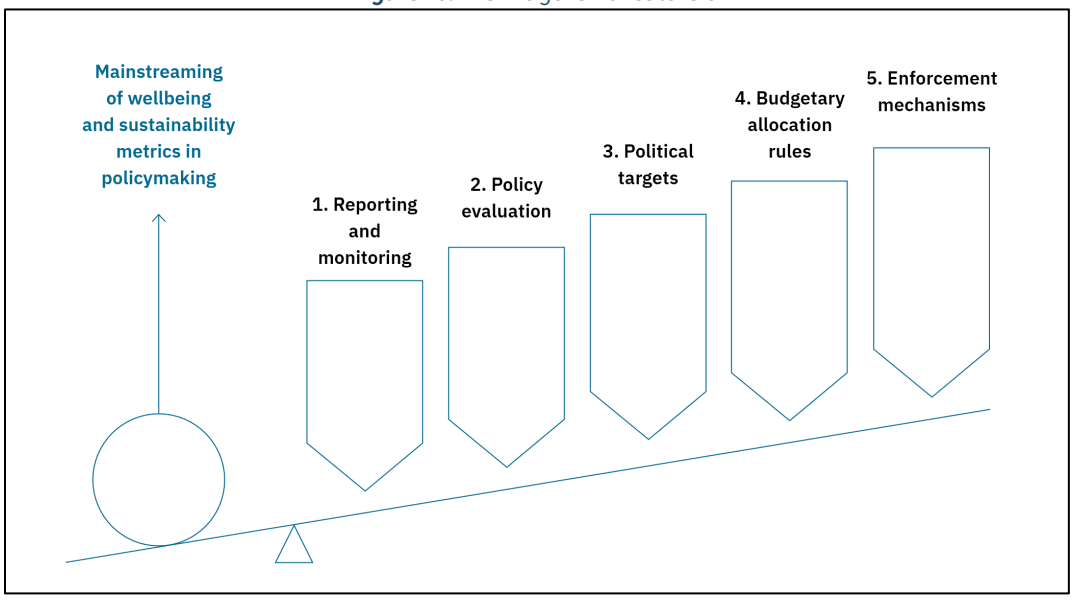
which aims to achieve transformative change. By challenging and reshaping established norms and policies at a systemic level, amplifying beyond macro-process not only extend the impact of initiatives but also create entirely new pathways for sustainable wellbeing, supported by the foundational changes brought about by amplifying within and out.

Scaling up

The process of scaling up within the realm of niche initiatives is crucial for effecting significant changes at higher institutional levels, challenging the existing rules and logics of incumbent regimes. This involves embedding the impact of initiatives into the broader fabric of law, policy, or institutional frameworks through strategies such as advocacy, lobbying, networking, and the promotion of alternative visions and discourses. To structure and refine this process specifically for IIs, we have adopted the typology proposed by Kaufmann et al. (2023), which introduces specific governance levers for mainstreaming wellbeing and sustainability metrics . These levers delineate how metrics are utilized within governance frameworks to effectively shape policy processes and outcomes. The integration of wellbeing and sustainability metrics at the governance level is pivotal, as it directly influences policymaking through various mechanisms. From the least to the most impactful levers, these include the (1) reporting and monitoring of metrics, (2) conducting ex-ante and ex-post policy evaluations, (3) setting political targets, (4) shaping budgetary allocation rules and (5) implementing enforcement mechanisms (see Figure **10**). Such a structured approach ensures that the scaling up process not only advocates for change but also institutionalizes these changes, making them durable and impactful across different governance layers. In a complementary subsection, we explore specific policy examples that come into support in how the scaling up of IIs has directly resulted in tangible policy outcomes.

Figure 10: *The five governance levers*



Source*: Kaufmann et al. (2023)*

Notes. *The further to the right a lever is located the higher its leverage on the mainstreaming of wellbeing and sustainability metrics in policymaking*

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Reporting and monitoring

The governance lever of **reporting and monitoring** plays a foundational role in the application of IIs, serving as a basis mechanism for the systematic collection, preparation, and publication of data. This lever is integral to the policymaking process, facilitating a range of essential functions that should enhance effectiveness of IIs. Firstly, it helps to increase political accountability and transparency, providing stakeholders and the public with clear insights into government actions and decisions. Secondly, it supports evidence-based policymaking by offering a robust understanding of societal issues, which helps in formulating informed and targeted policy responses. Thirdly, reporting and monitoring ensure that government compliance with laws and legislation is continually observed, promoting legal integrity and responsiveness. Lastly, this lever allows for the appraisal of the impact of policies once they are implemented, providing feedback that is crucial for assessing effectiveness and guiding future policy directions. By institutionalizing this process, reporting and monitoring not only uphold the principles of good governance but also strengthen the capacity of IIs to bring about substantial and sustained policy improvements. However, despite their critical role, reporting and monitoring alone are not sufficient for effectively changing institutional rules and norms, as these processes require additional strategic interventions to drive deeper, systemic transformations.

All selected IIs, except for the CIW which is not a government-supported initiative, are subject to some level of obligation for monitoring and reporting on indicators. This requirement underscores the **foundational aspect** of this lever. By instituting formal processes for the collection and dissemination of data, governments aim to provide a clear picture of the effectiveness and impact of their objectives and policies. Nonetheless, the scope and rigor of these reporting obligations vary significantly among the initiatives, reflecting their differing governance structures and the specific demands of their policy environments.

In **France**, for instance, the obligation for indicators monitoring and reporting has seen a notable reduction, specifically with the discontinuation of the obligation to publish and discuss comprehensive reports due to concerns about the independence of these reports. However, the INSEE continues to publish the indicators, maintaining a basic data dissemination.

In **Scotland**, the Community Empowerment Act requires Scottish Ministers to prepare and publish reports on the achievement of national outcomes. However, the legislation grants flexibility regarding the timing of these reports, allowing them to be published “whenever the Scottish Ministers consider appropriate”. Furthermore, the Act does not specify which indicators’ progress must be reported, nor does it require a comprehensive report on the progress of the entire NPF, leading to a lack of detailed and systematic reporting.

At the other end of the “reporting and monitoring spectrum”, there is **Wales** where the Wellbeing of Future Generations Act mandates a more structured and comprehensive reporting process. Within twelve months following a Senedd election, Welsh Ministers must publish a ‘Future Trends Report,’ which includes predictions of likely future trends across various dimensions of wellbeing in Wales along with any pertinent analytical data. Additionally, at the start of each financial year, Ministers are required to publish an annual progress report detailing the advancements made towards the seven national

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wellbeing goals, based on the 50 NWI. Public Services Boards (PSBs) are also mandated to publish a Local Assessment of Well-being for their respective areas, which is then assessed by the Future Generations Commissioner's Office and published on their website.

These examples highlight how the reporting and monitoring lever is crucial in ensuring accountability and facilitating the evaluation of policy effectiveness within different institutional frameworks. While the degree of rigor and the scope of reporting vary, the fundamental purpose of these processes—to inform policymakers, stakeholders, and the public about the progress and impacts of wellbeing policies—remains central to their implementation.

Specific policy evaluation

The governance lever of policy evaluation plays a critical role in the systematic use of metrics to assess the effectiveness of policies, going beyond the basic functions of reporting and monitoring. This lever is essential for gathering evidence, which enhances the accountability of policymakers, increases transparency, and promotes policy coherence. Policy evaluation can be categorized into two distinct types: ex-ante and ex-post. Ex-ante policy evaluation involves the assessment of potential social, environmental, and economic impacts of various policy options before they are implemented. On the other hand, ex-post policy evaluation focuses on analysing the impacts of previously implemented policies and political decisions, providing valuable insights that can guide future decision-making processes. By systematically applying these evaluation methods, policymakers can ensure that initiatives are more effective in achieving their intended outcomes and aligned with broader governmental goals.

Some selected IIs effectively utilize the **ex-ante** specific policy evaluation governance lever by integrating precise mechanisms to assess the potential impacts of policy proposals prior to their implementation. Notably, the New Zealand Treasury employs the CBAx tool within its LSF initiative (see Box 6, p.63) and the GNH Commission in Bhutan uses a screening policy tool to evaluate policies against wellbeing domains (see Box 7, p. 65). These tools facilitate a comprehensive understanding and assessment of policy implications across various dimensions of wellbeing, aligning decisions with broader strategic objectives. In New Zealand, policy analysts of the **Treasury** additionally regularly apply the principles of the **LSF** in their daily work, providing well-informed advice to ministers. This routine consideration helps ensure that policies not only meet immediate needs but also align with long-term wellbeing goals. Similarly, in Scotland, the NPF mandates that policymakers draft a **"contribution story"** for each policy proposal. This narrative must detail the expected impacts on national outcomes over the short and long term, promoting a proactive evaluation of potential wellbeing impacts.

Additionally, some selected IIs also effectively utilize **ex-post** specific policy evaluation mechanisms to retrospectively assess the impacts of previously implemented policies on wellbeing indicators. For instance, in Italy, the Ministry of Economy and Finance conducts a detailed analysis of trends in the short set of **BES** indicators over the past three years and projects their evolution over the next three years, considering the impact of public policies. This comprehensive approach not only offers insights into the outcomes of past decisions but also integrates ex-ante evaluations to forecast future trends.

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Similarly, in Wales, public bodies are mandated to annually document their **progress** against the objectives detailed in their "Local Wellbeing Plans". This requirement fosters accountability and allows for ongoing evaluation of policy effectiveness. The Future Generations Commissioner for Wales enhances this process through **the Future Generations Report**, which reviews and assesses how public bodies adhere to sustainable development principles, offering recommendations for improvement. Additionally, the Auditor General for Wales contributes with the **Wellbeing of Future Generations Report**, providing an assessment of public bodies' compliance with their duties under the same principles. This report evaluates the actions taken to meet wellbeing objectives and guides public bodies in refining their strategies to better align with the goals of the Act, ensuring that sustainability is at the forefront of public service operations in Wales.

In Canada, the **CIW** plays an **advocacy role** that, while not formally institutionalized, is informally recognized by Statistics Canada. The CIW's independent team status leverages this freedom to conduct in-depth advocacy, underscoring the framework's value in informing policy adjustments and discussions.

These examples not only illustrate the importance of ex-post evaluations in assessing the effectiveness of policies within the context of IIs, but also highlight how these mechanisms should complement ex-ante policy evaluations. Together, they operate the specific policy evaluation governance levers essential for sustainable wellbeing IIs.

Political targets

Political targets play a decisive role as governance levers in scaling up the impact of niche initiatives by directing policy efforts towards specific societal goals and helping government to define the national direction. These targets, whether **quantitative (**i.e., measurable and specific), or **qualitative** (i.e., providing general direction), serve as benchmarks that can significantly influence political processes and outcomes. Quantitative political targets are particularly effective as they provide clear, measurable metrics against which the progress towards a goal can be evaluated, allowing policymakers to ascertain if societal advancements are occurring at the desired pace. This feature makes quantitative targets powerful tools for guiding and continuously assessing policymaking efforts. Additionally, political targets can also be categorized as **binding** or **non-binding**. Binding targets offer the theoretical advantage of holding states accountable for failing to meet their goals, which can intensify commitment and urgency within policy frameworks. However, the actual impact of binding targets depends critically on the presence of effective enforcement mechanisms without which the potential to drive concrete policy changes may be limited. Thus, political targets, when well-defined and supported by strong accountability structures, can significantly enhance the strategic direction and efficacy of policy interventions aimed at achieving specific outcomes.

In our analysis of selected IIs, only two initiatives—the GNH of Bhutan and the NWI of Wales—explicitly incorporate quantitative targets for individual indicators within their metrics, whereas the NPF of Scotland opts for qualitative, directional, targets. However, we also perceive that any initiatives grounded in a **robust theoretical framework** inherently set de facto overall political targets, even if these are not explicitly defined for individual indicators. Instead, they articulate a general direction that

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the governing body—or, in the case of the CIW, the foundational team—intends to steer the community or territory towards. This approach, evident in all the selected IIs except for the NIW of France, which lacks clear theoretical underpinnings, aims at overarching improvements or changes in societal conditions rather than specific metric outcomes. The absence of a solid theoretical base in the NIW hinders its ability to effectively communicate and pursue strategic objectives, underscoring the importance of well-defined frameworks in guiding both the setting of targets and the subsequent policy actions to achieve them.

In **Bhutan**, the GNH Index exemplifies the use of political target levers through its integration of quantitative targets directly into the calculation of the index. The GNH Index indeed operates with a dual-threshold approach: a "**sufficiency threshold**" that defines the minimum conditions necessary for each of the 33 variables related to happiness, and a "**happiness threshold**" that sets more aspirational goals. These thresholds are crucial in guiding policy efforts toward enhancing national wellbeing. The sufficiency thresholds are determined using a mix of international standards for certain variables, such as work hours and living conditions, and national standards, like setting the sufficiency income at 1.5 times Bhutan's income poverty line. Where neither national nor international precedents exist, thresholds are based on normative judgments formed through extensive consultations. The CBS engaged in wide-ranging consultative conversations with government leaders, institutions, and community focus groups across various rural areas to validate these thresholds. These participatory meetings were instrumental in refining the GNH index by incorporating diverse perspectives, acknowledging that no single set of thresholds could universally apply across Bhutan's varied demographic and geographic landscape. Overall, this dual target approach not only allows for a dynamic assessment of wellbeing but also strategically **directs governmental and other efforts** to either increase the percentage of people who are happy or decrease the insufficient conditions of those who are not-yet-happy, thereby directly influencing policy and practical outcomes in pursuit of national happiness.

In **Wales**, the NWI serves as a central tool for implementing political target levers through the establishment of "**milestones"** set by Welsh ministers. These milestones articulate specific performance expectations for the indicators, being as such quantitative targets. When setting a milestone, ministers are required to define the criteria for its achievement, based on the value or characteristics by which the indicator is measured, and establish a timeline for reaching these milestones. To date, milestones have been set for 16 of the 50 indicators within the NWI framework. Additionally, the Well-being of Future Generations Act mandates that each public body in Wales must contribute to the improvement of economic, social, environmental, and cultural wellbeing by setting and publishing **specific wellbeing objectives**. These objectives must align with the broader vision outlined in the **seven wellbeing goals**, which provide a statutory framework guiding all governmental and public decision-making in Wales. This framework is underpinned by seven wellbeing goals that influence a wide array of public decisions and are supported by **five "ways of working",** which prescribe methods for achieving these goals (see Box 4, p.51). This structured approach ensures that policy actions are both strategically directed and measurable, enabling continuous evaluation and

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adaptation of strategies to meet the well-defined, legislated targets, thus enhancing the overall governance and accountability in the implementation of the NWI.

Next to indicators, the **NPF gives a set of objectives** ("national outcomes") around which departments and agencies, at central government and local level, aim to be aligned (Scottish Parliament, 2022[48]). Scottish Ministers are required to consult on, develop and review this set of National Outcomes for Scotland at least every five years, and the outcomes approach is enshrined in law regardless of the political party in power (see above). The performance overview tracks progress toward National Outcomes. It shows how well Scotland is performing overall on the 81 National Indicators, for which qualitative targets have been defined. Performance is assessed as improving, maintaining, or worsening based on the change between the last two data points of an indicator. The assessment of performance is made objectively and impartially by senior analysts in the Scottish Government. Decisions on performance are made independently of Scottish Government Ministers. However, it is important to stress that it is up to the government of the day to decide how exactly it seeks to achieve these National Outcomes: the NPF as such does not prescribe through what policy the Outcomes should be achieved, what priority particular Outcomes should be given, or which trade-offs between Outcomes are to be made. That means that working with these National Outcomes as generic wellbeing objectives still leaves room for political preference, political agendas, and debate – politics as usual if you will. This, in addition, the influence of vested interests directly contributed to a relative lack of progress in advancing Scotland's wellbeing objectives

The NPF of Scotland also effectively employs political target levers by setting a series of eleven "**national outcomes**" around which government departments and agencies at both central and local levels are expected to align their efforts. The framework's tracking system assesses Scotland's performance across 81 national indicators, categorizing progress as improving, maintaining, or worsening based on the latest data points. However, while the NPF sets a clear framework for aligning governmental actions with defined outcomes, it does not prescribe specific policies for achieving these outcomes, nor does it prioritize certain outcomes over others or dictate the necessary trade-offs. This flexibility allows the current government to interpret and pursue these outcomes according to its political agenda and preferences, which can introduce **variability and potential inconsistency** in policy implementation. Moreover, the influence of vested interests and the broad leeway given to political interpretation can **hinder substantive progress** toward achieving Scotland's wellbeing objectives.

Through our analysis thus, we observed that political targets can steer policy efforts towards specific societal goals and shaping national policy direction. Indeed, whether quantitative or qualitative, these targets can act as benchmarks that influence political processes and outcomes. Quantitative targets provide measurable metrics that allow policymakers to assess progress effectively, while qualitative targets offer broader directional guidance. However, the impact of these targets depends on strong accountability frameworks to enforce and guide policy actions, emphasizing the need for robust mechanisms to ensure their effectiveness.

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Budgetary allocation rules

The governance lever of budgetary allocation rules fundamentally supports the scaling up of the impact of IIs by directly influencing how resources are distributed across government activities. Budgetary priority-setting and implementation can explain how cross-government actions help in integrating deeply sustainable wellbeing approaches, as these mechanisms facilitate the management of synergies and trade-offs among various governmental objectives. By embedding sustainable wellbeing IIs into the budgeting process, governments can ensure that funding decisions align with clearly defined societal goals, optimizing the impact of public expenditure and enhancing the overall effectiveness of policy initiatives.

Among the selected IIs, most efforts primarily concentrate on developing, reporting, and integrating IIs into the budgetary process, as was previously practiced in France (before the obligation to publish and discuss the NIW report in the parliament ceased) and is currently being implemented in Italy (through the inclusion of the Annex on equitable and sustainable wellbeing indicators of the DEF). However, some countries, notably New Zealand and Bhutan, are going further by enacting deeper organizational changes. These modifications are designed to foster more integrated and long-term budgetary responses, specifically tailored to address wellbeing priorities effectively.

In Bhutan, the GNH Commission determine how budgetary allocations are distributed across various regions and sectors, using a **Resource Allocation Formula**. This formula is designed to remove political bias from financial decisions and base allocations on factual data, thereby ensuring that the distribution of resources is both fair and objective. The Resource Allocation Formula incorporates several criteria, including population size, multidimensional poverty rates, and geographic isolation. Importantly, it also integrates values from the GNH Index, allowing the government to consider a broader range of factors beyond mere economic or poverty indicators. By applying the GNH Index values to the Resource Allocation Formula, the formula ensures that resource distribution aligns with holistic wellbeing goals. This method is applied at various administrative levels—from national to district and city—emphasizing consistent and equitable resource allocation. In Bhutan, the GNH Index currently influences 10 percent of the allocation decisions for local government areas (Gewogs and Thromdes) and 15 percent for larger administrative divisions (Dzongkhags). This structured approach exemplifies how Bhutan utilizes budgetary allocation rules to directly support its philosophy of promoting national happiness through budgetary practices.

Similarly, since 2019, New Zealand has annually released a **wellbeing budget**, initiated when the Treasury's LSF and its accompanying dashboard were utilized to determine five key wellbeing policy areas for budgetary prioritization. This process incorporated expert consultations and extensive cross-ministry deliberations to ensure a comprehensive and effective allocation of resources. Over the years, New Zealand has refined its approach to integrating wellbeing evidence into the budgetary process. These ongoing developments illustrate New Zealand's commitment to embedding wellbeing considerations deeply within its fiscal policy framework (see Box 9, p.81 for additional details).

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Box 9: *The New Zealand Wellbeing Budget*

In May 2019, the New Zealand Government implemented its first Wellbeing Budget, designed to integrate wellbeing considerations systematically into budgetary decisions. This approach was driven by the New Zealand Treasury's LSF, which helped identify twelve areas of wellbeing priorities. After consultations with sector experts and Government's Chief Science Advisors, these were narrowed down to seven and then finally five key priorities by the Cabinet. Between 2019 and 2021, the Wellbeing Budget priorities have focused on supporting a just transition, shaping the future of work, reducing inequalities, improving child wellbeing, and improving physical and mental health outcomes.

The Wellbeing Budget operates through a unique process that emphasizes evidence-based policy planning. Each year begins with the publication of a Budget Policy Statement, which includes a Wellbeing Outlook analysing current and future wellbeing scenarios alongside traditional fiscal outlooks. This is instrumental in setting budget priorities. Following the release of the Budget Policy Statement, ministries submit funding proposals that align with these wellbeing priorities, demonstrating through evidence how their requests will impact wellbeing outcomes (notable through CBAx). Proposals that best align with the priorities are selected for funding, ensuring that budget allocations directly contribute to the enhancement of national wellbeing. This approach also extends to monitoring and evaluation, with each minister required to review their baseline spending, identifying funds not aligned with wellbeing objectives for potential reallocation. The process culminates in the annual budget announcement, where new spending is directed towards the identified priorities, which constituted about 4% of total government expenditure in the 2019 budget.

In parallel, IIs can also foster new initiatives within the budgetary process, as seen in Scotland where the Community Empowerment Act, which supports the development of the NPF, has significantly advanced the adoption of **participatory budgeting** by local authorities. Indeed, an agreement with the Convention of Scottish Local Authorities ensures that at least 1% of local government budgets will be allocated through participatory budgeting by the end of 2021. This development grants communities influence over the allocation of funds within their localities, potentially supporting democratic engagement.

As this section demonstrates, the governance lever of budgetary allocation rules is instrumental in elevating the influence of IIs by strategically directing resource distribution in line with well-defined sustainable wellbeing goals. Countries like Bhutan and New Zealand exemplify this approach by integrating their sustainable wellbeing measures into their budgetary frameworks, thereby aiming that their resource allocation not only supports immediate economic objectives but also fosters long-term sustainable wellbeing. This systemic integration of IIs into budgetary processes underscores the potential of thoughtful financial governance to profoundly influence policy outcomes.

Enforcements mechanisms

Enforcement mechanisms represent the fifth and most potent governance lever, crucial for ensuring that political targets are met, and legislation is adhered to, especially within the contexts of sustainability and wellbeing. These mechanisms impose **accountability** on political actors, compelling them to meet set targets through the potential consequences of non-compliance. This pressure is

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critical for ensuring that policies are not only implemented but also periodically adjusted to better meet their objectives. The impact of these enforcement strategies largely hinges on the severity and enforceability of the penalties for non-compliance, which can significantly influence policy adherence and efficacy.

In the selected IIs, there is a noticeable **absence of enforcement mechanisms**, leading to challenges in adhering to commitments, even those that are legally mandated. This lack of enforcement is evident in several instances, such as the delayed publication of the NIW report in France, which was released after the budget discussions, thereby diminishing its intended impact on budgetary decisions. Similarly, in Bhutan, despite the formal requirement under the Royal Government's Protocol for Policy Formulation that all policies must undergo the GNH policy screening tool, its application remains inconsistent and sporadic (Colman, 2021). Bhutanese policymakers often cite the complexity, lack of clarity, and the challenging nature of the tool's indicators as reasons for its underuse. This scenario highlights a critical gap between the political aspiration to integrate holistic measures into policy and the practical challenges of implementing such frameworks in the face of entrenched habits and opposition from vested interests.

The only initiative showing some signs of enforcements mechanisms and consideration of accountability is the NWI with the Well-being of Future Generations Act. Indeed, the Act mandates that ministers and public bodies actively work towards achieving seven wellbeing goals, effectively creating a legally binding framework overseen by the **Future Generations Commissioner for Wales**. This commissioner plays a crucial role in reviewing government activities and advocating for best practices aligned with the Act's objectives. While the Commissioner does not possess direct power to alter decisions or impose sanctions, they hold the authority to publicly report any non-compliance or inadequacies, making this visibility a potent accountability tool. Public bodies must respond to the Commissioner's recommendations and, if they choose not to follow them, are required to publicly justify their alternative actions. This "comply or justify" model enforces a level of accountability, helping to comply with the NWI framework.

Overall, we observe that most initiatives reviewed lack strong enforcement mechanisms, leading to challenges like the inconsistent use of Bhutan's GNH policy screening tool and the delayed impact of France's NIW report on budget discussions. Conversely, Wales' NWI, supported by the Well-being of Future Generations Act, effectively uses a "comply or justify" model, overseen by the Future Generations Commissioner, to enhance accountability and policy adherence.

Concrete results in terms of public policies

The effective implementation and integration of IIs using governance levers, as part of the scaling up amplification process, should significantly contribute to the realization of transformative policy outcomes supporting the overall state of sustainable wellbeing of the territory. These governance levers indeed equip governments with the necessary tools to embed sustainable wellbeing into the heart of their policymaking. While establishing a direct causal link between IIs and specific policies can be challenging, there are reasons to believe that **successfully scaled up IIs should correlate with policies that embody a comprehensive approach to sustainable wellbeing**. This suggests that when IIs are

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effectively integrated into governmental frameworks using the five governance levers (see Figure 10, p.74), they influence broader policy landscapes in ways that reflect overarching goals of sustainability and enhanced quality of life, indicating a successful alignment of policy actions with the strategic objectives of sustainable wellbeing.

In the analysis of selected IIs for this deliverable, certain initiatives such as the MWM, the NIW, and the BES are not specifically detailed in terms of how their approaches have led to progressive policies that are compatible with sustainable wellbeing. The documentation analysed for this deliverable, for these IIs, tends to be vague, lacking clear evidence of their impact on policy outcomes. In contrast, other initiatives like the GNH, CIW, and the NPF present a more mixed picture, with some documents suggesting that these initiatives have successfully improved sustainable wellbeing within their respective territories, while other documents indicate less effective outcomes. Meanwhile, the LSF[1] and the NWI[2] more consistently stand out in the documentation as having effectively generated impactful policies in terms of sustainable wellbeing. These two initiatives are frequently cited as exemplars in translating the principles of sustainable wellbeing into concrete, successful policy measures, demonstrating the potential of well-implemented IIs to drive substantial positive change in governance and societal outcomes.

The extensive literature and analysis surrounding the emblematic and long-established **GNH initiative** have likely contributed to more systematic examinations of the policy implications stemming from its application. And the GNH's **radical approach** might also invite greater scepticism regarding its outcomes. Conversely, the relatively recent and more conventional initiatives such as the LSF and NWI may not yet have undergone sufficient longitudinal analysis to ensure that their reported successes fully align with reality. This **lack of historical perspective** can sometimes lead to premature conclusions about the effectiveness of these newer initiatives, underscoring the need for continued observation and assessment over time to validate their impacts on sustainable wellbeing accurately.

Rather than listing all the policies potentially influenced by the implementation of IIs, we have chosen to focus on an event that required a cross-territorial response, i.e. the **COVID-19 pandemic.** This approach aims to illustrate how effectively IIs can foster distinctive strategies in dealing with widespread challenges. As such, the responses of New Zealand, Bhutan, and Scotland can exemplify how effectively implemented IIs can influence national strategies and foster distinct approaches to crises. Unlike the general response observed in many countries through the **mitigation strategy**, which focused on immediate containment and mitigation efforts such as lockdowns, social distancing, and vaccination programs to manage the pandemic's spread and economic impact, these three countries demonstrated

[1] Some of the notable public policy evolutions aligned with the implementation of the LSF are the former Prime Minister Ardern's support of the four-day working week, the raise of minimum wage or Ardern's politics of kindness, …

[2] Some of the notable public policy evolutions mentioned to be related to the implementation of the NWI and the wellbeing of Future Generations Act are Wales' ambition to become a zero waste country, its experimentation of using Universal Basic Income, its investment in road infrastructure drastically reduced for the advantage of public transport, its education programs redesigned around the core values of the Act, the possibility for Welsh doctors to prescribe electric bike, the equal pay between the woman and men soccer federations,…

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a different ethos. Their strategies, maybe informed by their respective IIs, encouraged approaches that not only addressed the immediate health crisis but also aligned with broader wellbeing and sustainability goals. This contrast highlights the potential of IIs to guide nations toward more holistic and sustainable crisis management strategies, moving beyond short-term economic relief to embrace long-term wellbeing considerations, thus showcasing a shift from reactive to proactive governance.

New Zealand's response to the initial stages of the COVID-19 pandemic, potentially influenced by its LSF, differed markedly from typical global pandemic responses. Led by Prime Minister Jacinda Ardern, the country adopted an **elimination strategy**, implementing stringent public health measures including strict border closures, rigorous contact tracing, and enforced self-isolation. This proactive approach was supported by substantial investments in healthcare, enabling widespread testing and vaccination. Effective communication between policymakers, scientists, and the public played a critical role, ensuring broad compliance and support for the strategy. Unlike the reactive measures common in other countries, which primarily aimed to balance virus containment with economic impacts, New Zealand's strategy sought to eliminate the virus, backed by strong fiscal and monetary policies that maintained economic resilience. While it is not explicitly documented how much the LSF influenced these decisions, the framework's emphasis on holistic wellbeing likely informed the government's comprehensive approach. However, despite this initially successful strategy, a surge in infections by September 2021 prompted a shift to a mitigation strategy.

Bhutan's response to the COVID 19 seems also to be rooted in the principles of GNH. It focussed on the benefits of a home-grown development model that leverages local expertise and sociocultural understanding. The GNH framework guided the country's swift actions, such as the **early lockdown and border closures**, reflecting a holistic approach to wellbeing rather than a narrow focus on economic metrics. This strategy was supported by the country's strong community ties and a collective emphasis on wellbeing, which were crucial in enforcing public health measures effectively. However, the pandemic also exposed gaps in Bhutan's healthcare resources and infrastructure, underscoring the need for strategic improvements in preparedness for future health crises.

Finally, in Scotland, the government formed the **Advisory Group on Economic Recovery** to navigate the long-term effects of the COVID-19 pandemic. This expert group is tasked with providing strategic guidance on economic revitalization post-pandemic, emphasizing a rapid yet strong recovery that enhances the economy's resilience against future crises. Their approach incorporates a comprehensive focus on wellbeing, fairness, and inclusivity, alongside environmental sustainability. This aligns with the NPF's outcomes, ensuring that recovery efforts not only restore economic stability but also reinforce Scotland's commitment to holistic and sustainable wellbeing policy objectives.

These cases serve as illustrative examples, not definitive analyses, of how integrated wellbeing frameworks can influence distinct, proactive responses to global crises. They suggest that from a common diagnostic, countries can adopt different approaches based on varying ethos, potentially supported by IIs. This highlights that nations deeply committed to wellbeing and sustainability in their policymaking may react differently than those without such frameworks, providing varied responses to similar challenges.

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Our analysis (see Table 9, p.87) indicates that while nearly all selected IIs find their tools incorporated into monitoring and reporting tools, few extend their integration into deeper decision-making processes. The CIW stands out as it has not been officially adopted by the government for reporting and monitoring, yet its reports still contribute to public discussions and debates concerning the overall wellbeing of the Canadian population. Some initiatives such as the LSF in New Zealand and the GNH in Bhutan showcase effective use of IIs for specific policy evaluations, demonstrating how these tools can influence policy decisions. Further, the NWI in Wales illustrates the potential for setting impactful political targets that align with sustainable wellbeing goals, offering a model for other territories to consider. However, the integration of IIs into budgetary allocation processes remains limited, with only a few initiatives making cautious advances. No standardized method has yet emerged for embedding IIs into budgeting practices robustly. Finally, the NWI has notably pioneered efforts to establish enforcement mechanisms, which are crucial for ensuring adherence to commitments towards sustainable wellbeing. And this, even though both budget allocation rules and enforcement mechanisms play critical roles in scaling up IIs to transform prevailing rules and logics effectively.

Scaling deep

In this section, we examine the process of "scaling deep", which seeks to fundamentally alter values, norms, and beliefs through the influence of niche. Scaling deep involves cultivating new mindsets, reshaping perceptions, and introducing novel relational modes and value systems. Our analysis of selected IIs highlights how this amplification process can be refined to the specific case of IIs. By evaluating how these IIs are welcomed and integrated across different layers of the society—ranging from public administration and business sectors to civil society and everyday life of citizens, we can discern their influence cultural and behavioural changes, thereby reinforcing their transformative potential within the broader society.

Overall reception

The reception of selected IIs across various territories has shown mixed results, with a general trend towards favourable acceptance, potentially due to their limited exposure. Initiatives like the MWM may not have gained significant traction due to its novelty, while others such as the CIW and the Italian BES are perceived as having minimal political influence. However, more prominent IIs like the GNH in Bhutan, the LSF in New Zealand, Scotland's NPF and the NWI of Wales tend to attract heightened scrutiny and more detailed feedback.

Critically, initiatives like the NPF and NWI have been assessed by the civil society for not being **sufficiently transformative** in shaping societal visions (e.g., Furet, 2022; Transform our Economy group, 2022), often lacking the radical edge needed to foster significant change. In contrast, GNH is viewed more positively within Bhutan, with a consensus that, although progress is slow, it is moving in the right direction. This perception is partly attributed to the trust the Bhutanese population places in their government's commitment to wellbeing, a sentiment that is notably rare globally.

Concerns also persist about the depth of integration and effective implementation of these initiatives within governmental operations. For instance, in Wales, the Senedd's Public Accounts Committee found significant shortcomings in public bodies' efforts to align with the sustainable development principles

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of the Well-being of Future Generations Act. Similarly, in New Zealand, there is a call for broader governmental involvement beyond the Treasury to ensure that wellbeing principles are more thoroughly integrated across all departments, suggesting a crucial role for the Department of Prime Minister and Cabinet to enhance inter-agency collaboration.

In France, the **NIW faces criticism** for its lack of independence from political influences, leading to concerns about its utility as a genuine tool for societal progress rather than a mere political instrument. These observations underscore the challenges IIs face in establishing themselves as credible and effective tools for driving deep, independent societal change.

Overall (Table 9, p. 87), this section highlights that while the reception of IIs is generally positive, communication and public awareness of the presence and progress of selected IIs remain limited, such that their fail to gain traction on the general public.

Influence on the ways of thinking and communicating

Similarly to the overall reception selected IIs have benefited from, evidence of the influence of IIs on the societal thought processes and communication practices demonstrate mixed performance of the IIs in reaching deep scale process, reflecting varying degrees of integration and public awareness. While some initiatives like the **LSF have fostered new ways of thinking** by providing a robust model and vocabulary for discussing wellbeing, particularly within public administration, others like, the CIW, have **struggled to gain traction among political leaders and the public**.

In Wales, **the NWI has not only become part of public consciousness**, significantly influencing public sector decision-making but is also claimed to have fostered a cultural shift towards sustainability and wellbeing. The shift in language from sustainable development to wellbeing was intentionally made to simplify and clarify the communication, making the concepts more accessible and relatable to the public. This **strategic communication** has been instrumental in embedding these concepts deeply within the Welsh society. Additionally, the Welsh government's extensive engagement through initiatives like "The Wales We Want" conversation is believed to have played a critical role in shaping public discourse and encouraging community participation in defining long-term wellbeing goals.

Similarly, Bhutan's GNH index has deeply impacted societal values, with substantial efforts to embed GNH consciousness through **education** and **socially responsible business practices**. This broad-based engagement is seen as crucial to maintaining GNH as a meaningful and transformative approach rather than just a slogan.

In Scotland, despite the NPF being recognized within the civil service as transformative, broader societal impact appears limited due to inconsistent promotional efforts by the government. The NPF was designed to create a shared language for public services and foster a sense of unity of purpose. However, the **lack of promotional activity** raises questions about the Scottish Government's commitment to the framework, given its low visibility in public discourse.

In New Zealand, the LSF has fostered new ways of thinking beyond GDP by providing a model and vocabulary for discussing wellbeing. However, the initial enthusiasm around its wellbeing budget has

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diminished over time, reflecting a decrease in its mention in political discourse and suggesting a retreat from its initial prominence.

Despite these mixed outcomes, the overarching influence of IIs is evident in the gradual integration of wellbeing goals into public policies, and sometimes in business practices, even if the depth and visibility of this integration vary significantly across different contexts and initiatives (see Table 9).

Table 9: *Results of the analysis phase – Impact criteria – Niche "amplification beyond" macro-process*

Selected sustainable wellbeing IIs				MWM (AUS)	GNH (BHU)	CIW (CAN)	NIW (FR)	BES (IT)	LSF (NZ)	NPF (SCT)	NWI (WAL)
Impact criteria	Amplification beyond	Scaling up	*Reporting and monitoring*								
			Specific policy evaluation								
			Political targets								
			Budgetary allocation rules								
			Enforcement mechanisms								
			Results in policies								
			Overall								
		Scaling deep	*Overall reception*								
			Influence on thinking								
			Overall								

Notes*. To visually represent results of the analysis phase, we utilized a color-coded system: a score of "0" is marked with light colour to indicate "minimal alignment"; "0.5" is shown in medium shaded colour, denoting "moderate alignment"; and a score of "1" is highlighted in dark colour, signifying "high alignment" with our conceptual framework of T-II. Additionally, rows representing a broader category including subcategories are emphasized with double-line borders, helping to visually distinguish between primary and secondary evaluative criteria in our analysis grid.*

Conclusion: The impact criteria alignment of selected indicators initiatives

The synthesis of our impact analysis, summarized in Table 10, provides a comprehensive overview of how the selected IIs align with the niche amplification process typology and illustrate their overall impact. Regarding the macro-process of **amplifying within**, these initiatives demonstrate considerable stability, primarily attributed to their legal foundations and further reinforced by their integration into and alignment with the cultural specificities of their respective territories. However, the analysis of their performance in terms of speeding up their impact reveals a more nuanced picture. A notable gap identified is the limited use of gatekeepers, which contrasts with the more successful enhancement of their underlying theoretical frameworks and the development of complementary tools. Despite this, the selected IIs generally show commendable amplification within their respective niches, although there are some exceptions, such as the MWM, which may be experiencing limits due to its relative youth. This detailed evaluation provides insights into the areas where these initiatives excel and where there is room for improvement, particularly in leveraging gatekeepers to augment their impact further.

In general, the selected IIs demonstrate limited **amplification out**, particularly noticeable in newer initiatives like the MWM and the reducing ones like the NIW, which have not significantly expanded beyond their original settings. Among the various amplification mechanisms, "growing" has found the most resonance, illustrating how IIs have managed to gain internal traction within their respective territories and initiatives. These findings shed light on the broader beyond GDP movement which, despite its vitality, is also criticized for its fragmentation and lack of unity (e.g., Hoekstra, 2019).

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Individual IIs seem to struggle with integrating and evolving into a more coherent and cohesive movement. Specifically, there is a notable lack of transferring or replicating successful practices from one initiative to another, which suggests a missed opportunity to leverage the accumulated experience and knowledge within the field. This lack of interconnectedness contributes to the isolated development of IIs, preventing them from contributing to a unified global strategy for sustainable wellbeing.

Finally, the alignment of the selected IIs in the **amplification beyond** macro-process appears generally weak, reinforcing our initial diagnosis that current sustainable wellbeing IIs struggle to change rules and laws (scale up) or norms and values (scale deep). However, there are exceptions that stand out. Three initiatives—LSF, GNH, and NWI—have demonstrated successful scaling up, while GNH and NWI have also excelled in scaling deep. It is also noteworthy that strong alignment in scaling up often correlates with effective scaling deep, suggesting a cohesive effect in expanding influence both structurally and normatively. These initiatives also show strong alignment in previous amplification within and out processes, indicating a strong overall strategy. However, it is important to acknowledge that even these successful cases, particularly GNH and NWI, have room for improvement. Enhancing their impact could involve better integrating their II frameworks into budgetary allocation rules and establishing more rigorous enforcement mechanisms. The scoring method used to assess these IIs was designed to maintain consistency and nuance within the selected set, meaning that while GNH and NWI are inspirations in their field, their current strategies could still be refined and more deeply ingrained to maximize their impact potential.

In total, we observe that there is considerable room for improvement in the impact criteria for the selected IIs. In the context of T-II, the amplification beyond macro-process is of paramount importance as it embodies the impact potential of these initiatives. However, achieving success in this area often depends on strong alignment in the other two macro-processes—amplification within and out. This interdependence is visible in initiatives like GNH and NWI, which stand out across multiple dimensions.

Indeed, an overall examination of the alignment data suggests that there is a noticeable **internal consistency within initiatives** regarding how they perform across the three macro-processes of niche amplification. Specifically, the alignment in speeding up activities tends to mirror the results seen in scaling up and scaling deep processes. This similarity underscores the **interconnected nature of these processes**, where effective acceleration of initiatives' impact within their niche often supports broader efforts to change institutional frameworks and societal values. Thus, enhancing the integration and effectiveness of all amplification processes could significantly elevate the transformative impact of these IIs.

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Table 10: *Results of the analysis phase - Impact criteria*

Selected sustainable wellbeing IIs				MWM (AUS)	GNH (BHU)	CIW (CAN)	NIW (FR)	BES (IT)	LSF (NZ)	NPF (SCT)	NWI (WAL)
Impact criteria	Amplification within	Stabilizing	*Integration*								
			Cultural embedment								
			Legal embedment								
			Stability across governments								
			Overall								
		Speeding up	*Framework improvement*								
			Complementary tools								
			Gatekeepers								
			Overall								
	Amplification out	Growing									
		Replicating									
		Transferring									
		Spreading									
	Amplification beyond	Scaling up	*Reporting and monitoring*								
			Specific policy evaluation								
			Political targets								
			Budgetary allocation rules								
			Enforcement mechanisms								
			Results in policies								
			Overall								
		Scaling deep	*Overall reception*								
			Influence on thinking								
			Overall								

Notes*. To visually represent results of the analysis phase, we utilized a color-coded system: a score of "0" is marked with light colour to indicate "minimal alignment"; "0.5" is shown in medium shaded colour, denoting "moderate alignment"; and a score of "1" is highlighted in dark colour, signifying "high alignment" with our conceptual framework of T-II. Additionally, rows representing a broader category including subcategories are emphasized with double-line borders, helping to visually distinguish between primary and secondary evaluative criteria in our analysis grid.*

3.3.3. Results of the synthesis phase

The synthesis phase of this deliverable integrates the comprehensive analysis of the eight selected IIs based on the three fundamental criteria—quality, theoretical foundation, and impact—each integral to our conceptual framework of T-II. Having systematically evaluated these initiatives against these criteria in the previous sections, we are now able to present a consolidated overview of how each II aligns with our conceptualization of a T-II. This aggregated assessment is detailed in Table 11 , which illustrates the degree of closeness or remoteness of the selected IIs to our conceptualization of T-II, highlighting areas where they are either closely aligned or distantly aligned with the framework. Again, we emphasize that the primary goal of this evaluation of initiatives is not to compare or rank them against each other. Instead, our objective is to explore how their distinct characteristics align with our conceptual framework for T-IIs. By learning from these experiences, we also aim to derive insights that can inform the development of future IIs, especially within the EU context.

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Table 11: *Results of the synthesis phase*

Selected sustainable wellbeing IIs				MWM (AUS)	GNH (BHU)	CIW (CAN)	NIW (FR)	BES (IT)	LSF (NZ)	NPF (SCT)	NWI (WAL)
Conceptual criteria of T-II	Quality criteria	Accuracy									
		Reliability									
		Robustness									
		Timeliness									
		Coherence									
		Comparability									
		Accessibility									
		Clarity									
	Theoretical criteria	Individual domain									
		Societal domain									
		Ecological domain									
		Overall approach									
	Impact criteria	Amplification within	Stabilizing								
			Speeding up								
		Amplification out	Growing								
			Replicating								
			Transferring								
			Spreading								
		Amplification beyond	Scaling up								
			Scaling deep								

Notes*. To visually represent results of the analysis phase, we utilized a color-coded system: a score of "0" is marked with light colour to indicate "minimal alignment"; "0.5" is shown in medium shaded colour, denoting "moderate alignment"; and a score of "1" is highlighted in dark colour, signifying "high alignment" with our conceptual framework of T-II.*

Expanding beyond the individual sub criteria detailed in the previous sections, a **transversal-horizontal analysis** of Table 11 reveals insights into the alignment of the selected IIs across three main criteria: quality, theoretical foundation, and impact.

Firstly, an examination of the **quality criteria** suggests a general proximity between selected IIs and our definition of the criteria. Despite this, there are notable opportunities for enhancement, particularly concerning the timeliness of data collection and the need for improvements in data accuracy and clarity.

Second, the evaluation of the **theoretical criteria** presents a more nuanced picture. There is a discernible gap in how comprehensively the initiatives integrate an overall approach that captures the integrative, boundary-limited, and systemic aspects of sustainable wellbeing. A particular distinction with our theoretical criteria is the poor integration of ecological considerations and planetary boundaries, which are critical for ensuring the sustainability considerations within these initiatives.

Third, regarding the **impact criteria**, the analysis indicates a weak alignment, especially in the amplification out process. While amplification out is not the primary focus—serving more as a support to scaling up and scaling deep—it is crucial for the emergence of impactful and transformative initiatives. Most initiatives show minimal evidence of replication and transfer, yet there is noticeable growth and the spread of networks, which is encouraging. Our primary interest lies in amplification beyond, as we aim for impacts that fundamentally change rules (scaling up) and norms (scaling deep). Unfortunately, scaling up is notably absent in half of the initiatives, with a significant lack of integration

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of IIs into budget allocation rules and the establishment of enforcement mechanisms to ensure adherence to II commitments. Furthermore, there appears to be a correlation between the results across different amplification processes, suggesting that initiatives could benefit from adopting a cohesive strategy to enhance their overall impact and get closer to our conceptualization of the impact criteria. This is particularly evident in how the speeding up process and the amplification beyond macro-process tend to reflect one another, highlighting the interconnectedness of these mechanisms in achieving impact. Such insights are crucial for refining the strategic approaches of IIs to ensure they not only meet but exceed their transformative potential.

In a **transversal-vertical** analysis of Table 11, which compares IIs against each other, it appears that the initiatives can be categorized into three distinct groups based on their proximity with our conceptualization of T-II, across the quality, theoretical, and impact criteria.

The **first group**, comprising the MWM and NIW, generally is close to our definition of quality criteria. However, their degree of conformity with theoretical criteria diverges and is notably further away from impact criteria. The MWM, being a relatively young initiative, potentially struggles with impact due to its nascent stage. However, its approach to sustainable wellbeing, while robust in certain areas, diverges, to some extent, from our conceptualization of an ideal sustainable wellbeing vision. This divergence may thus influence the initiative's alignment with transformative objectives in the future. The NIW, on the other hand, has face challenges with integration into decision-making processes and fostering a strong participatory approach, which may have limited its potential for impact.

The **second group** includes the CIW, BES, NPF, and LSF. Like the first group, these initiatives exhibit high degree of closeness with quality criteria and moderate alignment on theoretical criteria. However, they show a notably higher proximity with impact criteria compared to the first group. This proximity is largely due to their more effective integration into decision-making processes and their correlated influence on norms and values within their respective contexts. The NPF and LSF are particularly notable for potentially advancing to the third group as they continue to refine their approaches.

The final and **third group** consists of the GNH and NWI, which both demonstrate high alignment with our conceptual framework of T-II across all three criteria, though the GNH remains some steps behind with regard to the theoretical criteria. The GNH's focus tends to prioritize how environmental factors contribute to individual happiness rather than incorporating environmental issues directly into its theoretical framework. This approach slightly weakens its theoretical proximity with our definition of sustainable wellbeing.

Let us highlight that these groupings are not rigid, and some initiatives may straddle the boundaries between groups. This fluidity indicates a potential for development and improvement as initiatives evolve and adapt to changing circumstances and feedback.

Because results in the table format could be hard to digest or integrate, we also translate the result of Table 11 into a graphical and visual representation. For this purpose, scores for each criterion—quality, theoretical, and impact—were arithmetically aggregated separately. To clarify, evaluations were quantified using a three-point scale, where a score of "0" indicates "minimal alignment" (represented

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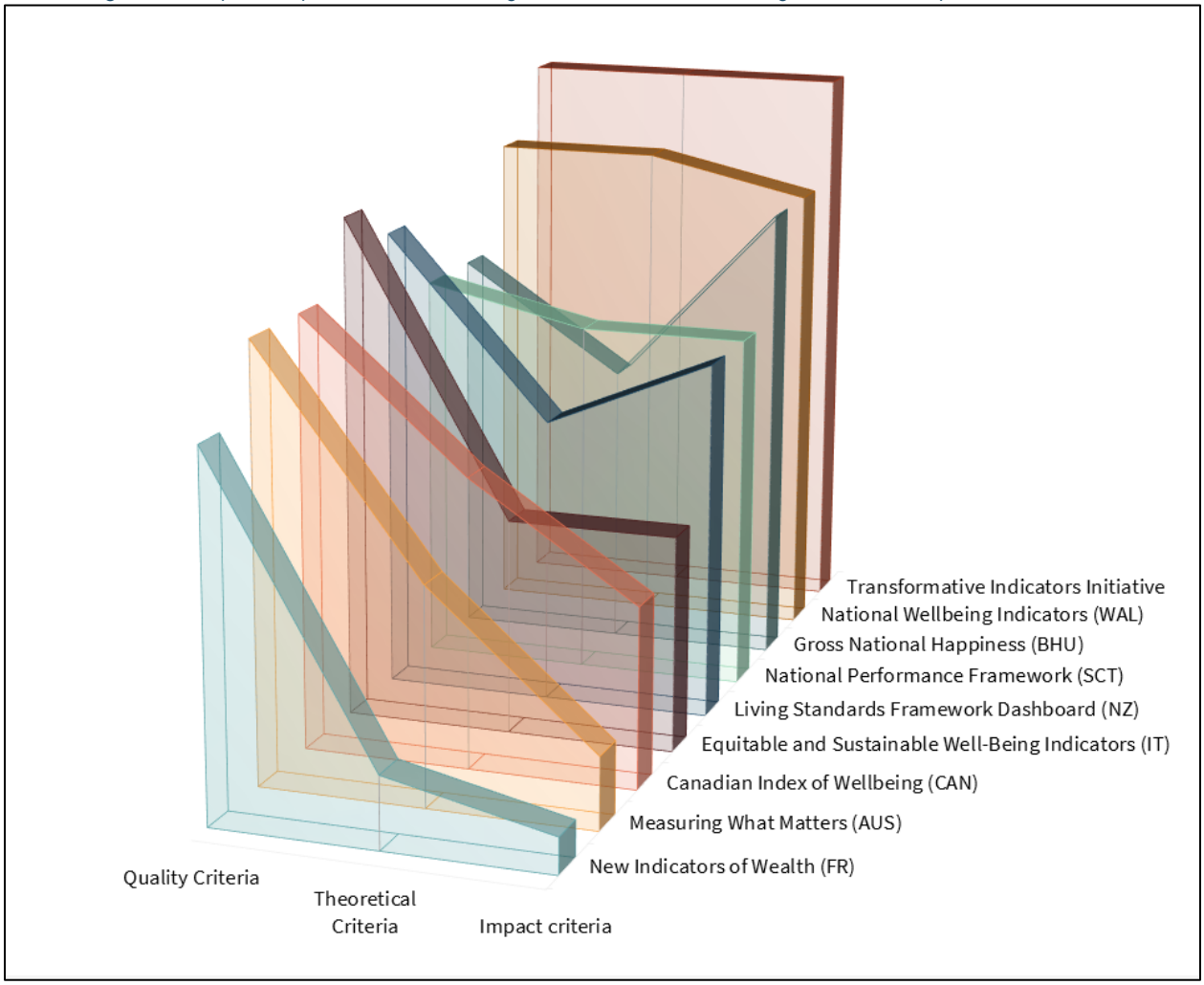
by light coloured cells), “0.5” denotes “moderate alignment” (medium shaded cells), and “1” signifies “high alignment” (dark cells). Consequently, each selected II could achieve a maximum score of 8 for quality, 4 for theoretical criteria, and 8 for impact criteria. These scores were then normalized to a 10-point scale to facilitate a clearer, more uniform graphical display. Results are presented in the Figure 11, where the score of each selected II on each criterion is represented along X-axis, parallel to each other.

It is important to acknowledge the inherent limitations and implications of these aggregation and normalization methods. While they aid in visualizing the data in a more digestible format, our goal in analysing selected IIs is not to compare or benchmark them against one another, such as explained in Box 2 (see p.34). Instead, the analysis is intended to identify and highlight initiatives that serve as inspirational examples, guiding the development of T-IIs and fostering a better understanding of effective practices within the field.

***Figure 11**: Graphical representation of the alignment of selected IIs with regard to the conceptualization of T-II*



Overall, vertical and horizontal analyses illuminate key facets of the impact criteria across selected IIs and sets the stage for further explorations into transformative strategies for IIs. While the individual

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proximity with our criteria vary, with some initiatives highly close with the quality and theoretical foundations, others remain steps behind with regard to impactful amplification processes, particularly in scaling up and deep. This discrepancy highlights the need for a more cohesive and integrated approach across all amplification processes to ensure that IIs not only aim at but also achieve substantial societal and environmental transformations. As the analysis transitions from evaluating individual criteria to synthesizing overarching insights, this research reveals that the journey towards impactful sustainable wellbeing measures is complex and demands continual reassessment and adaptation to fulfil its transformative potential.

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4. Designing a transformative indicators initiative for the European Union

This section is dedicated to the design of a Transformative Indicators Initiative (T-II) tailored for the EU. Aimed at being both feasible and desirable, this initiative seeks to align with, and enhance, the European statistical system by fostering a sustainable wellbeing perspective. Section 4.1 explores the current state of the EU statistical system to evaluate its capacity to encompass sustainable wellbeing metrics, identifying gaps and areas for enhancement. Following this analysis, Section 4.2 outlines specific recommendations for embedding a T-II within the EU framework, proposing actionable steps to ensure this initiative not only complement but also support the union's approach to measuring, and achieving, sustainable wellbeing. Recommendations are grounded in the insights gained from Section 3 and further refined through a roundtable dialogue with EU statistical experts, adapting our findings to the specific context of the EU.

4.1. The European statistical system from a sustainable wellbeing perspective

Recent comprehensive reviews have catalogued a range of dashboards and indices aligned with the sustainable wellbeing movement, presenting viable frameworks for adoption within the European context. These reviews, as highlighted in studies by Barth et al. (2021), Gábos et al. (2023), and Jansen et al. (2023), detail various sets of indicators and indices developed by both **European institutions**, often under the auspices of different divisions of the European Commission, and **external organizations**. These entities design tools aimed at supporting EU policy objectives by measuring and promoting certain aspects of sustainable wellbeing.

Among the external contributions, notable examples include the Competitive Sustainability Index[1] built by the Cambridge Institute for Sustainability Leadership, which offers a measure of sustainability aligned with competitive economic metrics. The European Quality of Government Index[2], developed for the DG Regio by the Quality of Government Institute at the University of Gothenburg, provides insights into governance effectiveness and its impact on social outcomes. Additionally, the European Social Rights Indicator, from the EUROSHIP Horizon project (Biggeri et al., 2023), offers a robust framework for the heterogeneity of achievements in the different dimensions of social citizenship. Another model, the EU Doughnut by 2030, developed by the ZOE Institute (Barth et al., 2021), proposes a holistic approach to assessing European policies against both social and planetary boundaries, inspired by Kate Raworth's Doughnut Economics model.

These diverse frameworks underscore the potential for and the willingness to integrate sustainable wellbeing indicators into the EU's policy analysis and development processes. Each set of indicators

[1] https://www.cisl.cam.ac.uk/competitive-sustainability-index
[2] https://www.gu.se/en/quality-government/qog-data/data-downloads/european-quality-of-government-index

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provides unique insights that could help tailor EU strategies to better meet sustainable wellbeing, thus supporting a more comprehensive and actionable approach to policymaking within the EU.

Notably, the EU has developed numerous dashboards **to monitor specific political strategies**, illustrating its commitment to operationalizing beyond GDP concepts, such as sustainability, equity, and wellbeing, within its policy framework. For instance, the Social Scoreboard supports the European Pillar of Social Rights (EPSR), while the Statistics for the European Green Deal (EU-GD) and the Education and Training Monitor toolbox align with the European Green Deal and the European Education Area Strategic Framework, respectively. Other significant dashboards include the National Indicator of Energy Poverty for the EU Energy Poverty Observatory, Cohesion Indicators for the New Cohesion Policy 2021-2027, and the EU Regional Gender Equality Monitor for the Gender Equality Strategy 2020-2025. The JRC offers an extensive and detailed database[1] of these indicators and dashboards, providing a valuable resource for those seeking to understand and apply these metrics.

For the purposes of this deliverable, we have specifically concentrated on main dashboards and indices created by European institutions that effectively cover at least two of the three domains—individual, societal, and ecological—outlined in our theoretical framework of sustainable wellbeing. To present an accurate representation of the current landscape of European IIs for sustainable wellbeing, we offer a succinct summary of six central IIs:

1. Resilience Dashboards
2. Social Scoreboard
3. Statistics for the European Green Deal
4. The EU Social Progress Index
5. The EU SDG Indicator Set
6. The Transitions Performance Index

These selected IIs are emblematic of this research commitment to utilizing comprehensive and multidimensional tools that facilitate a thorough evaluation and promotion of wellbeing across the EU. Each has been chosen for its ability to integrate and reflect the complex interplay of individual, societal, and environmental wellbeing factors, aligning with broader EU policy objectives and providing a holistic approach to sustainable development.

[1] https://composite-indicators.jrc.ec.europa.eu/explorer

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Table 12: *Main sustainable wellbeing indicators initiatives of the European Union*

Name	Short name	Organization	Objective	Time coverage	Geographical coverage	Dimensions	Index or dashboard
Resilience Dashboards	EU-RD	European Commission	Monitoring the Vulnerabilities and Capacities of the EU and its MS on four dimensions: social and economic, green, digital, and geopolitical.	2007-2021	EU MS + 16 non-EU MS	4: Social and economic; Green; Digital; Geopolitical	Dashboards and indices
Social Scoreboard	EU-SSC	European Commission	Supporting the implementation of the EPSR to assess the employment and social performances of participating EU countries.	2013-2022	EU MS	3: Equal opportunities; Fair working conditions; Social protection and inclusion	Dashboard
Statistics for the European Green Deal	EU-GD	European Commission	Monitoring the achievement of the European Green Deal´s objectives, one of the six European Commission priorities for 2019-2024.	1985-2022	EU MS + EFTA countries	3: Reducing our climate impact; Protecting our planet & health; Enabling a green & just transition.	Dashboard
The EU Social Progress Index	EU-SPI	DG Regio	Measuring societal development and quality of life at the regional level, to monitor regional policy	2016, 2020	EU MS (with breakdown at NUTS2 level)	3: Basic human needs; Foundations of wellbeing; Opportunity	Index
The EU SDG Indicator Set	EU-SDG	Eurostat	Monitoring the EU's delivery on the 2030 Agenda, and its effort to meet the SDGs	2017-2023	EU MS (with some breakdown at NUTS2)	17 (see SDGs)	Dashboard
Transitions Performance Index	EU-TPI	DG RTD	Monitoring and ranking countries based on their transitions to fair and prosperous sustainability; Seeing how countries progress towards the 6 priorities of the Commission	2011-2020	EU MS + 45 non-EU MS	4: Economic, social, environmental and governance transitions	Dashboard and index

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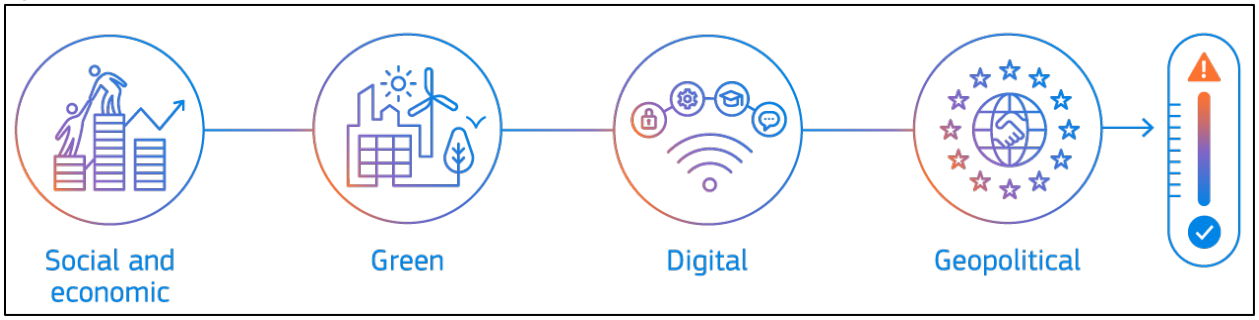
The **EU-RD** are designed, as a follow up of the 2020 Strategic Foresight Report, to offer a comprehensive assessment of resilience within the EU and its Member States (EU-MS), particularly in light of ongoing societal transformations and anticipated challenges. These dashboards evaluate the capacity of EU-MS to progress towards policy goals despite adversities, using a broad array of indicators across four key dimensions: social and economic, green, digital, and geopolitical (see Figure 12). These indicators are chosen to reflect both the capacities—enablers or opportunities that facilitate navigating transitions and confronting future shocks—and vulnerabilities that could exacerbate the impact of challenges associated with green, digital, and fair transitions. This strategic approach is reinforced by the inclusion of synthetic resilience indices that synthesize the overall situation of resilience capacities and vulnerabilities across these dimensions. The dashboards also facilitate comparative assessments by including indicators that showcase how the EU-27 fares relative to selected non-EU countries. This comparison aims to highlight areas requiring further analysis and potential policy action. The EU-RD aim at playing a crucial role in strengthening the EU's resilience by helping to monitor and evaluate the impact of Europe's recovery and resilience strategies, including those vis-à-vis key non-EU countries. Updates to the dashboards, such as those initially in Spring 2022 aligned with European Semester indicators and the most recent in Spring 2023, ensure they remain relevant and reflect the latest data and policy developments.

Figure 12: *The four interrelated dimension of the EU-RD*



The **EU-SSC**, established under the EPSR launched in 2017, serves as a critical monitoring tool within the European Commission's framework to advance fair and well-functioning labour markets and inclusive welfare systems by 2030. This scoreboard is integral to the EPSR's implementation, which is structured around 20 principles aimed at reaffirming rights and setting objectives for social progress (see Figure 13), guided by an action plan that translates these principles into tangible actions. The EU-SSC features a collection of headline and secondary indicators that provide time-series data essential for identifying significant employment and social challenges and benchmarking successful outcomes across EU-MS. This data aids in the policy coordination process of the European Semester, ensuring that EU-MS adhere to the EPSR's goals. The indicators specifically focus on inclusion, covering areas such as equal opportunity and access to the labour market, fair working conditions, and social protection and inclusion, thereby supporting the EPSR's mandate to enhance social equity within the EU.

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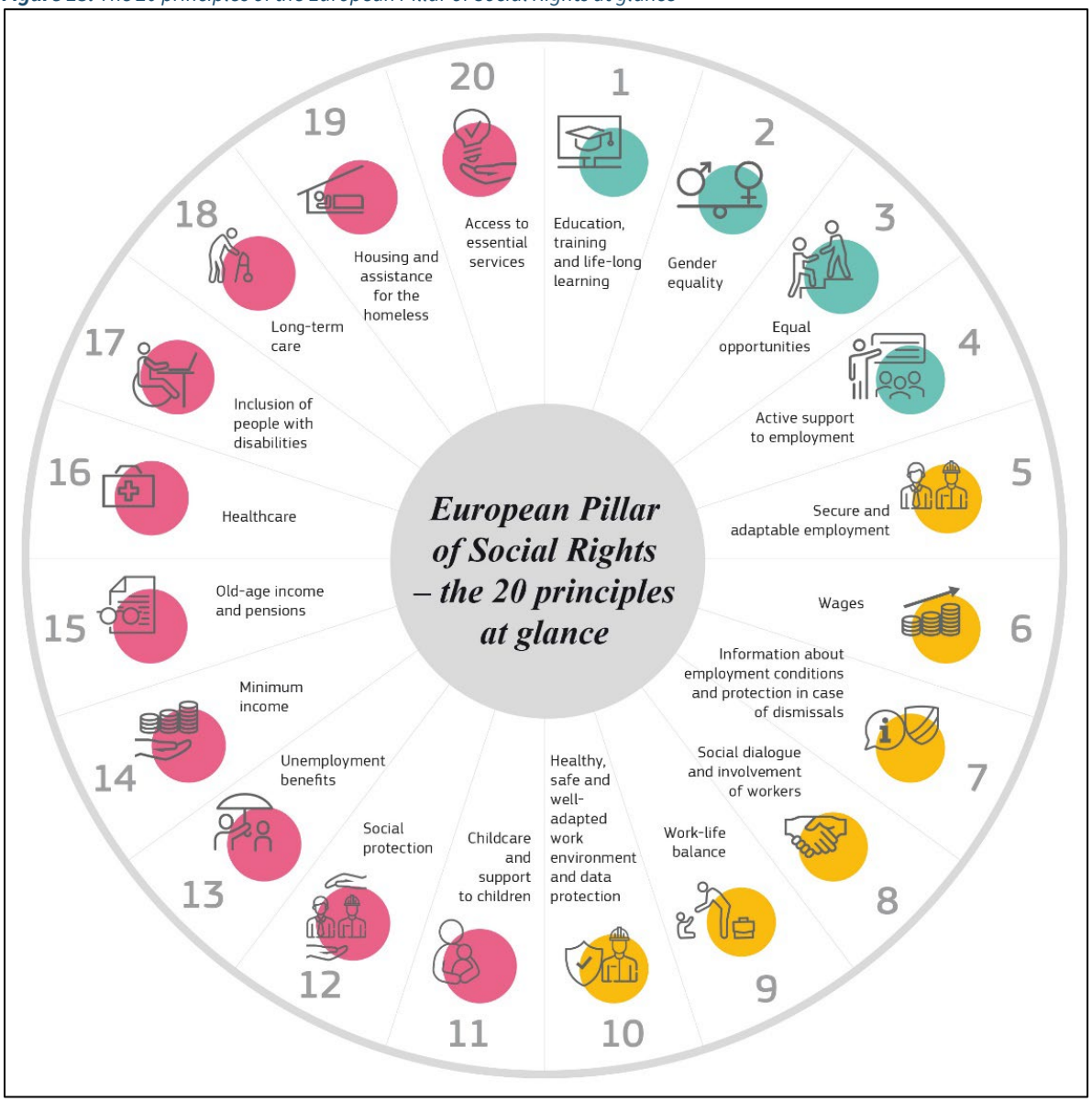
Figure 13: *The 20 principles of the European Pillar of Social Rights at glance*



The **EU-GD** is a key instrument for monitoring the progress of the European Green Deal, launched in 2019 with the goal to transition the EU to a climate-neutral and resource-efficient economy by 2050—a target now enshrined in the European Climate Law. This comprehensive scoreboard facilitates policy evaluation and informed decision-making by tracking advancements across various strategic areas like biodiversity, industrial strategies, circular economy, sustainable food systems, and pollution reduction. Indicators within the scoreboard are categorized under three subthemes: reducing climate impact, protecting the planet and health, and enabling a green and just transformation, which collectively focus on the wellbeing of future generations and the preservation of natural resources and ecosystem services. Additionally, certain indicators also touch upon current wellbeing and inclusion, such as those measuring the ability of populations to heat their homes adequately and the availability of high-speed

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internet in sparsely populated areas, reflecting the Green Deal's broad scope that spans immediate and long-term sustainability goals.

The **EU-SPI** is a comprehensive measure designed to assess the social progress of regions across the EU, adapting the broader framework of the global SPI[1] to the unique social and cultural contexts of EU-MS. This adaptation considers regional disparities and the availability of data specific to the EU, focusing on aspects beyond just economic performance. It evaluates social progress at the NUTS2 regional level using fifty-five distinct social and environmental indicators spread across twelve components. These components are grouped into three broader dimensions: Basic Human Needs (including nutrition, medical care, sanitation, and shelter), Foundations of Wellbeing (covering access to basic knowledge, information and communications, health and wellness, and environmental quality), and Opportunity (which evaluates personal rights, freedom of choice, inclusiveness, and access to advanced education). The construction of the EU-SPI involved a collaborative process with contributions from DG Employment, DG REGIO, the OECD, academics, and organizations such as the Bertelsmann Stiftung, ensuring the index's relevance and applicability. Originally envisioned as a tool for influencing EU budgetary allocations, the EU-SPI has transitioned to primarily serve as a nuanced monitoring tool. It facilitates benchmarking across EU regions to highlight strengths and pinpoint areas needing improvement, supporting policymakers in devising strategies that enhance social outcomes. This benchmarking aligns with the EU's cohesion policy goals centred on improving basic services, technological access, energy efficiency, and environmental sustainability.

The **EU-SDG** is a comprehensive tool developed by Eurostat to monitor progress toward the 17 SDGs as outlined in the 2030 Agenda for Sustainable Development, which was adopted by the UN General Assembly in 2015. The EU, having long embedded sustainable development in its treaties, has committed to actively advancing these goals, integrating them into its internal and external policies. The indicator set is designed to reflect the SDGs' relevance to EU policy, encompassing a mix of qualitative and quantitative measures. It is updated annually to include new data sources and adjust to evolving EU priorities, ensuring its relevance and applicability. Additionally, an annual report provides a detailed assessment of progress at both EU and EU-MS levels, addressing the multifaceted aspects of wellbeing and sustainability. This includes focusing on current generations with goals like "good health and wellbeing" and "quality education", while goals like "sustainable cities and communities" and "responsible consumption and production" aim to safeguard the wellbeing of future generations. Moreover, goals such as "no poverty", "zero hunger", and "gender equality" highlight the distributional aspects of wellbeing, emphasizing inclusion. This set of indicators plays a crucial role in the EU's strategy to monitor and enhance its contribution to the global SDG efforts.

The **EU-TPI** is a significant initiative designed to monitor and compare the progress of EU countries towards achieving sustainable and equitable prosperity. Developed by the Directorate-General for Research and Innovation, the EU-TPI evaluates countries based on their transition across four key dimensions: economic, social, environmental, and governance (see Figure 14). Underpinning these

[1] https://www.socialprogress.org/social-progress-index-time-series/

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dimensions are 28 internationally comparable, outcome-oriented indicators such as healthy life expectancy, income inequality (measured by the Gini coefficient of disposable income), material use, and homicide rates. The TPI provides both dimensional performance scores and an overall performance score for each country, calculated as a weighted arithmetic average of the dimensional scores. This index, reflecting a "beyond GDP" approach, aims to encapsulate the collective impact of national policy mixes on advancing fair and sustainable development, thereby offering a comprehensive view of each country's transition performance relative to the priorities outlined by the European Commission. The 2021 edition of the EU-TPI has been enhanced to reflect the ongoing twin green and digital transitions more accurately, incorporating the critical insights gained during the COVID-19 pandemic. The TPI now includes new data sources that emphasize the increasing role of digitalization in the economy and introduces an indicator for tracking a country's material footprint. This addition aims to better account for environmental spillover effects and more effectively measure the impact of consumption patterns on the environment.

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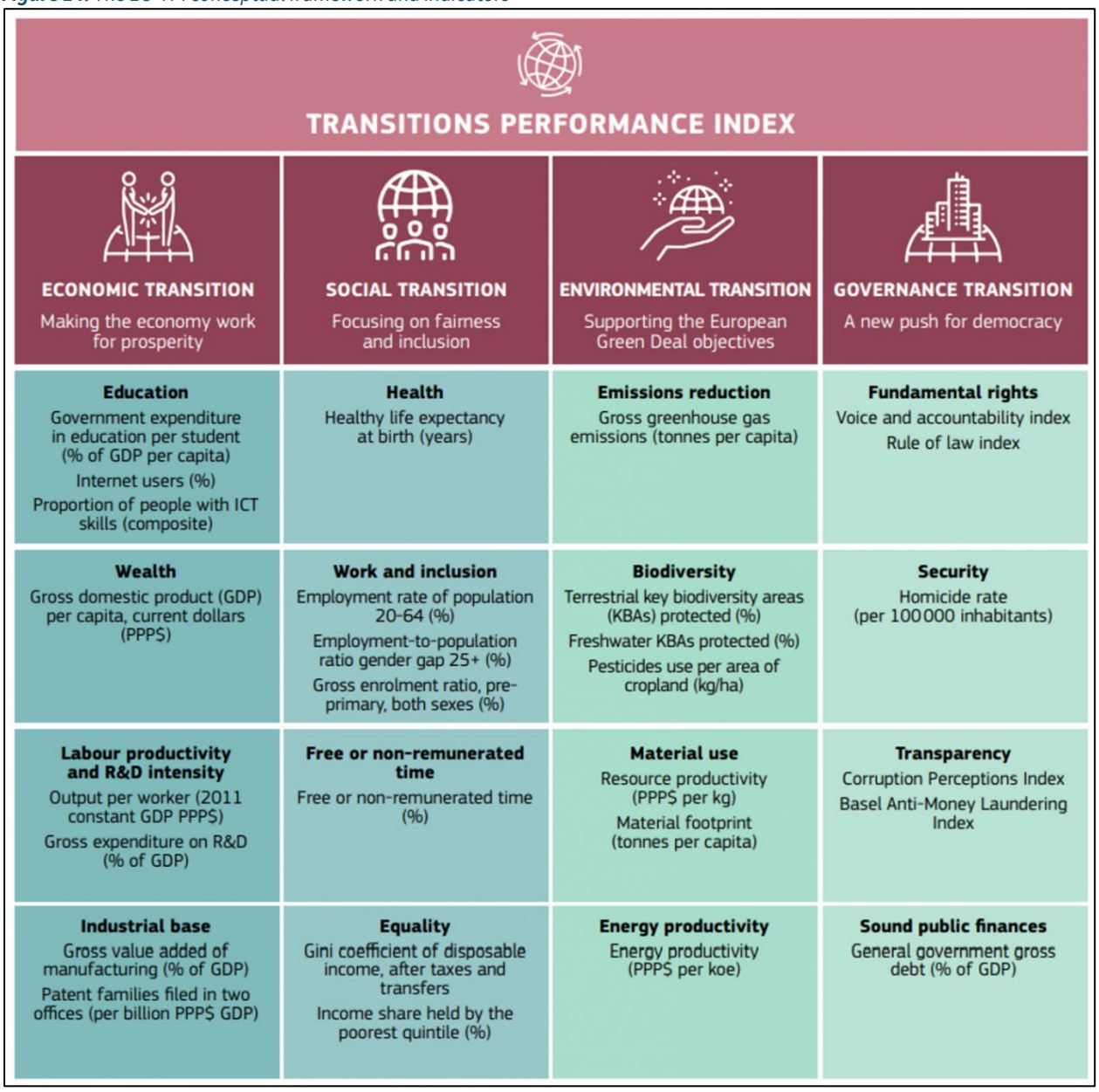
Figure 14: *The EU-TPI conceptual framework and indicators*



4.1.1. The use of non-financial indicators at the European Union level

The recent PhD thesis by Widuto (2022) examines the application of "beyond GDP" metrics[1] at the EU level through the lens of instrumental, conceptual, and political uses, a framework first introduced in the beyond GDP domain by Whitby et al. (2014). This categorization helps in elucidating the varied

[1] The range of metrics examined in Widuto's PhD thesis (2022) extends beyond the sustainable wellbeing metrics considered previously in this section (see Table 12).

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impacts and roles that these frameworks and indicators play at the EU level. Instrumental use pertains to the direct incorporation of data into policy-making processes, conceptual use pertains to how indicators help shape frameworks and inform decision-making through dialogue, and political use encompasses the deployment of these metrics to persuade and justify policy choices.

Instrumentally, Widuto (2022) found that these metrics range from **hard applications**, such as embedding into legislation and influencing economic governance (e.g., to some extent, the Cohesion indicators), to **softer applications** like monitoring progress, reporting achievements, and setting developmental targets (e.g., the EU-GD or the EU-SSC). She also demonstrates that although "beyond GDP" indicators are central to EU policy discussions, they typically do not carry the same weight as economic indicators, which are firmly anchored in legislation and often associated with strict financial consequences for non-compliance (e.g., the Macroeconomic Imbalance Procedure Scoreboard).

Conceptually, Widuto (2022) has found that "beyond GDP" indicators play a crucial role in shaping collective understandings and fostering agreement on shared visions among EU-MS. They serve as key tools in **raising awareness**, attracting attention to critical issues, and shaping narratives that influence public and policy debates. These indicators help in framing discussions, focusing debates on specific issues, and stimulating widespread engagement across different sectors. This facilitation of interdisciplinary dialogue is particularly valuable in integrating social considerations into broader economic strategies, as seen with the European Semester's increased focus on social indicators. Additionally, the standardization and harmonization of statistical practices across the EU—achieved through these indicators—ensure that data collection and reporting are consistent, enhancing the reliability and comparability of information used to guide EU policies.

Politically, "beyond GDP" metrics are strategically employed to support or challenge political agendas, exerting influence over policy decisions and public perceptions. These indicators can be selectively used to apply pressure on policymakers, justify governmental actions, and communicate the impacts of policies to the electorate, often in the context of re-election campaigns. The political use of these indicators demonstrates their capacity to not only reflect but also **shape political landscapes** within the EU, offering a means to demonstrate the added value of EU initiatives to its citizens.

Overall, the multifaceted uses of "beyond GDP" metrics within the EU highlight that while "beyond GDP" metrics in the EU are essential for conceptual understanding and political discourse, their instrumental application remains limited. These metrics primarily enrich debates and shape public and policy-maker perceptions concerning social, and environmental priorities, reflecting shared values and visions. However, unlike traditional economic indicators which are deeply embedded in legislation and carry significant weight in budgetary and regulatory decisions, the instrumental use of "beyond GDP" metrics in hard policy tools is less pronounced. This underscores a gap between the potential of these metrics to influence EU governance and policymaking process and their actual deployment in formulating hard policy measures.

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4.1.2. The factors explaining the use of non-financial indicators at the European Union level

The utilization of "beyond GDP" metrics at the EU level can be comprehensively understood through the examination of various influential factors. This analysis proposed by Widuto (2022) in her PhD thesis examines the intricacies of indicator, user, and policy factors, which currently shape the use of these metrics within EU policies. Indicator factors refer to the characteristics of the indicator itself; user factors are linked to the perceptions, capabilities and positions of the actors involved; and policy factors relate to the general policy context. Her findings highlight the complex interplay between the technical challenges associated with indicator quality and availability, the statistical competencies of users, and the political realities that influence demand. Additionally, the role of EU competences as outlined by treaties, as well as the impact of external events like financial crises and environmental concerns, significantly dictates how these indicators are prioritized and implemented. In the following sections, we present systematically Widuto's (2022) findings regarding the indicator, user and policy factors explaining the use of beyond GDP metrics at the EU level.

Indicator factors

The "beyond GDP" metrics in the EU is characterized by a series of indicator factors that both support and complicate their implementation within policy frameworks. One major factor is the **preference for dashboards** and scoreboards over composite indices, as highlighted by Eurostat and echoed in the Stiglitz report, which argues against the arbitrariness of assigning weights in composite indices, viewing them as potentially politically charged.

Another significant challenge is **data availability**. Despite the breadth of indicators, there's often an overload of data which can obscure decision-making rather than aid it. The ideal seems to be a streamlined set of indicators that maintains clarity and eases policy implementation. Issues of data granularity and the legal obligations of data provision by national or regional authorities further complicate this landscape. Moreover, the detail needed for effective policy application, especially in terms of social group and regional breakdowns, is frequently lacking.

Time lag in data availability also plays a critical role in the utility of these indicators. Unlike economic measures like GDP, which can provide frequent updates and immediate reflections of policy impacts, many social and environmental indicators only show changes over longer periods, making them less responsive to policy adjustments in the short term. This inherent delay diminishes their appeal for the European institutions compared to more rapidly updating economic indicators.

Methodological robustness is another area of concern. Despite advancements, there remains, with the European institutions, scepticism about the objectivity and reliability of "beyond GDP" indicators, particularly those derived from surveys. Issues with international comparability and translation can also detract from their perceived validity and robustness.

Resource constraints further affect the feasibility of comprehensive data collection, with both EU and national levels facing budgetary limitations that hinder the expansion and depth of indicator collection.

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This financial restraint impacts the ability to maintain or expand indicator data sets to meet growing demands.

Lastly, the **clarity and policy relevance** of indicators, though crucial for their effective use, seem limited. Current indicators should be more straightforward and directly relatable to policy impacts to be more useful for policymakers. They should provide a clearer, unambiguous information that can readily inform policy decisions and public communication without excessive interpretation or confusion over their implications. This clarity is essential for both policymakers and the public to gauge the effectiveness and impact of policies based on these metrics.

User factors

The utilization of "beyond GDP" metrics at the EU level is also influenced by a variety of user factors that both support and limit their effective integration into policymaking. These factors include the types of users, the domination of economic perspectives, participation in the co-creation of indicators, political realities, differences between actors, scepticism towards certain types of indicators, and statistical competencies.

Types of users within the EU, such as the general public, media, and interinstitutional bodies, often require tailored support to effectively engage with "beyond GDP" metrics. Eurostat provides specialized services to facilitate this, enhancing user understanding and engagement with the data. However, there's a notable dominance of **economic-centric perspectives** within the EU, where non-economic data often need to be translated into economic terms to be taken seriously. This underscores a broader preference for economic data, which is often considered superior and more actionable compared to social or environmental data.

The **participation** of stakeholders in the co-creation of indicators is another critical factor. Involvement in processes like establishing the EU-SSC or the EU-SPI helps ensure stakeholder buy-in and facilitates the later use of these indicators. However, the overall participation of citizens in co-creating indicators is relatively limited, which contradicts the EU's awareness of the need to bridge the distance between citizens and statistical information.

Political realities also play a significant role in the use of "beyond GDP" metrics. Indicators that might necessitate unpopular decisions or touch upon sensitive topics are less likely to be favoured. This dynamic is further complicated by the need for **consensus among EU-MS**, each of which has its own priorities and perspectives, making it challenging to agree on a common set of indicators.

Scepticism towards social and environmental indicators persists, despite their recognized value. Some policymakers remain hesitant to adopt findings based on these indicators due to potential controversy or conflict. Moreover, Eurostat's role is often seen as purely technical, with the responsibility for determining and selecting indicators left to policymakers who may not possess adequate statistical knowledge to make informed decisions.

Similarly, **statistical competencies** among users vary, with many lacking the necessary skills to accurately interpret "beyond GDP" metrics. This gap underscores the need for better communication

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and educational efforts to ensure that users understand not only the scores but also how to interpret them correctly. Such efforts could help mitigate misinterpretations and enhance the effective use of these metrics in policymaking.

These user factors collectively highlight the complex interplay between technical capabilities, political considerations from the user perspective, and stakeholder engagement that shapes the use of "beyond GDP" metrics at the EU level. Addressing these challenges requires a concerted effort to enhance statistical literacy, foster inclusive dialogue, and ensure that these metrics are both understandable and actionable for all stakeholders involved.

Policy factors

The use of "beyond GDP" metrics at the EU level is finally significantly influenced by policy factors that both support and limit their integration into broader policy frameworks. These factors encompass issues like compartmentalization, the constraints imposed by EU treaties, inertia, and path-dependency, as well as the dynamic nature of political priorities and external events.

Compartmentalization remains a significant challenge, as "beyond GDP" indicators often stay confined within their specific policy domains rather than being integrated across broader economic measures. For instance, while the European Semester incorporates such indicators, including the EU-SSC and EU-SDGs, they are positioned as lower-priority metrics used for informational and monitoring purposes without the capacity to trigger sanctions. This sectoral isolation impedes the seamless integration of these indicators into a comprehensive framework that could complement or even replace GDP.

EU Treaty constraints also play a crucial role, as they delineate the competences of the EU, particularly limiting its decision-making capabilities on economical and, to a lesser extent, social issues. These limitations are embedded in the foundational structures of EU governance, restricting the 'hard' uses of "beyond GDP" indicators, such as in legislation and budgetary allocations where direct impacts could be enforced. This institutional framework creates a dichotomy between economic indicators, which are more firmly established and actionable within the EU's legal and political landscape, and social or environmental indicators, which are often viewed as secondary.

Inertia and path-dependency further complicate the adoption of new indicators, as established economic measures are deeply entrenched and resistant to change. The well-established nature of economic indicators makes them a default choice, often perceived as more reliable compared to newer "beyond GDP" metrics, which may be seen as methodologically less robust or ideologically contentious, particularly in the realm of social indicators.

Political realities and external events also shape the adoption and application of these indicators. The fluctuating demand for specific metrics can be influenced by current events, political fashions, or crises, such as the financial crisis, which may accelerate the adoption of certain indicators as a political response. Moreover, the priorities of each European Commission's term of office often dictate the selection of indicators, with new commissions potentially setting new agendas and influencing which indicators are emphasized.

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These political factors reveal the complex interplay between structural limitations, institutional inertia, and dynamic political agendas at the EU level, all of which determine how "beyond GDP" metrics are used, viewed, and integrated into the policymaking process. The challenge lies in overcoming these barriers to better harness the potential of these indicators for shaping a more holistic and responsive EU policy framework that goes beyond traditional economic measures.

A summary of both the "beyond GDP" metrics usages (Section 4.1.1, p. 101) and factors explaining their usages (Section 4.1.2, p.103) at the EU level is proposed in Table 13.

***Table 13**: Summary of "beyond GDP" indicators use, and factors explaining the use, at the European Union level*

		Types of use		
		Instrumental	*Conceptual*	*Political*
Factors explaining the use	*Indicator*	Data availability and quality	Multiplicity and clarity	Policy relevance
	User	Lack of statistical competency	Domination of "Econ people"; Stakeholders' engagement	Consensus requirement; Scepticism
	Policy	Political priorities	Path dependency; Compartmentalisation	EU competences; External events

***Source:** Refinement of Table 5 from Widuto (2022)*

4.2. Recommendations for integrating a transformative indicators initiative at the European Union level

Building upon our prior discussions—in which we defined T-II (Section 2), explored their practical applications (Section 3), and assessed the current state of the EU's statistical system from a sustainable wellbeing perspective (Section 4)—we are now prepared to offer strategic recommendations. These suggestions are designed to aid the EU in advancing a transformative indicator initiative (T-II). This initiative should not only align with the definitions and frameworks we have proposed but also pragmatically address the complexities and constraints within the existing statistical landscape of the EU. Our aim with these recommendations is to facilitate the development of indicators that not only measure but also drive meaningful change, fostering a holistic approach to policy-making that integrates social and environmental domains.

To ensure that our recommendations reflect the realities of the field, we have employed a methodology designed to refine our initial proposals reflecting our findings. This approach, along with the outcomes of its implementation, is detailed in the subsequent sections. We conclude by presenting a desirable, yet feasible, scenario informed by these results, while also acknowledging its limitations relative to our ideal conceptualization of T-II.

4.2.1. The methodology

To transform our preliminary recommendations into actionable strategies for EU indicators practitioners, we conducted a roundtable dialogue in collaboration with the European Policy Centre. This gathering brought together experts in EU indicators to engage in a structured discussion. During the roundtable, we presented three alternative scenarios that envisioned the integration of a new II at the EU level. Each scenario, grounded in real-life examples from Section 3 (p. 29) to ensure their

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credibility, was followed by a discussion where participants evaluated the implementation feasibility, impact, and necessary resources for each scenario. The three scenarios were each characterized by unique challenges and strategic nuances associated with implementing IIs. These scenarios were distinct not only in their primary objectives and the level of stakeholder engagement but also in the specificity of indicator targets and the strategies for optimizing resources. The carefully chosen attributes of each scenario ensured internal consistency while allowing for a broad exploration of different approaches across scenarios. This diversity was instrumental in refining our understanding and methodologies, offering practical insights that resonated with the three distinct groups identified in our vertical analysis of selected IIs, as detailed in the discussion of Table 11 (p.90). For the purpose of this scenario building, we renamed the groups as "informist" (including MWM and NIW), "reformist" (including LSF, NPF, BES and CIW) and "transformist" (including GNH and NWI). Detailed narratives and methodological approaches underpinning these scenarios are included in "Annex 4: Scenarios in support of the roundtable dialogue" for further reference (p. 183). A comparison of the scenarios on the key attributes is proposed in Table 14, also indicating on which selected IIs the scenario attribute is inspired.

Table 14: *Comparison of scenarios built for the roundtable dialogue with European Union indicators practitioners*

Scenarios	Primary objective	Participation level	Indicator targets	Means and resources
The "informist" path	Monitoring role MWM – BES (long set) – CIW	Stakeholders' consultation MWM – NPF	Trend analysis MWM – NIW – BES – CIW – LSF	Optimization of existing resources NIW – BES – LSF
The "reformist" path	Supporting decision-making process LSF – BES (short set) – NIW	Co-construction with institutional stakeholders BES	Qualitative guidance NPF	Moderate resource enhancement MWM – NPF(?)
The "transformist" path	Binding decision-making process GNH – NPF – NWI	High stakeholders' direct engagement GNH – NWI – CIW (NIW? LSF?)	Quantitative and binding GNH – NWI	Creation of a new dedicated agency GNH – NWI – (+/-) CIW

During the roundtable dialogue, participants engaged in evaluating the **desirability** and **feasibility** of various attributes within each proposed scenario. These discussions not only focused on assessing the potential impact and practicality of the scenarios but also extended to participants proposing concrete **institutional pathways**. They explored how these scenarios could be effectively implemented within the EU context, considering their knowledge and experience of the legislative and policy frameworks of the EU. As discussions evolved, participants were encouraged to synthesize their insights and preferences by designing their own ideal scenario, picking attributes from the three alternative scenarios or proposing their own imagined attribute. This exercise aimed to conceptualize how the EU could develop and adopt its own T-II. Results of these discussions and the details of desirable and feasible indicator scenario for a European T-II are developed in the next section.

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4.2.2. The results: A desirable and feasible transformative indicators initiative for the European Union

Table 15 provides a detailed overview of the participants involved in the roundtable dialogue, which included a diverse group of nine individuals, each fulfilling distinct roles such as active participants, observers, and coordinators. The active participants, who were central to the discussion, were selected from various institutions that are integral to the European statistical system. This diverse institutional background ensured a diversity of perspectives on the potential scenarios for a European T-II, enhancing the dialogue with their specialized knowledge and expertise. Additionally, two observers from the ToBe project were present to gather insights without directly contributing to the discussion. The dialogue was facilitated by two coordinators from the ToBe project, who were responsible for guiding the discussions to stay focused on the session's objectives.

Table 15: *Roundtable dialogue participant overview*

Participant number	Status	Institutions
1	Active participant	Directorate-General for Employment, Social Affairs and Inclusion
2	Active participant	Secretariat-General Foresight and Strategic Communication
3	Active participant	European Environment Agency
4	Active participant	Joint Research Centre
5	Active participant	Directorate-General for Research and Innovation
6	Observer	ToBe
7	Observer	ToBe
8	Coordinator	ToBe
9	Coordinator	ToBe

The discussions evolved smoothly during the roundtable dialogue, revealing rather consensual opinions among participants regarding the limitations of the current EU statistical system and the challenges inherent in the alternative scenarios when applied to real-world contexts. In their discussions, participants prioritized feasibility in thoughtfully navigating the constraints of realistic application. This pragmatic approach, while maybe limiting more visionary thinking, ensured that the proposals remained grounded and actionable. As such, this approach helped steer the conversation towards developing a final scenario that, while more ambitious than a slightly improved "business as usual", remains within the bounds of practical implementation, striking a balance between desirability and feasibility.

Participants unanimously recognized "the informist path" (scenario 1) as desirable due to its potential to address the existing lack of uniformity and cohesion within the European statistical system. However, they also collectively expressed reservations about its overall ambition and were sceptical about the actual impact it could have at the EU level, expressing as such reserve about the overall desirability of "the informist path". Indeed, while similar initiatives (e.g., Barth et al., 2021) exist and have garnered some support from entities like the European Commission, they have yet to make a significant impact

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or gain sufficient traction to be deemed effective. Conversely, "the transformist path" (scenario 3) was viewed as the most desirable due to its ambitious and radical nature, specifically in terms of the indicators target attribute (i.e., quantitative and binding). Yet, concerns regarding its feasibility, particularly in the short to medium term, quickly became apparent, presenting a major hurdle and limiting participants' enthusiasm for fully endorsing this scenario.

Overall, participants largely concurred that "the reformist path" (scenario 2) strikes the optimal balance between desirability and feasibility, though they highlighted nuances in its practical application. In the sections that follow, we will detail the attributes of "the reformist path" and how they can be tailored to enhance the EU statistical system, thereby shaping a scenario that is both desirable and feasible for an EU T-II. However, we also consider the limitations of this scenario in light of our ideal conceptualization of T-II and the progress made by certain IIs, particularly those discussed in the analysis of selected IIs for this deliverable (see Section 3.3.2, p. 42).

Primary objective of the desirable and feasible scenario

Participants at the roundtable dialogue reached a consensus regarding the primary objective of a desirable and feasible T-II scenario for the EU. They unanimously agreed that the ideal T-II should extend beyond merely providing monitoring and reporting tools; it should actively support and enhance decision-making processes. However, they emphasized that while the T-II should inform and guide policy, it should not restrict political decision-making or impose any specific political direction. This approach would ensure that the T-II remains a flexible and effective tool for policy support, aligning with the diverse needs and strategic goals of the EU without dictating or limiting the scope of political discourse and decision-making.

In that sense, participants converged on a scenario that would achieve at least the second governance levers by integrating the T-II into specific policy evaluation mechanisms.

For the first governance lever *(see Figure 10, p.74)—utilizing the T-II as a monitoring and reporting tool—the roundtable recognized the need to* ***consolidate existing EU statistical frameworks*** *under a unified vision. This integration effort could potentially be undertaken by an external entity, such as a think tank, which would enable the incorporation of broader expert and academic insights. They assert that is critical to build upon and harmonize with existing frameworks and institutions to prevent initiative fatigue and disillusionment, thus ensuring consistency around* ***a compelling narrative****. The doughnut economics narrative was mentioned at this occasion.*

The development of a compelling narrative around the Future Generations Act in Wales serves as a compelling example of how narrative building processes and strategic communication can significantly influence policy engagement. The Welsh Government recognized early on that without a strong, relatable narrative, sustainability efforts might seem fragmented and fail to motivate public involvement. To overcome this, they commissioned the Climate Outreach & Information Network in 2011 to craft and test sustainability and climate change narratives tailored to the Welsh context. This initiative built on earlier efforts to understand public attitudes towards sustainability, aiming to foster a "system consciousness" where the public could perceive the root causes of issues and envision possible solutions.

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As complexities in communication hindered the integration of sustainable development into governmental operations, the Welsh Government shifted its language from "sustainable development" to "wellbeing". This strategic reframing was designed to simplify the concept and broaden its appeal, making it more accessible and relevant to everyday concerns of the Welsh people. Sophie Howe, the Commissioner for Future Generations in Wales, noted that this reframing aimed to make the principles of the Act more comprehensible and relatable (Wallace, 2019).

Also, the narrative around the Future Generations Act in Wales was significantly bolstered by the national conversation known as "The Wales We Want". This initiative effectively engaged the public, providing a relevant narrative that not only garnered support but also legitimized the wellbeing efforts by aligning them with the values and aspirations of the Welsh people. This dialogue facilitated a deeper connection between citizens and the policy goals, making the concept of long-term wellbeing a tangible part of public discourse and decision-making.

Despite the narrative progress, challenges remain in fully transforming policy frameworks to reflect these new paradigms. Wales's involvement in the WEGo highlights its commitment to shifting economic paradigms away from GDP-centric models. However, there are concerns that despite the advancements in narrative development through WEGo, the movement struggles to overcome the entrenched neoclassical economics training within policymaking institutions, which are often siloed and short-termist. This indicates a need for more transformative narratives that can effectively challenge these prevailing structures and the influence of vested interests within policy and economic systems (Mason & Büchs, 2023).

This case exemplifies how a well-thought narrative, among other things, can catalyse broader shifts in policy and public engagement towards more sustainable and inclusive futures, yet also highlights the ongoing challenges in achieving deep systemic change.

For the second governance lever *(see Figure 10, p.74)—the evaluation of specific policy—the envisioned scenario suggests integrating this T-II into* ***both ex-ante and ex-post policy impact assessments****. Participants suggest this would enhance the T-II's utility in shaping policy by aligning it with established processes such as the Impact Assessment of the EU's Better Regulation toolbox, which emphasize the importance of evidence-based policy making and rigorous evaluation to understand the effects of policies thoroughly before and after their implementation.*

This suggestion resonates with what New Zealand has been performing in the context of the LSF, through the development and use of the CBAx tool (see Box 6, p.63). Developed by the New Zealand Treasury, CBAx is designed to improve the quality of public sector decision-making by quantifying both monetary and non-monetary impacts of spending proposals over a long-term horizon. The CBAx model incorporates LSF concepts by allowing analysts to assess a wide range of wellbeing impacts. This tool includes a database of New Zealand wellbeing values and provides a standardized approach for modelling the benefits and costs associated with different policy options.

A practical application of the CBAx alongside the LSF was seen in the analysis of a major investment proposal for the regeneration of the eastern Porirua neighbourhood in Wellington—a region suffering

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from high deprivation and poor housing conditions. This business case assessed a wide array of fiscal, economic, and wellbeing impacts. By quantifying and monetizing benefits such as reduced hospitalizations from improved housing and increased productivity, the inclusion of wellbeing benefits significantly shifted the cost-benefit analysis in favour of a regeneration project. This example showcases how CBAx, underpinned by the LSF, facilitates a nuanced evaluation of policy options, not just in economic terms but also in terms of broader societal wellbeing. This approach allowed decision-makers to view the project through a holistic lens, ultimately tipping the decision towards funding the regeneration initiative due to its positive impact on community wellbeing.

With regard to the primary goal of a potential EU T-II, participants of roundtable dialogue prioritized the initial governance levers but did not integrate more impactful ones such as political targets (i.e., the third lever), budgetary allocation rules (i.e., the fourth lever), and enforcement mechanisms (i.e., the fifth lever).

This omission may have missed an opportunity to propose a T-II with the potential to significantly influence and reshape the established regime's rules and logic (i.e., scaling up). Discussions on developing political targets and enforcement mechanisms will be elaborated in sections titled "Indicators target of the desirable and feasible scenario" and "Means and resources of the desirable and feasible scenario." Furthermore, we highlight examples from selected IIs in the following paragraphs that demonstrate successful integration of IIs into the budget decision-making process, showcasing potential paths for deeper systemic integration and impact.

For instance, the BES in Italy offers a relatively introductory level of II integration within the budgetary discussion by including an Annex on equitable and sustainable wellbeing indicators in the DEF, which outlines recent trends and forecasts, considering policy proposals, of a short set of BES indicators. This example shows a basic level of embedding IIs into budget discussions. The New Zealand's Wellbeing Budget represents a deeper integration, with spending decisions directly influenced by selected wellbeing priorities identified through a structured and holistic evaluation process based on the LSF. Despite its innovative approach, some critics argue that this budget does not fundamentally shift from traditional GDP-focused economic strategies. Another promising and inspiring example for the EU within the selected IIs, is the approach observed in Bhutan, where the GNH index influences the Resource Allocation Formula since the 12th Five-Year-Plan, directly linking wellbeing outcomes to budgetary allocations across different regions and sectors. The later example could inspire the EU for the update of criteria for regional budgetary allocations provided under the European Cohesion Policy[1].

These examples highlight varying degrees of how wellbeing frameworks can be embedded into budget strategies, suggesting pathways the EU might consider for a more profound incorporation of sustainable wellbeing considerations into its budgetary processes.

Participation level of the desirable and feasible scenario

When discussing the appropriate level of stakeholder participation in designing and reviewing a T-II for the EU, participants generally favoured a focus on institutional stakeholder participation. They

[1] See Beltrán-Esteve et al. (2023) for suggestions on this matter with regard to the EU-SPI.

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emphasized the need to uphold the democratic principles cherished by the EU while also expressing concerns about the potential for politicization if participation is overly broad. A consensus emerged around the idea of fostering a cooperative environment where key European social dialogue actors—such as employee and employer organizations—along with civil society, can collaborate effectively similarly toe the BES initiative. This collaboration could be structured through interinstitutional agreements on working methods and task forces of national institutes of statistics led by Eurostat. In fact, the discussions around a broad call for contributions, akin to the "informist path" inspired by the MWM initiative, were acknowledged as a component of a broader strategy that would prioritize structured collaboration with institutional stakeholders, reflecting the "reformist path". On the other hand, the "transformist path", which advocates for deep stakeholder engagement, was seen as potentially less effective. Participants expressed concerns that despite extensive participatory efforts, the ultimate decision-making would likely remain at the highest political levels, potentially diverging significantly from the proposals put forward by stakeholders. This recognition led to a cautious approach towards highly participative methods that might not align effectively with political realities.

In terms of the spectrum of public participation (Figure 15), the envisioned T-II would thus oscillate between the "consult" and "involve" levels, effectively incorporating elements of informing, consulting, and, and to some extents, involving stakeholders in the process. This approach aims to balance inclusivity with practical governance, ensuring that the initiative remains grounded in democratic principles without becoming mired in political complexities.

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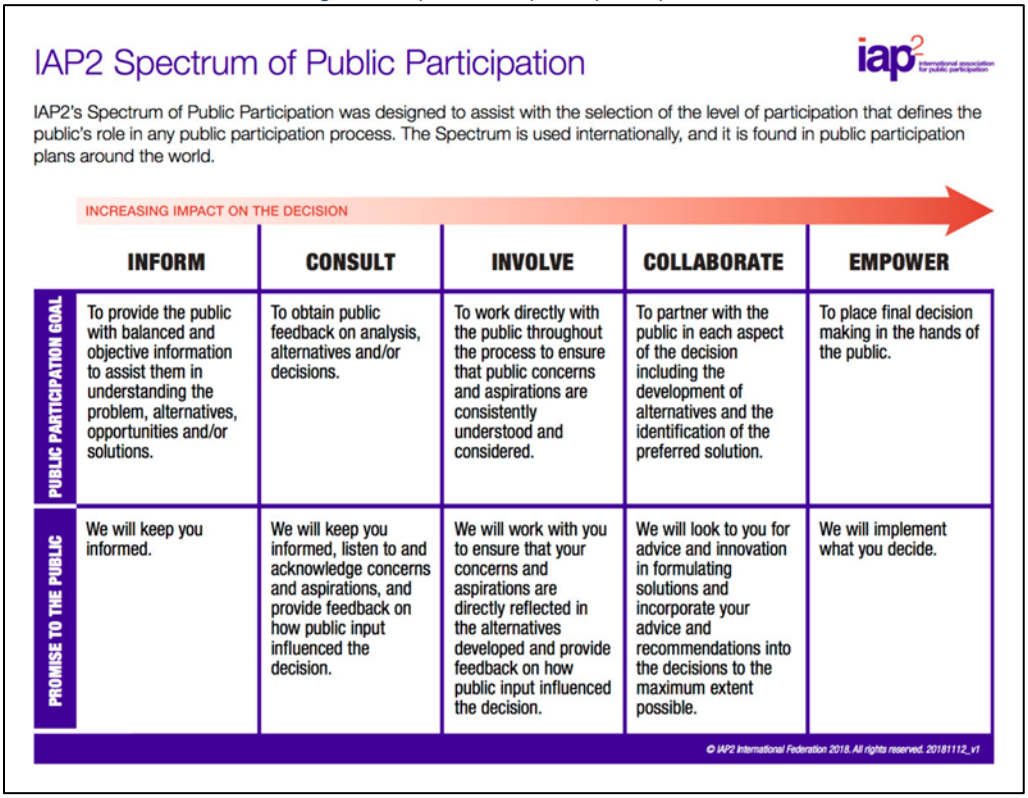
Figure 15: *Spectrum of public participation*



Source*: IAP2 International Federation (2018)*

Despite certain reservations expressed during the roundtable dialogue, some national experiences from the selected IIs reached levels that oscillate between "involve" and "collaborate". For instance, the NWI of Wales was developed through an extensive national conversation; the CIW involved a broad and diverse community in designing its framework; the NPF incorporates a mandated review every five years that should preferably include participatory processes; and the GNH in Bhutan was shaped through deep participatory processes during both the framework formulation and data collection stages, engaging citizens widely in national surveys. Participatory processes vary in depth—from shallow to deep engagement (see Figure 15)—and can occur at various stages of an II development, including framework formulation, indicator selection, data collection through citizen science, indicator weighting, target setting, and result communication (Le Roy & Ottaviani, 2017).

The benefits of participatory approaches in IIs are well-documented, though they sometimes fall short of their promises. The arguments supporting participatory approaches are numerous but Sébastien et al. (2017) summarize them along six key promises:

- Promise 1: Empowering citizens, transforming the role of the expert;
- Promise 2: Integration of subjectivities, discourses, and diverse points of view;
- Promise 3: Cross-disciplinary learning, broadening perspectives;
- Promise 4: Balancing powers, enriching democracy;
- Promise 5: Increasing the use of indicators in decision-making;

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- Promise 6: Overlapping multi-scalar issues.

These promises can explain why the EU has developed several participatory programs[1], with participants of the roundtable dialogue highlighting the "Conference on the Future of Europe"[2] as a particularly inspiring model that could influence the development of a new European T-II. The Conference on the Future of Europe represents a bottom-up, pan-European effort that engaged citizens, civil society, and various levels of government in a wide-ranging discussion about their expectations for the EU. It features a series of interconnected events and debates conducted in all official EU languages, promoting extensive stakeholder engagement.

This high level of stakeholder engagement aligns with the participatory attributes of the "transformist path" of the T-II scenarios, which prioritizes extensive engagement. The overall process of the Conference led to the emergence of 49 proposals regarding the future of the EU, supported by over 300 specific actions, which have been presented to the Presidents of the European Parliament, the Council and Commission. The Conference has also observed that "Citizens need to be given time and space to deliberate on the issues that affect them".

This deliberative and participatory experience, combined with similar experiences at the EU level and within national indicators experiences such as the ones described in the analysis of selected IIs, provides a hopeful outlook for integrating deep stakeholder engagement in the development of a T-II at the EU level. Such an approach would not only align with democratic principles mentioned during the round table dialogue but also leverages the recognized promises of participatory processes in the field of indicators (Sébastien et al., 2017), ultimately enhancing the potential impact of the T-II.

Indicators target of the desirable and feasible scenario

Participants in the roundtable dialogue recognized that merely having qualitative, directional indicators targets, as suggested by the "reformist path" scenario, may not sufficiently empower an II to achieve impactful outcomes. Nonetheless, they concurred that the idea of setting quantitative and binding targets for all indicators, as envisioned in the "transformist path" scenario, might be overly ambitious and unrealistic. They expressed additional concerns about ensuring that such targets adequately reflect the specific needs and contexts of individual EU-MS, advocating for a tailored approach that accommodates diverse circumstances. A minority within the group also supported the concept of relying on trend analysis of historical data, as proposed by the "informist path" scenario, rather than setting explicit targets.

The discussion also broached the topic of aligning new targets with those already established within the EU framework. Overall, despite disparities within the group, it seems to lead towards a balanced approach: adopting quantitative, binding targets for areas where engagement is already strong, such as

[1] https://cop-demos.jrc.ec.europa.eu/citizen-engagement-projects/collaborate
[2]https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/new-push-european-democracy/conference-future-europe_en#commission-follow-up-on-the-outcome-of-the-conference

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areas covered by the European Green Deal, while proposing qualitative, non-binding targets for other areas to allow flexibility.

Moreover, when considering the broader directionality supported by a T-II, participants expressed concerns about the challenge of forging a common vision and direction that resonates across all EU-MS. This underscores the need, but also the challenges, for a consensus-driven approach to establishing a unified and impactful EU-wide strategy.

For the third governance lever *(see Figure 10, p.74)—the setting of political targets—the proposed scenario recommends a strategy that merges quantitative binding targets with qualitative non-binding targets, all within a strong overarching vision. This vision is intended to harmonize the diverse circumstances prevalent among EU-MS, promoting a coherent direction while respecting their individual differences. The specifics of institutional mechanisms to support this approach remain to be clearly defined but should fundamentally uphold democratic principles. This combination aims to balance strict adherence to certain core objectives with the flexibility needed to adapt to local conditions, ensuring that all EU-MS can contribute to and benefit from the collective goals set forth by the EU T-II.*

Despite concerns raised by participants regarding the feasibility of quantitative and binding targets, our review of national initiatives reveals that some selected IIs have successfully established quantitative targets. Notably, the NWI in Wales and the GNH in Bhutan stand out. The NWI, for instance, has set milestones for 16 of its 50 national indicators. These milestones are not definitive goals but expectations for progress, specifying the necessary scale and pace of change. The first group of eight milestones was officially approved by the Senedd in December 2021, with the Welsh Government actively working on a 'second wave' of milestones by the end of 2022. In particular, they did so by commissioning the Wales Centre for Public Policy to bring together existing research evidence to inform the development of three new National Milestones. This approach underscores a meticulous, evidence-based process for setting targets (potentially explaining why some many indicators remain without any milestone set).

This method allows the Welsh Government to engage in a self-reflective exercise, with the possibility to evaluate their own progress towards these milestones. For instance, in his 2023 Well-being of Wales report, the Future Generations Commissioner Derek Walter provided detailed commentaries on each milestone, assessing the nation's progress. While acknowledging the need for improvement, he suggested that through collaborative efforts, Wales has the potential to meet its national milestones. This example illustrates a proactive and structured approach to integrating quantitative, yet flexible, targets within national initiatives.

The GNH index employs a dual-threshold system to evaluate wellbeing, incorporating both sufficiency thresholds and happiness thresholds for a nuanced assessment of national happiness. Each of the 33 indicators within the GNH framework is further unpacked into 124 variables, with sufficiency thresholds established for each variable. These thresholds are derived from a blend of international norms, national standards, and extensive consultative processes that contribute to normative judgments defining what is considered sufficient for happiness. For instance, the sufficiency threshold for adequate sleep is set at 8 hours per night. Individuals falling below these thresholds are classified as having 'insufficient' fulfilment in those specific variables.

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The comprehensive nature of the GNH allows for the acknowledgment that not all individuals need to meet every threshold to achieve happiness, reflecting the diversity in personal life fulfilment. The happiness threshold, on the other hand, offers a broader, aggregate measure. It represents a reasoned judgment across the various domains, determining how many a person needs to fulfil to be considered 'happy.' This threshold is not about achieving perfection in all areas but rather ensuring a significant proportion of wellbeing across different life domains. Currently, the happiness threshold is set such that if individuals meet the criteria in 66% of these domains, they are categorized as 'happy.'

This structured approach facilitates policymaking by dividing the population into 'happy' and 'not-yet-happy' groups, using these thresholds as a policy tool to monitor and promote national happiness effectively. By establishing clear, measurable thresholds, this methodology not only quantifies the progress of societal happiness but also directs government interventions towards specific areas of need. For example, it highlights particular insufficiencies such as education and living standards, especially prevalent in rural areas, pinpointing where targeted efforts are most needed to raise the overall happiness levels. This focus allows for more efficient allocation of resources, ensuring that interventions are precisely tailored to bridge the gaps identified within the 'not-yet-happy' segments of Bhutan's population, thereby fostering a more inclusive approach to national development.

Drawing from these insights, it becomes clearer that the articulation of well-defined targets can be a fundamental mechanism for transforming IIs into impactful instruments. In Wales, the NWI has fostered a culture of self-reflection by setting clear milestones, which aids in monitoring progress towards national objectives. Similarly, Bhutan's GNH index uses specific thresholds to guide government policies aimed at reducing the gaps in happiness among its citizens, effectively focusing on enhancing the conditions of those identified as "not-yet-happy". These examples underscore the potential benefits of establishing quantitative, albeit non-binding, targets within an EU T-II. By adopting such a strategy, the EU T-II could emulate the successful aspects of these models, leveraging targeted, measurable objectives to drive substantial policy impact and societal improvement, without the necessity of imposing strict binding conditions.

Means and resources of the desirable and feasible scenario

During the roundtable dialogue, participants discussed the means and resources necessary for the effective implementation of an EU T-II. They identified Eurostat and national statistics institutes as essential actors, emphasizing their critical role due to their expertise and established infrastructure. To enhance integration across various policy domains, participants also supported the formation of inter-service groups among different Directorates-General to break down existing silos within the EU's bureaucracy.

On the topic of resource allocation, there was a shared view that the new initiative should make prudent use of resources by leveraging existing frameworks and agencies, thus avoiding unnecessary expenditure, such as what the "informist path", or somehow the "reformist path", scenarios suggested. This approach aims to optimize current capacities with limited enhancements rather than seeking substantial new investments. Participants further justified this choice because the participatory process

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envisioned—institutional stakeholders collaboration and call for public contribution—require moderate resource compared to extensive participatory processes.

In the final part of the roundtable dialogue, participants also explored the need for oversight mechanisms within the EU framework. On that aspect, there was a general agreement that a gatekeeper role was not necessarily desirable. Participants concluded that due to the complex and multifaceted governance structure of the EU, the introduction of a dedicated gatekeeper, like the Future Generations Commissioner in Wales, might not be ideal in the framework of the EU T-II and might further reinforce siloed behaviours. Instead, they emphasized the importance of integrating the T-II within the existing frameworks and agencies, optimizing resource use without substantial increases, and managing the initiative directly through existing EU structures. Rather than the creation of a new agency, better coordination and synergies between current agencies was suggested for the development of a T-II.

For the fifth governance lever *(see Figure 10, p.74) —the implementation of enforcement mechanisms— participants at the roundtable dialogue largely dismissed the necessity of creating a new oversight agency. They argued that establishing such an agency would only add complexity to the EU's already intricate and compartmentalized governance structure. Instead, the focus shifted towards enhancing collaboration within existing frameworks and agencies. This approach emphasizes the importance of leveraging current structures for effective governance rather than introducing additional layers of oversight, which participants believed could potentially hinder rather than help the initiative's impact.*

However, in the selected IIs, we have tangible examples that the implementation of enforcement mechanisms have been decisive in bringing impact in the II. For instance, the CBS, though not officially designated as a gatekeeper, plays a crucial role in safeguarding the ethics and integrity of Bhutan's GNH philosophy. While CBS's primary function is not enforcement, its activities significantly contribute to ensuring the GNH remains a central element in policy-making and national development. The CBS's mandates include researching and promoting understanding of the GNH philosophy, conducting policy studies for the Royal Government of Bhutan, and fostering academic and public engagement through training, seminars, and publications. These responsibilities empower the CBS to influence and inform the design and implementation of the GNH index critically.

By acting as a semi-independent think tank and research organization, the CBS effectively supports the government by offering insights and data that ensure GNH principles are consistently applied across various governmental initiatives. It also engages in collaborative research that helps integrate GNH into public policy more effectively. Furthermore, the CBS serves as an information hub, disseminating research findings that help maintain transparency and inform public discourse on GNH-related issues. Through these activities, the CBS indirectly enforces GNH ethics by ensuring that policies and public actions remain aligned with Bhutan's development philosophy, even without having formal regulatory power.

Furthermore, the Future Generations Commissioner for Wales exemplifies, maybe in a more meaningful way, the crucial role gatekeepers can play in enhancing the impact of IIs. Tasked with an oversight function, the Commissioner's office is responsible for ensuring that Welsh public bodies and the government not only acknowledge but actively incorporate the long-term impacts of their decisions into

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current policymaking processes. This role is instrumental in weaving the considerations of future generations into today's decision-making, thereby ensuring that sustainable wellbeing becomes a practical guideline for governance.

Concretely, one of the main functions of the Commissioner is to monitor and assess how well public bodies are fulfilling their statutory duties to promote sustainable wellbeing and achieve the goals set out by the NWI. This involves reviewing the actions and policies of public bodies to ensure they align with the seven wellbeing goals. Additionally, the Commissioner has the authority to make recommendations to public bodies on how they could better apply the principles of sustainable wellbeing. These recommendations are not just advisory but carry a degree of influence, as public bodies are required to respond, detailing the actions they will take to comply with the recommendations or explaining why they will not comply. The Commissioner also engages in promoting best practices across public bodies, sharing innovative approaches to sustainable development that can be replicated to enhance the effectiveness of the NWI. This role includes providing guidance, resources, and training to support the integration of wellbeing measures into everyday public administration. Finally, the Commissioner's office engages with the public and various stakeholders to raise awareness about the importance of sustainable wellbeing and the principles underpinning the NWI. This engagement helps build a consensus and understanding of the importance of long-term wellbeing, thereby strengthening public and institutional support for the NWI's objectives.

By fulfilling these roles, the Future Generations Commissioner not only ensures compliance with the Well-being of Future Generations Act but also plays a crucial role in bringing transparency and accountability in the implementation of the NWI, thereby reinforcing its impact.

Drawing from the successful, even if limited, implementation of enforcement mechanisms in selected IIs, there lies a significant opportunity for the EU to deepen its commitment to a more idealistic T-II. These examples demonstrate practical ways to integrate strong enforcement mechanisms that ensure adherence to sustainable wellbeing goals. By considering these established practices, the EU could develop a more accountable and impactful framework, ensuring that long-term sustainability objectives are not just set but actively pursued and achieved.

Conclusion

Table 16 summarizes the outcomes of the roundtable dialogue by integrating the attributes of the envisioned scenario for a desirable and feasible T-II for the EU. Previous sections provide detailed discussions of each attribute and also offer recommendations for the EU to advance towards a more ideal T-II (see Figure 3, p.8), supported by examples from selected IIs.

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Table 16: *Attributes of the desirable and feasible European Union transformative indicators initiative, according to participants of the roundtable dialogue*

Attributes	Primary objective	Participation level	Indicator targets	Means and resources
The desirable and feasible T-II according to the roundtable dialogue	Supporting decision-making process with the integration of the T-II into the Impact Assessment mechanism	Co-construction with institutional stakeholders and open call for stakeholders' contributions	Quantitative binding targets for some already existing areas and qualitative nonbinding targets for the rest.	Optimization of existing resources with more synergies between current agencies and frameworks

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5. Final conclusions

In the face of escalating socio-economic crises, the urgency to explore innovative policy-making and decision-making approaches has never been more apparent. The drive to transcend traditional macroeconomic or macrosocial evaluation metrics, such as GDP, which has long dominated global economic assessments, reflects a growing recognition that true progress encompasses far more than economic output alone. Despite the amplification of the Beyond GDP movement in recent years, no indicators have yet systematically surpassed GDP in guiding economic assessments globally. This deliverable examined the transformative potential of IIs that aspire to guide in a new era of policymaking that genuinely reflects the complex realities of sustainable wellbeing. The ultimate goal of this examination was to identify mechanisms that enable these IIs to be transformative, providing foundational recommendations for the EU to establish its own T-II that can better measure and foster progress towards sustainable wellbeing.

Our study unfolded through three distinct subsequent phases: conceptualization, empirical analysis, and recommendation formulation. Thus, the **first phase** of our study established the foundational concept of T-II. We grounded our research in the theoretical frameworks of sustainable transition studies, particularly leveraging on the MLP and strategic niche management to define the concept of T-II. This conceptual phase delineated T-IIs as a synthesis of **three central criteria**: quality, theoretical depth, and impact reach. These criteria ensure that T-IIs are not only about designing high-quality measurement tools but are constructed to act as catalysts for profound socio-economic transformations aligned with sustainable wellbeing paradigms. Importantly, our interest extends beyond the indicators themselves; we focus on transformative indicators and the **underlying initiatives** that reflect the construction of a community around the interpretation of a common object from which these indicators originate. We contend that concentrating solely on the impact of the indicators overlooks the significant influence exerted by the actions and dynamics of the parties involved, often transcending the measurable impact of the indicators themselves.

In our conceptual framework, we posited that T-IIs should extend beyond merely measuring wellbeing to actively influencing and reshaping socio-economic realities. Thus, **T-IIs are defined** as initiatives which cultivate (1) measurement tools or metrics of high-quality standards that not only provide insights into (2) the theoretical dimensions of sustainable wellbeing but also possess the inherent capacity (3) to challenge, reshape, or replace prevailing institutional and socio-economic paradigms within a given social context, towards inclusive wellbeing within planetary boundaries. This approach positions T-IIs as dynamic instruments capable of driving real change, aligning theoretical insights with practical impact to forge pathways towards a sustainable wellbeing.

Following the conceptual groundwork, our **second phase** involved a practice review through the empirical analysis of eight existing IIs—MWM, GNH, CIW, NIW, BES, LSF, NPF, and NWI—potentially transformative. This examination—relying on desk-based research of more than 240 documents and 7 semi-structured interviews—was structured through a detailed reading grid that assessed the selected IIs against our conceptual T-II three criteria.

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At the end of phase 2, our analysis revealed that selected IIs generally show goods signs of alignment with the **quality criteria**, yet highlighted room for improvement, particularly in data timeliness and accuracy. This underscores a need for enhancements that could refine the usability and reliability of these indicators further. The assessment of **theoretical criteria** painted a more nuanced picture, revealing a substantial gap in how well these initiatives integrate a comprehensive approach that encapsulates integrative, boundary-defined, and systemic dimensions of sustainable wellbeing, with a notably weak integration of ecological considerations. Regarding the **impact criteria**, our findings indicate a greater distance from our conceptualization, particularly in the amplification out process, which, though not a primary focus—serving instead to support deeper scaling efforts—could be essential for the emergence of impactful and transformative initiatives. Most IIs demonstrated minimal replication and transfer activities, yet growth and spreading activities were more present, suggesting potential for broader influence. Crucially, our focus on amplification beyond focuses on initiatives alter rules (scaling up) and norms (scaling deep). Our analysis reveals that scaling up is significantly lacking in half of the examined initiatives, with a manifest absence of integration into budgetary allocation rules and of enforcement mechanisms to ensure commitment adherence, although both these governance levers are considered as the most impactful ones. Findings also stress a co-evolution across various amplification processes, suggesting that a more cohesive strategic approach could substantially bolster the overall impact of IIs. This co-evolution, particularly between the processes of speeding up and amplification beyond, is decisive for refining strategic approaches to ensure that IIs meet their transformative potential.

Our analysis also revealed the existence of **three distinct groups** of IIs: informist, reformist, and transformist, each embodying varying levels of proximity with our quality, theoretical, and impact criteria. The first group includes the MWM of Australia and the NIW of France, which show proximity with quality criteria but remoteness with theoretical depth and impact. MWM, still in its developmental phase, lacks a strong sustainable wellbeing vision, while NIW struggles with integration into decision-making processes and participatory mechanisms, limiting their transformative potential. The second group, comprising the CIW of Canada, the BES of Italy, the NPF of Scotland, and the LSF of New Zealand, exhibits high proximity with quality criteria and moderate theoretical proximity, with a significantly higher closeness with impact criteria, particularly due to better integration into decision-making and influencing norms and values within their contexts. The third group, consisting of the GNH of Bhutan and NWI of Wales, are highly close to our conceptualization across all criteria, though GNH could further get its theoretical aspects closer to our conceptualization by more directly incorporating environmental concerns. It is important to recognize that these categorizations are fluid, allowing for potential shifts as initiatives evolve and adapt to feedback and changing conditions.

During the **third phase**, the culmination of our theoretical (phase 1) and empirical (phase 2) insights was brought to a roundtable dialogue, engaging EU practitioners in a discussion on designing **a feasible and desirable EU T-II**. This dialogue helped us in refining how T-IIs could be realistically integrated within the EU's compartmentalized statistical system and complex policymaking landscape. Key outcomes from this roundtable emphasized the importance of:

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- Integrating the T-II into the EU's Impact Assessment mechanism for the T-II to support decision-making processes.
- In the constructing and review of the T-II, facilitating co-construction with institutional stakeholders while inviting broader participation through open calls for contribution;
- Establishing a balanced approach to indicator targets that combines quantitative, binding targets in policy areas where such targets already exist with qualitative, non-binding targets otherwise. Indicators targets should also take into consideration and acknowledge the diversity within EU-MS;
- Optimizing resources supporting the T-II by enhancing synergies among existing frameworks and agencies, avoiding thus the proliferation of new structures that may exacerbate existing bureaucratic complexities.

*Our **final proposition for an EU T-II** bridges theoretical and empirical insights with practical realities shared by EU practitioners. For the quality criteria, the EU is encouraged to uphold high standards that integrate accuracy (whether the assessment is close to the true or actual value of the phenomenon it intends to represent), reliability (whether the assessment is consistent and stable over time and across different conditions), robustness (whether the assessment is resilient to changes and adaptable when faced with variations, uncertainties, or challenges), timeliness (whether the assessment is updated regularly and promptly), coherence (whether the assessment fits into the broader statistical landscape), comparability (whether the assessment enables benchmarking), accessibility (whether the assessment is easily available, and clarity (whether the assessment is presented in a clear, understandable manner (language, visualization, explanatory material)). The theoretical underpinnings should be grounded in holistic, context-sensitive, boundary-limited, systemic, and integrated framework that considers wellbeing within individual, societal, and planetary domains—echoing the ToBe theoretical framework of sustainable wellbeing. As for the impact criteria, the EU should draw on the roundtable's recommendations but remain aware of the broader perspectives and goal: aligning closer to an ideal T-II. By leveraging lessons from the practice review of selected IIs, the EU can navigate towards a more effective and transformative implementation of a T-II.*

Following our comprehensive examination and the construction of a final proposition for a feasible and desirable EU T-II, it is important to clarify that our research does not prescribe a definitive list of transformative indicators for immediate adoption at the EU level. Instead, we provide a **conceptual framework** (see Figure 3, p.8) and **dynamic tool** (Table 3, p.34). These instruments are designed to assess and identify indicators that could effectively be integrated into a T-II. Our approach is not about furnishing a fixed list of metrics but about offering a flexible, evolving toolset that aligns with both the theoretical advancements and practical applications in the field of sustainable wellbeing indicators.

By developing a tool that adapts to the ongoing changes in understanding and priorities within sustainable wellbeing, we enable the EU to continuously refine and update its statistical system to further supports the development of a sustainable wellbeing paradigm. This method ensures that the **EU statistical system improves** its relevancy and effectiveness in driving the transformative change necessary for achieving a sustainable wellbeing future. This deliverable therefore supports the transformative potential of well-conceived IIs in reshaping the landscape of European policymaking and

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governance. By fostering an environment that embraces comprehensive evaluations, participatory processes, and dynamic target setting, the EU can lead by example in the global movement towards sustainable wellbeing.

This dynamic tool, designed to assist the EU in transforming its statistical system to more effectively drive transformative changes, also offers significant utility for a wide range of research endeavours that aim to incorporate sustainable wellbeing considerations into **macroeconomic modelling**. For instance, the tool is particularly aligned with the objectives of WP4 of the present ToBe project, which focuses on adapting ecological macroeconomic models to integrate considerations of sustainable wellbeing more deeply. By providing a flexible and adaptive framework, the tool facilitates the incorporation of emerging research findings and evolving policy needs into macroeconomic models. This not only enhances the relevance and effectiveness of these models in capturing complex socio-economic dynamics but also supports the development of policies that are more aligned with sustainable wellbeing goals. The availability of such a tool underscores the potential for cross-disciplinary applications, extending its benefits beyond the EU and into the global research community engaged in developing sustainable wellbeing pathways.

The scope and depth of our analysis of T-IIs present several **avenues for enhancement** in future research. One crucial aspect is the need for **more in-depth qualitative** research. Future studies could benefit significantly from conducting semi-structured interviews with more insiders of these initiatives. Such interviews would allow for a deeper understanding of the internal dynamics, challenges, and successes of IIs, providing richer, firsthand insights that go beyond public documentation. This approach would help in uncovering nuanced aspects of the implementation and amplification of these initiatives that are often masked in broad overviews.

The **geographical scope** of our current analysis predominantly covers initiatives from the global north, focusing on national levels. To enhance the global relevance and depth of our findings, future research should incorporate more IIs, specifically from the global south, and extend its focus to include local and regional initiatives. Such an expansion would not only provide a richer, more varied perspective on IIs, reflecting diverse socio-economic contexts and governance models, but also bolster the robustness of our proposed typology—informist, reformist, and transformist—through a more comprehensive dataset. More diverse cases would allow for robust statistical validation of these groups and enable a deeper understanding of their distinct characteristics. Furthermore, expanding the inclusion of more European initiatives would refine our recommendations, ensuring they are more coherent and applicable across national policies. Ultimately, this approach would strengthen the theoretical and practical impact of our study, leading to more nuanced and effective recommendations for an EU T-II.

Finally, to enhance the strength of the conclusions and to ensure a wider spectrum of perspectives is considered, there is a need for **more interactive and diverse methodologies** such as focus groups and additional roundtable dialogues. These methods should aim to bring together a varied group of EU stakeholders including policymakers, academics, and representatives from civil society to discuss and debate the merits and drawbacks of different IIs scenarios. This would not only enrich the dialogue around EU T-IIs but also promote a more democratic and inclusive approach to evaluating and shaping

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these tools. Such engagements can foster more critical and comprehensive discussions, ensuring that the development of future IIs is both participatory and reflective of multiple viewpoints.

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Annexes

Annex 1: Overview of the selected indicators initiatives

Measuring What Matters Indicators – Australia

Origins, main initial objectives, and construction process

Introduced by the Australian Treasury in July 2023, the MWM framework represents a pivotal advancement in Australia's approach to assessing national progress. This framework extends beyond traditional economic indicators like GDP and employment, integrating a broader array of metrics that align economic and social objectives more closely. It is designed to foster more informed policy discussions and improve quality of life across the nation. It builds on the legacy of the Treasury's earlier Wellbeing Framework and the Australian Bureau of Statistics' Measures of Australia's Progress, aiming to provide a richer, more nuanced understanding of the well-being of Australians.

The **Australian Treasury** developed its own **Wellbeing Framework**, first released publicly in 2004 and revised in 2011. This framework was designed to integrate broader social and economic considerations into policy evaluation and decision-making, focusing on factors such as income, wealth, economic and physical security, and governance. The Treasury's Wellbeing Framework aimed to guide policy advice by emphasizing the importance of sustainability and equity in assessing the long-term impacts of government decisions on citizens' well-being. Despite its early contributions, the use of the Treasury's Wellbeing Framework gradually faded from practice by 2016.

Simultaneously, the **Measures of Australia's Progress** was initiated by the **Australian Bureau of Statistics** in 1999, marking it as the first national statistical organization in the world to develop a progress measurement framework that acknowledged the limitations of GDP as a measure of societal progress. Officially launched in 2002, Measures of Australia's Progress combined economic, social, environmental, and democratic dimensions to provide a holistic assessment of national well-being. It tracked various indicators from health and education to housing and environmental sustainability, aiming to inform both policymakers and the public about areas of progress and concern. However, due to consecutive budget cuts, the MAP initiative concluded in 2014.

The development of the MWM framework was an iterative process, **engaging a broad spectrum of stakeholders** over two phases of public consultation. Initially launched alongside the October Budget 2022-23 and concluding in May 2023, the consultations received a total of 285 submissions from academic researchers, government agencies, businesses, community organizations, and individual Australians. These consultations were aimed at refining the proposed wellbeing themes and ensuring that the framework's indicators were culturally inclusive and resonated with the diverse perspectives of the Australian population, including significant input from First Nations communities.

Brief history

While the MWM is a **new initiative**, it is deeply rooted in a long-standing tradition of integrating broader economic and social goals into national metrics. This initiative indeed builds upon earlier efforts such

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as the Australian Bureau of Statistics' Measures of Australia's Progress and the Treasury's Wellbeing Framework. Looking ahead, the Treasury plans to continue refining the MWM framework to better support **future budgets** and contribute to the long-term well-being of Australians. An essential future step should involve not only measuring but also **aligning decision-making processes** with these metrics, setting national goals through an inclusive consultation process that reflects the values and vision of the Australia we wish to sustain for future generations.

Current theoretical structure

The MWM integrates a comprehensive theoretical structure that reflects international best practices, drawing on the OECD's Wellbeing Framework and the UN Sustainable Development Goals. At its core, MWM focuses on five key wellbeing themes: health, security, sustainability, cohesion, and prosperity (see Figure **16**). These themes encapsulate both current and long-term aspects of well-being, thereby adopting a holistic approach to assessing Australia's progress.

To operationalize these themes, the framework employs a set of 50 indicators, which include both objective measures and subjective assessments like life satisfaction. These indicators provide a detailed snapshot of national well-being and are annually updated on a publicly accessible dashboard. This dashboard serves as a tool for transparency and accountability and also offers data functionalities that allow for disaggregation by demographic variables such as gender, ethnicity, and age.

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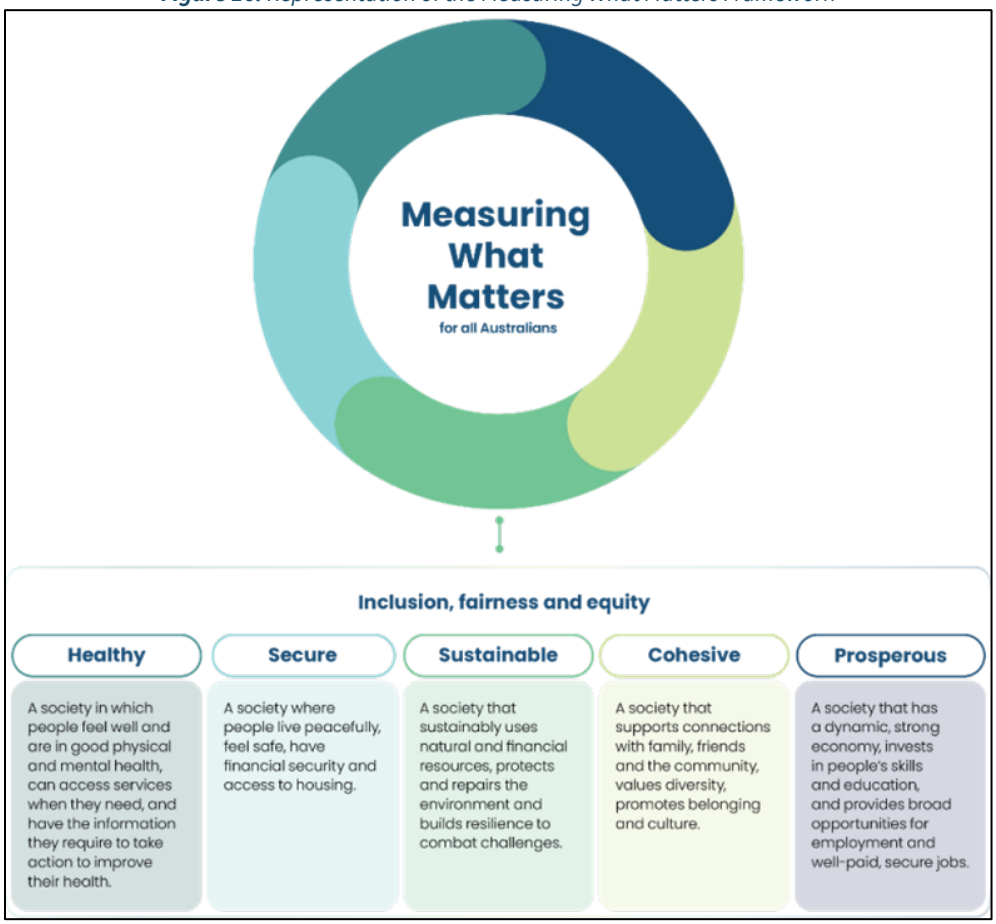
Figure 16: *Representation of the Measuring What Matters Framework*



Complementary tools and frameworks supporting the initiative

Governmental initiatives in Australia, alongside the Measuring What Matters (MWM) framework, encompass diverse approaches aimed at comprehensively assessing societal and environmental wellbeing. The **Closing the Gap** Information Repository, a critical component of the National Agreement on Closing the Gap, addresses entrenched inequalities faced by Aboriginal and Torres Strait Islander peoples, striving to equalize life outcomes across Australian society. Additionally, the Australia **State of the Environment report** provides a holistic evaluation of environmental conditions, integrating scientific, traditional, and local knowledge to inform policy decisions and assess stewardship efforts. This cyclical review, conducted every five years, aligns with national targets such as those outlined in Australia's 2030 Nationally Determined Contribution and net-zero emission goals, illustrating a commitment to sustainable environmental practices and long-term wellbeing.

Conversely, non-governmental initiatives in Australia offer complementary perspectives on wellbeing and environmental health, augmenting the MWM framework's breadth and depth. The **Mayi Kuwaya Study**, led by Aboriginal researchers at the Australian National University, represents a pioneering longitudinal examination of how culture influences the health and wellbeing of Aboriginal and Torres Strait Islander communities. Meanwhile, the **Australian National Development Index**, spearheaded by the University of Melbourne, provides nuanced insights into national development beyond traditional

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economic measures, encompassing social, environmental, and cultural dimensions. Additionally, the **Australian Unity Wellbeing Index**, a collaborative effort between Deakin University and Australian Unity, serves as a barometer of subjective wellbeing, capturing the multifaceted aspects of Australians' lived experiences and perceptions of prosperity. Together, these non-governmental initiatives enrich the landscape of wellbeing assessment in Australia, offering diverse perspectives and methodologies to inform policymaking and enhance societal outcomes.

International influence

The international influence of the MWM could be gradually emerging given that its recent inception in July 2023 limits its current global traction. However, Australia's longstanding expertise in sustainable wellbeing measurement has already fostered connections and collaborations that resonated on the international stage. For instance, Australia's rich history and expertise in sustainable wellbeing measurement, exemplified by initiatives like the Australian National Development Index (ANDI), have contributed to broader international discussions on comprehensive wellbeing assessment. The connection between ANDI and the CIW underscores Australia's influence in shaping global conversations and methodologies surrounding wellbeing measurement. Moreover, collaborative efforts with countries like Wales, facilitated by organizations such as the Centre for Policy Development, further exemplified Australia's engagement on international wellbeing frameworks.

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Gross National Happiness Index – Bhutan

The GNH index of Bhutan represents a **pioneering** approach in the beyond GDP movement, prioritizing the wellbeing and happiness of its citizens above conventional economic indicators. Originating in the 1970s under the inspiration of the King Jigme Singye Wangchuck, GNH embodies Bhutan's commitment to an economic and societal model deeply rooted in **Buddhist spiritual values**, striving for a balance between four pillars: sustainable and equitable socio-economic development, environmental conservation, preservation and promotion of culture, and good governance. This framework aims to ensure holistic development of the society, enhancing the overall **happiness** and satisfaction of the Bhutanese people.

Origins, main initial objectives, and construction processes

The GNH framework was developed by Bhutan to establish a socio-economic model deeply rooted in its distinctive cultural values, prioritizing happiness and wellbeing as the fundamental objectives of national development. The creation of the GNH index was a **highly participative process** involving extensive public consultation, making community engagement a cornerstone of the framework. Today, the **CBS, an independent research centre**, with the help of Oxford University researchers, leads all empirical research related to GNH, conducting surveys and disseminating results through publications and conferences. CBS plays a crucial role in keeping both governmental bodies and the public informed about its research outcomes.

CBS undertakes **comprehensive surveys** approximately every five years to assess public wellbeing and shape policy effectively. These surveys are designed not only to collect data but also to stimulate public discourse on happiness, encouraging citizens to contemplate and articulate what happiness means to them. This reflective process is integral to ensuring that the GNH index remains a true and dynamic representation of the collective aspirations and evolving needs of Bhutanese society. Thus, the GNH index transcends its function as a mere governmental tool, embodying the lived values and hopes of the Bhutanese people.

Brief history

Over time, the GNH index has undergone several assessments, beginning with a pilot survey in 2007, followed by a more comprehensive iteration in 2008. Subsequent surveys in 2010, 2015, and 2022 have maintained consistent questionnaires to enhance the precision of data and comparability over time. During this period, Bhutan has witnessed **significant socio-economic transformations**, including its first **democratic** elections in 2008 and an **opening up to global influences**, which marked a shift from its previously isolated, underdeveloped status.

The evolution of GNH has mirrored Bhutan's socio-economic changes. From the mid-1990s, as Bhutan endeavoured to **modernize** and mitigate the impacts of globalization, GNH policies also adapted, aiming to balance modernization with the preservation of cultural values. This policy shift was particularly evident during the 2008 and 2012 elections when GNH was a **central political issue**, reflecting debates on whether GNH should concentrate solely on domestic wellbeing or also promote its values internationally.

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The concept of the **'middle way'** has thus become a guiding principle in these deliberations, suggesting that GNH need not choose between national and international focuses. It advocates for a dual approach where Bhutan addresses its internal challenges while sharing its development philosophy globally, embracing the Buddhist principle of 'dana' or generosity. To achieve this, enhancing both national and global understanding of GNH is crucial, aligning with the government's objective during the Thinley administration (2008-2013) to promote GNH internationally, acknowledging Bhutan's integral role in a globalized world.

Current theoretical structure

At the core of the GNH index are four foundational pillars established in 1998: sustainable and equitable socio-economic development; preservation and promotion of cultural values; conservation of the environment; and good governance. These pillars are quantified through a comprehensive index that assesses happiness across 9 domains, using 33 cluster indicators (relying on 124 individual variables) (see Figure **17**).

The GNH index employs a modified **Alkire-Foster method**, a technique originally developed for measuring multidimensional poverty and wellbeing. This adaptation involves setting two types of thresholds for each variable: a "sufficiency threshold" that delineates the minimum conditions necessary for happiness, and a "happiness threshold" that sets more aspirational goals. The calibration of these thresholds is informed by a mix of international benchmarks, national standards, and value judgments derived from extensive consultations with stakeholders at institutional, governmental, and community levels.

Individuals are classified into four happiness categories based on their achievements across the domains: those achieving sufficiency in less than 50% of domains are labelled "unhappy"; in 50-65% as "narrowly happy"; in 66-76% as "extensively happy"; and in 77-100% as "deeply happy". The **GNH formula**, $GNH\ Index = H^h + (H^u * A^u_{suff})$, quantifies the overall happiness in Bhutan, where H^h represents the proportion of the population that is 'happy' (extensively and deeply happy), H^u is the proportion 'not-yet-happy' (unhappy and narrowly happy), and A^u_{suff} is the average sufficiency score among the not-yet-happy.

This methodological framework ensures that GNH is a **dynamic tool for policy guidance**, aiming not only to increase the number of 'happy' individuals but also to enhance the wellbeing of the 'not-yet-happy' by addressing their most **significant deprivations**. The GNH index's multidimensional approach thus offers a nuanced perspective on wellbeing, capturing the complex challenge of fostering sustainable happiness within the community.

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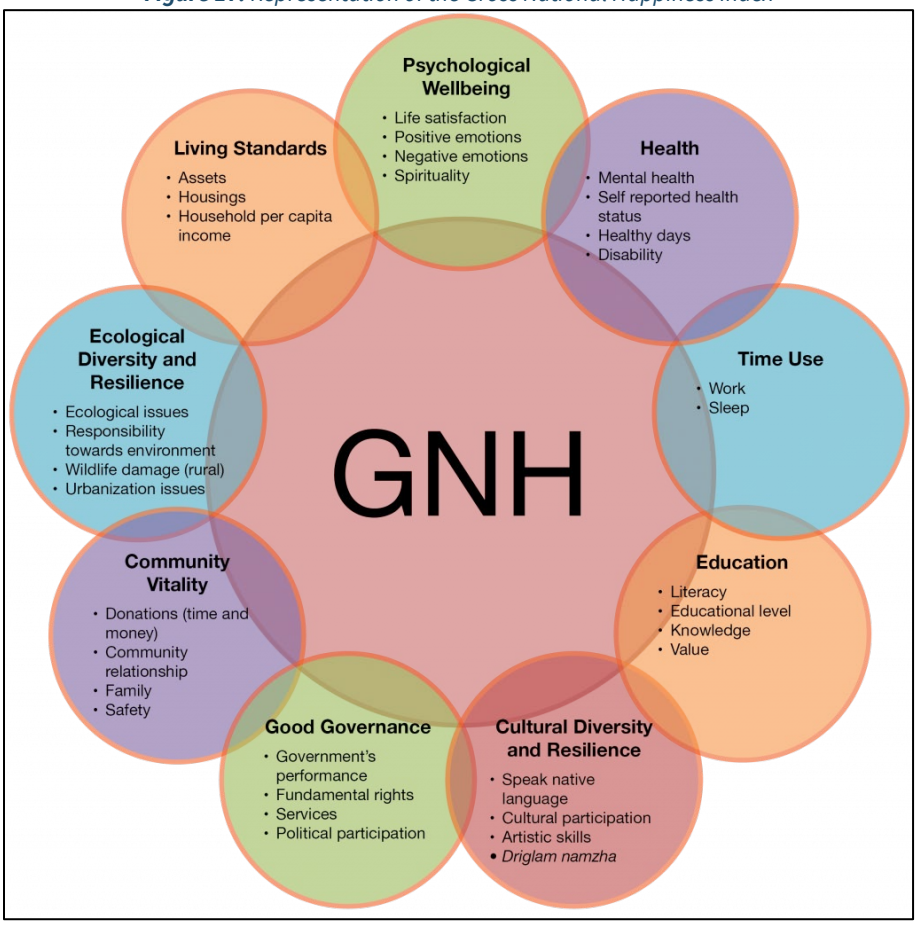
Figure 17: *Representation of the Gross National Happiness Index*



Complementary tools and frameworks supporting the initiative

The GNH index is deeply integrated into Bhutan's governance and policy-making frameworks. Government bodies are required to adopt GNH principles in their strategic planning, ensuring that initiatives contribute positively to societal wellbeing. Bhutan supports this integration with a robust set of tools, including the GNH Commission, policy/project screening tools, and GNH checklists, which facilitate a comprehensive evaluation of the impact of policies across all government levels.

The **GNH Commission**, which consists of experts well-versed in relevant fields, employs a **policy/project screening tool** to evaluate proposals based on the nine wellbeing domains of GNH. Only projects scoring above a neutral threshold of 69 out of 100 are selected. Although the Bhutan government's Protocol for Policy Formulation still officially requires all policies to undergo this GNH assessment, and government publications assert the necessity for every development policy to meet a minimum score for endorsement, there remains no concrete evidence that the tool has been improved to be systematically implemented in practice. Bhutanese policymakers mention that the GNH screening tool is not regularly used today due to its complexity and the difficulty in applying its indicators, citing a lack of clarity and transparency.

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The GNH Commission, serving as the coordinating apex body just below the cabinet, is also tasked with integrating GNH principles into ministry programs and overarching national strategies such as the **Five-year plans**. The Five-Year Plan outlines Bhutan's strategic objectives, with many targets within the latest plan derived directly from components of the GNH Index

At the local level, districts and gewogs implement **GNH checklists** within their planning frameworks to maintain the principles of integrated development. These efforts are coordinated by the GNH Commission, which also oversees the infusion of GNH into ministry programs.

Additionally, the GNH index informs resource allocation through the **Resource Allocation Formula**, which considers factors such as population density, multidimensional poverty, and geographic isolation, enriched by GNH metrics. This approach was notably applied in the 12th Five-Year Plan (FYP), where GNH scores helped determine funding distributions, highlighting its growing influence in fiscal planning.

International influence

The GNH index has significantly influenced global discussions on development and wellbeing, culminating in its central role at the United Nations. In 2011, inspired by GNH, the UN General Assembly adopted Resolution 65/309, advocating for a holistic approach to development that acknowledges the limitations of GDP as a wellbeing indicator. In April 2012, Bhutan spearheaded a high-level UN meeting titled "Happiness and Wellbeing: Defining a New Economic Paradigm", which was attended by global leaders including the UN Secretary-General. At this event, discussions centred around moving beyond the GDP-centric model towards a framework that integrates happiness and acknowledges planetary boundaries. This redefined perspective has not only shaped international policy discussions but has also been integrated into the UN's post-2015 development indicators, highlighting the GNH index as a crucial metric.

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Canadian Index of Wellbeing – Canada

The Canadian Index of Wellbeing (CIW), developed and maintained by the University of Waterloo, represents a groundbreaking initiative to comprehensively measure the wellbeing of Canadians across multiple dimensions of life. Unlike traditional indicators that primarily focus on economic productivity, such as GDP, the CIW offers a more holistic view of society's progress by integrating domains that directly affect the quality of life of individuals and communities. This innovative framework reflects Canada's commitment to fostering a society where economic success is balanced with social progress and environmental sustainability.

Origins, main initial objectives, and construction processes

By the end of the 1990's, the Atkinson Foundation identified a critical gap in how Canada's wellbeing was being measured and sought to establish an independent and authoritative national voice to evaluate the economic, health, social, and environmental facets of Canadian life. To this end, Atkinson Foundation incubated the CIW as an in-house project and, in collaboration with Canadian index experts, explored methodologies for a comprehensive wellbeing assessment tool.

Public engagement was paramount in the CIW's methodology, with the project positioning itself as a **citizen-driven** entity to avoid any perception of partisan or governmental bias. This foundational principle guided the CIW to conduct extensive public consultations in three successive rounds that spanned Canada's vast geography. These consultations solicited frank input from Canadians about the critical factors impacting their quality of life and the metrics that should be tracked. By 2010, the CIW had found a permanent base at the **University of Waterloo**, enhancing its capacity to influence and disseminate its findings more strongly. The University has since played a crucial role in making the CIW's insights accessible and engaging for a wide audience, regularly releasing special reports and updates on the eight domains of wellbeing.

Brief history

The CIW was initiated by the Atkinson Foundation in the late 1990s, culminating in the establishment of eight wellbeing domains by 2010. The CIW was permanently housed at the University of Waterloo's Faculty of Health in 2011, where it released its inaugural national composite index. Subsequent updates followed in 2012 and 2016, with another planned for 2025.

Beyond national reports, the CIW has expanded into **regional assessments** with provincial reports for Ontario, Nova Scotia, Saskatchewan, and soon, Manitoba. It also developed the **Community Wellbeing Survey** in 2012 to provide detailed local analyses, utilized by nine communities, including the first governmental application by the Yukon in 2020.

In collaboration with UNICEF Canada, the CIW created the **Canadian Child and Youth Wellbeing Index** in 2019, further adapted by the Siksika Nation in 2021-2022 for the first Indigenous-led survey. These developments highlight the CIW's role as a versatile tool for measuring and promoting wellbeing across different levels of Canadian society.

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Current theoretical structure

At its foundation, the CIW features **eight interconnected domains** that holistically encapsulate wellbeing: Community Vitality, Democratic Engagement, Education, Environment, Healthy Populations, Leisure and Culture, Living Standards, and Time Use (see Figure **18**). These domains were meticulously selected through extensive research and widespread **consultation** with Canadians, reflecting the nation's diverse values and priorities. The CIW prioritizes an ideal conception of wellbeing as articulated by Canadians themselves, rather than merely relying on available data, which allows for the inclusion of **placeholders** for future refinement.

Each domain within the CIW is measured by 8 indicators against a baseline where every indicator is **indexed to 100 points as of 1994**. Subsequent measurements gauge rises or falls from this benchmark, facilitating a clear depiction of trends over time in percentage change terms. The overall CIW score is then derived as the average of these domain trends, providing a comprehensive snapshot of national wellbeing that transcends traditional economic metrics.

Operationally, the CIW is managed by the University of Waterloo alongside various partners who collectively undertake rigorous data collection and analysis. This process leverages data from national surveys, administrative records, and other critical studies to ensure the index's accuracy and reliability. By tracking wellbeing changes over time, the CIW not only identifies areas where Canada excels but also pinpoints where enhancements are necessary, thereby enabling CIW team to inform targeted actions to improve the overall quality of life.

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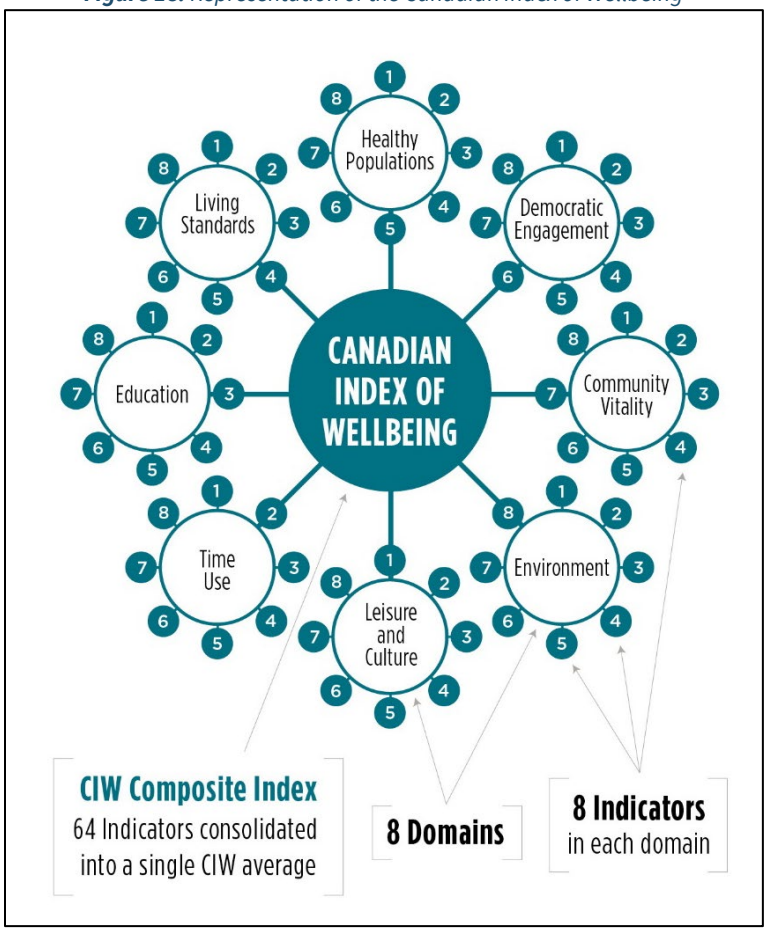
Figure 18: *Representation of the Canadian Index of Wellbeing*



Complementary tools and frameworks supporting the initiative

To maximize the utility of the CIW, policymakers, community leaders, and other key stakeholders are encouraged to leverage the index as a foundational tool for crafting and assessing public programs and policies. The CIW has notably influenced the development of "Measuring What Matters: Toward a Quality of Life Strategy for Canada", a strategic initiative launched by the Canadian government in 2020, which underscores its inspirational role.

Throughout its development, the CIW has spurred the creation of several complementary tools aimed at enhancing community engagement and specific demographic analyses, such as the **Community Wellbeing Survey** and the **Canadian Child and Youth Wellbeing Survey**. Although these tools have enriched the broader dialogue around wellbeing, they have yet to be routinely integrated into the national government's decision-making processes.

International influence

While the CIW has achieved some level of recognition in media circles both nationally and internationally since the mid-2010s, its concrete global impact remains **relatively modest**. The CIW's influence on international wellbeing initiatives can primarily be traced through isolated engagements of its key personnel rather than through widespread adoption of its frameworks.

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Specifically, Ron Colman, a significant figure in the development of the CIW, contributed to **Bhutan's GNH index**. This collaboration suggests some level of methodological exchange, but it represents a singular instance rather than a broader trend (Colman, 2021). Similarly, Bryan Smale, the current director of the CIW, has served as a consultant for specific projects such as **Italy's BES and Scotland's NPF**.

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New Indicators of Wealth – France

The NIW in France were established by the "Sas Law" in 2015, following the Stiglitz-Sen-Fitoussi Commission's report supporting the broadening of metrics beyond GDP to include economic, social, and environmental dimensions. Despite efforts to integrate extensive stakeholder consultations, critiques such as those from FAIR suggest that the process was more confirmatory than collaborative. The NIW faced challenges with its perceived independence and the timeliness of its reports, leading to the discontinuation of its annual release. However, these indicators are still published annually by the INSEE. This ongoing publication ensures that, despite setbacks, the NIW continues to stimulate some debate on measurements issues.

Origins, main initial objectives, and construction process

The NIW in France trace their origins to the influential **Stiglitz-Sen-Fitoussi Commission report**, which critically reevaluated the adequacy of GDP as a sole measure of national progress. This reflection sparked a broader movement to develop indicators that more comprehensively reflect economic, social, and environmental wellbeing. In response, France institutionalized these efforts through legislation, the **"Sas Law",** passed on April 2, 2015, mandating an annual report to Parliament detailing the evolution of indicators such as inequality, quality of life, and sustainable development. This law aimed to integrate new dimensions of wealth into the policymaking process, particularly preceding the budget discussion at the parliament.

The process for selecting these indicators involved **extensive consultation** mechanisms organized by the French government, engaging a diverse group of about 60 stakeholders including researchers, civil society representatives, and international experts. These consultations were designed to refine and prioritize the indicator set through various methods, including online and telephone surveys and focus groups. However, some participants, including members from the Forum pour d'Autres Indicateurs de Richesse (Forum for Other Indicators of Wealth) (FAIR), criticized **the process as being more confirmatory than truly consultative**.

FAIR argued that the consultation methods fell short of a genuine participatory process. They contended that the approach largely served to validate a pre-determined set of indicators chosen by the CESE, rather than engaging citizens and experts in a meaningful debate to collaboratively construct the indicator set. This superficial engagement, according to FAIR, undermined the potential of the consultations to capture a comprehensive array of perspectives and diminished the transformative impact such indicators could have on public policy. FAIR advocated for a more in-depth and democratic dialogue that would not only evaluate but also shape the development of indicators by truly incorporating public and expert input, thus ensuring that the NIW could offer a balanced and critical counterpoint to traditional economic measures like GDP.

The finalized set of indicators was intended to offer a multi-dimensional view of France's progress, influencing policy at all government levels. The reports generated from these indicators should be debated in Parliament, providing a structured opportunity to assess and adjust national strategies in line with the holistic wellbeing goals set forth.

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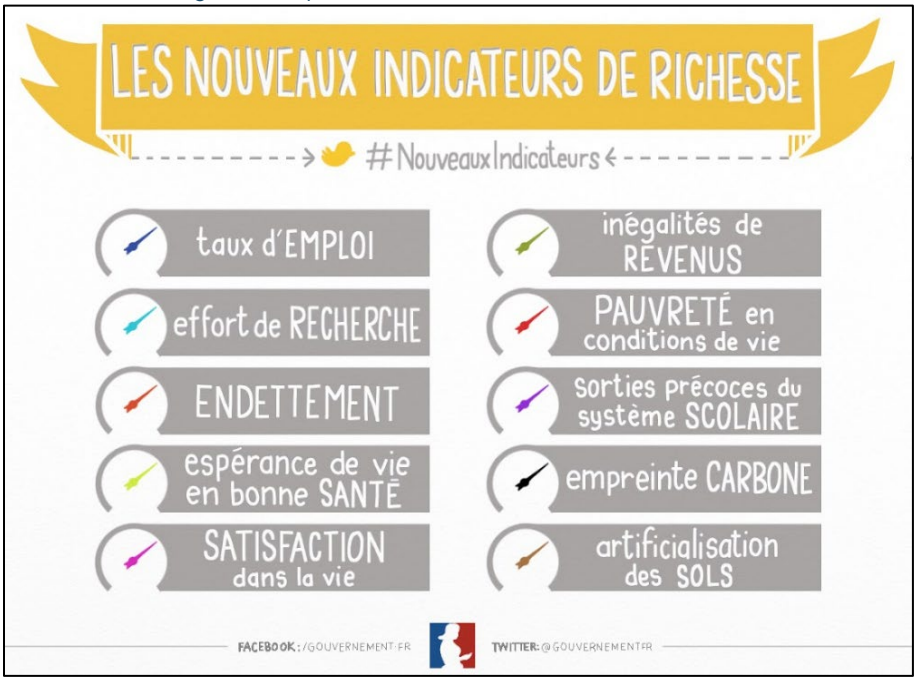
Brief history

The journey of the NIW began with a legislative action in 2015, known as the "Sas Law", which marked a decisive moment in the country's approach to measuring progress. This law mandated the creation of an annual report, compiled by the INSEE, which would detail developments across a suite of NIW. These indicators were designed to encompass a broader spectrum of national prosperity, including economic, social, and environmental dimensions.

However, the initiative faced **challenges of timeliness and independence**. By 2018, the formal report that was meant to influence legislative discussions was **discontinued**. Despite this setback, the INSEE has continued to collect and publish the data annually, maintaining a commitment to providing these broader metrics. A significant issue noted was the **timing of the report's publication**, which consistently lagged, being released after the national budget discussions had concluded in Parliament. This misalignment severely restricted the report's potential impact on shaping fiscal policy, as the data intended to inform budgetary decisions was not available when most needed.

Current theoretical structure

Figure 19: *Representation of the New Indicators of Wealth*



The NIW in France consist of ten diverse metrics aimed at capturing social, economic, and environmental dimensions (see Figure **19**), though they lack systematic interconnection. Economically, the NIW measures include income inequality and employment rates to analyse wealth distribution and labour market dynamics. Socially, it assesses, among others, educational attainment, health outcomes, and life satisfaction to gauge the populace's wellbeing. Environmentally, it tracks sustainability through carbon emissions and soil artificialisation, providing insights into France's ecological progress. Collectively, these indicators offer a snapshot of national development.

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Complementary tools and frameworks supporting the initiative

The obligation to produce an annual NIW report was discontinued after three years, due in part to concerns over the report's perceived lack of independence and the untimely nature of its publication. Despite the setback at the national level, numerous regional and local initiatives focused on sustainable wellbeing measurements have flourished across France. These grassroots and decentralized efforts are sometimes supported by local governments and strongly by civil society and academic institutions, which play a fundamental role in nurturing and expanding the beyond-GDP movement.

Currently, France's strategic focus seems to have shifted towards **integrating the SDGs** and implementing the **green budget framework**. The green budget initiative integrates environmental considerations directly into financial planning processes, ensuring that fiscal policies support France's ecological objectives. These frameworks reflect France's adaptive approach to measuring and supporting sustainable wellbeing, highlighting a transition towards globally aligned and environmentally focused strategies as the nation seeks to address contemporary challenges effectively. This local and academic engagement underscores a dynamic and community-driven response to wellbeing assessment, compensating for the lack of a strong national initiative.

International influence

The NIW, as a standalone framework, does not appear to have garnered significant international influence. However, the foundational work that led to their development, particularly the report from the **Stiglitz Commission**, has had a notable impact globally. This seminal report has been extensively discussed and has inspired numerous initiatives aimed at developing more comprehensive measures of national progress. Among these, the OECD has been particularly influenced, integrating similar concepts into its own frameworks for measuring sustainable wellbeing and economic performance. This broader adoption underscores the key role that the Stiglitz Commission's findings play in shaping global discourse on moving beyond traditional GDP metrics to embrace a multifaceted approach to assessing prosperity.

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Equitable and Sustainable Wellbeing Indicators – Italy

The BES represent a pioneering initiative to gauge the Italy's progress by focusing on the wellbeing and quality of life of its citizens, beyond the conventional economic metrics such as GDP. Launched by the ISTAT in collaboration with the National Council for Economics and Labour (CNEL), the BES framework underscores Italy's commitment to fostering a holistic approach to development, one that values social equity, environmental sustainability, and economic vitality in equal measure.

Origins, main initial objectives, and construction process

The origins the BES can be traced back to the influence of **Enrico Giovannini**, who became the president of **ISTAT** in 2009. At this time, the international statistical community was deeply engaged in discussions about measuring societal progress, largely inspired by the Stiglitz, Sen, Fitoussi Commission on Economic Performance and Social Progress (2009). Giovannini's previous involvement in the initiatives such as the OECD's "Measuring wellbeing and Societal Progress" and the 1st OECD World Forum on (Wellbeing) Knowledge, Statistics and Policy, in Palermo (2004) further shaped the BES's beginning, also supported by emerging local initiatives like QUARS, (an initiative launched in 2003 by Sbilanciamoci!, an Italian non-government organisation, and that aimed at measuring regional wellbeing in Italy).

The primary goal of the BES, established in 2013 through a collaboration between CNEL and ISTAT, was to equip Italy with a **comprehensive set of non-financial indicators** that reflect the true wellbeing of its citizens at a national scale. This initiative sought to redefine the notion of progress in Italian society by crafting a shared set of economic, social, and environmental indicators that resonated with the insights from the Stiglitz Commission.

The development process of the BES was methodically structured through the formation of two key committees: a steering committee and a scientific committee. The **steering committee**, comprising experts from both CNEL and ISTAT, was tasked with defining and selecting relevant domains to ensure that the framework comprehensively represented various societal perspectives. Concurrently, the **scientific committee**, staffed by specialists from ISTAT, focused on proposing and vetting the specific indicators to populate these domains, ensuring that the BES was grounded in reliable and accessible data.

Brief history

The BES officially commenced with its first report in 2013. This inaugural release featured over 130 individual indicators structured across twelve domains, each aimed at capturing distinct aspects of daily life across Italy's twenty regions. The BES initiative began to evolve by producing **domain-specific composite indices** from 2015 onwards.

Recognizing the need to support local policymaking with precise wellbeing assessments, the BES expanded to include provincial wellbeing indicators starting in 2013. This expansion, facilitated by a collaboration between the Coordination of Statistics Offices of Italian Provinces (CUSPI) and ISTAT, aimed to develop a robust statistical system for large area organizations. This initiative, although ambitious, saw participation from 20 provinces and seven metropolitan cities by 2019, highlighting a gradual but incomplete adoption across all Italian provinces.

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Parallel to provincial efforts, the **UrBES** project was launched in 2012 to drill down into urban wellbeing, beginning with Bologna in collaboration with ISTAT. This project adapted BES methodologies to the urban context, utilizing a subset of BES indicators to allow city administrators and communities to conduct detailed local wellbeing analyses. By 2015, the UrBES project had produced two comprehensive reports, integrating these urban profiles into the broader provincial BES framework, which by then also included metropolitan cities.

ISTAT has also advanced the application of wellbeing measures with the development of the BES at a territorial level (**BesT**), designed to examine the nuances of wellbeing across smaller regional scales. This initiative, launched with the first report in 2018, was collaboratively crafted with local authorities to cater specifically to the informational demands of municipalities, provinces, and metropolitan cities, ensuring consistency with the broader national BES framework.

In a substantial move towards policy integration, the Italian government legislated through the 2016 Budget Law to embed wellbeing indicators directly into national fiscal policy. The Committee for Equitable and Sustainable wellbeing Indicators identified 12 critical BES indicators to guide economic planning and strategy. The Ministry of the Economy and Finance was mandated to monitor these indicators, providing annual updates that include retrospective evaluations for the three last-years and future projections, for 4 out 12 indicators, within the **DEF**. A report monitoring the BES 12 indicators is also presented to parliament to ensure transparency and legislative oversight. This pivotal integration of the BES metrics into the budgetary process signifies the evolution of the BES from a mere statistical tool to a foundational element in strategic national policymaking, enhancing the role of wellbeing measures in shaping Italy's economic landscape.

Current theoretical structure

At its core, the BES framework integrates twelve diverse domains that collectively encapsulate a holistic view of wellbeing. These domains include Health, Education and Training, Work and Life Balance, Economic Wellbeing, Social Relationships, Politics and Institutions, Safety, Subjective Wellbeing, Landscape and Cultural Heritage, Environment, Innovation, Research and Creativity, and Quality of Services. Each domain is measured through systematic data collection and analysis, ensuring that the BES indicators provide a multidimensional assessment of Italian wellbeing.

Initiated to enhance regional wellbeing insights, the BES has progressively refined its methodology. Starting in 2015, and up to the 2019 report, ISTAT began producing domain-specific composite indices. These indices employ the Adjusted Mazziotta-Pareto Index for aggregation, a statistical technique that normalizes individual indicators through a min-max transformation and integrates them using a penalized arithmetic average. This method captures the variability among indicators, thus providing a more accurate and representative measure of each domain's contribution to overall wellbeing. This evolution marks a significant enhancement in the granularity and applicability of the BES, allowing for targeted analyses and interventions tailored to specific wellbeing aspects.

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Complementary tools and frameworks supporting the initiative

Italy pioneered the integration of wellbeing indicators into budgeting process by legislating in 2016 that a selection of 12 wellbeing indicators must be incorporated into the **DEF,** through the Annex on equitable and sustainable well-being indicators. This made Italy the first country to formally tie wellbeing assessments to its budgeting process. This DEF, which outlines Italy's economic and financial strategy, now includes a select subset of 12 indicators from the BES. These indicators are used to report previous 3 years evolution and forecast the impact of policies on various outcomes for the next 3 years. Modelling of the forecast is performed by the Ministry of Economy. It is important nonetheless to note that the DEF focuses exclusively on objective indicators from the broader set of 153 BES metrics, excluding subjective measures such as life satisfaction, because of this forecast objective. This choice reflects a deliberate prioritization of tangible outcomes in policy impact assessments.

International influence

The BES initiative has significantly influenced the international discourse on wellbeing metrics in the 2010's, establishing Italy as a **pioneer** within the OECD in developing comprehensive wellbeing indicators. Italy hosted the first World Forum on "Statistics, Knowledge, and Policy" in Palermo in 2004, marking a critical juncture in global efforts to enhance the measurement of societal progress beyond traditional economic indicators. This event set the stage for Italy's leadership in the field, spearheaded by Enrico Giovannini, a key figure in promoting the BES initiative both domestically and internationally. Giovannini's contributions have been instrumental in shaping the international approach to wellbeing measurement, emphasizing the need for metrics that reflect true societal progress. Additionally, the impact of the BES initiative has been further disseminated through scholarly publications, including two volumes published by Springer focused on the measurement of wellbeing in Italy.

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Living Standards Framework Dashboard – New Zealand

The LSF represents New Zealand's strategic initiative to advance public policy by evaluating and promoting the wellbeing of its citizens beyond conventional economic measures. Developed by the New Zealand Treasury, the LSF emerged from a series of foundational studies and reports beginning in the early 2000s, which underscored the necessity of integrating broader wellbeing indicators into national progress assessments. The LSF dashboard has been officially launched in 2018. This tool consolidated previous efforts, providing a platform for engaging the public and gathering feedback to refine and expand the framework's capabilities.

Origins, main initial objectives, and construction process

The LSF is a hallmark initiative developed internally by the New Zealand Treasury to enhance its public policy evaluation and formulation by focusing on the broader determinants of wellbeing, beyond mere economic measures. This framework was designed **to support the Treasury's advice** to Ministers on priorities for improving the living standards and the overall quality of life for all New Zealanders.

The origins of the LSF trace back to foundational works such as the 2008 and 2010 reports by Stats NZ titled "Measuring New Zealand's Progress Using a Sustainable Development Approach", which themselves built upon the "Monitoring Progress Towards a Sustainable New Zealand Reports" from the early 2000s. These efforts laid the groundwork for a comprehensive approach to measuring wellbeing that was later refined and expanded by subsequent initiatives. In 2011, an essential development occurred when the New Zealand Treasury released a paper providing a snapshot of New Zealand's living standards, which served as a direct precursor to the LSF.

In 2018, the Treasury launched the Living Standards Framework **Dashboard,** a quantitative consolidation of previous efforts and a natural extension of its strategic focus on wellbeing. The Dashboard provides a structured and transparent indicators set, resulting from; public engagement, having received wide-ranging feedback through consultations, including over 500 responses and 60 submissions from various sectors during its proposal phase.

Indeed, the **public participation** has been a cornerstone of the LSF's development strategy. The New Zealand Treasury has actively sought the input of a wide array of stakeholders, including community organizations, business leaders, academic experts, and the general public. This engagement is aimed at ensuring that the LSF accurately reflects the diverse values and aspirations of New Zealand society. Such inclusive processes are crucial for identifying actionable priorities and ensuring that the framework remains adaptive to changing societal needs.

Brief history

The development of the LSF has evolved significantly since its conceptual beginnings in 2011, aiming to broaden the perspective on national progress beyond mere economic indicators to include a wider array of wellbeing metrics. Initially inspired by early efforts to track sustainable progress, the LSF was catalysed by the Treasury's 2011 snapshot of New Zealand's living standards.

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By 2018, the framework had matured with the release of the Living Standards Dashboard, integrating insights into New Zealanders' wellbeing across various domains, informed by extensive public engagement. This engagement highlighted several **framework limitations**, leading to a significant refresh in 2021. This update focused on enhancing cultural, children's wellbeing, and te ao Māori perspectives, and included a series of discussion papers that broadened the framework's scope.

The LSF has been incorporated into various legislative and policy initiatives to ensure its principles guide government action. These include the embedding of wellbeing considerations into **the Public Finance Act (2020),** influencing budgetary processes through the annual **Wellbeing Budgets initiated in 2019,** and shaping the Child Poverty Reduction Act's targets (2018). Furthermore, amendments to the Local Government Act (2019) reinstated wellbeing as a core purpose of local governance, emphasizing the framework's influence at both national and local levels.

Following the 2020 amendments of Public Finance Act of 1989, the Treasury launched its **Wellbeing Report in late 2022.** This report is mandated to occur every four years and is designed to provide a comprehensive assessment of the state of wellbeing in New Zealand. Utilizing the 2021 version of the LSF and integrating insights from He Ara Waiora, the report aims to outline the current status of wellbeing, track changes over time, and evaluate the sustainability and risks associated with these trends. While the Public Finance Act does not specify which indicators must be used, it entrusts the Treasury with the responsibility to apply its best professional judgement in selecting appropriate measures that reflect the multifaceted nature of wellbeing across the nation. This approach underscores the government's commitment to a rigorous and informed evaluation of the nation's progress, ensuring that policy decisions are grounded in a comprehensive understanding of both present conditions and future possibilities.

Additionally, the Treasury has consistently worked to align the LSF with New Zealand's policy environment, collaborating with a range of departments and leveraging the framework in strategic documents like the Investment Statement. Efforts to foster a broader adoption of wellbeing analytics in public service aim at facilitating a more integrated and intergenerational approach to policymaking and performance reporting. This holistic and continuously evolving approach reflects a commitment to embedding sustainable wellbeing into the fabric of New Zealand's public policy landscape.

Current theoretical structure

The LSF provides a comprehensive approach to measuring wellbeing through a diverse set of indicators that cover social and environmental dimensions. At the core of the LSF are four types of capital that are considered fundamental to current and future wellbeing: natural capital, social capital, human capital, and financial/physical capital. This framework positions these capitals as interdependent, emphasizing that sustainable improvements in living standards necessitate a balanced approach to nurturing and utilizing these capitals over time (see Figure **20**).

A distinctive feature of the LSF is its conceptual differentiation between **immediate** wellbeing outcomes and the systems that sustain these outcomes over the **long term**. This allows for monitoring and assessment of whether current benefits are being achieved at the expense of future wellbeing, helping

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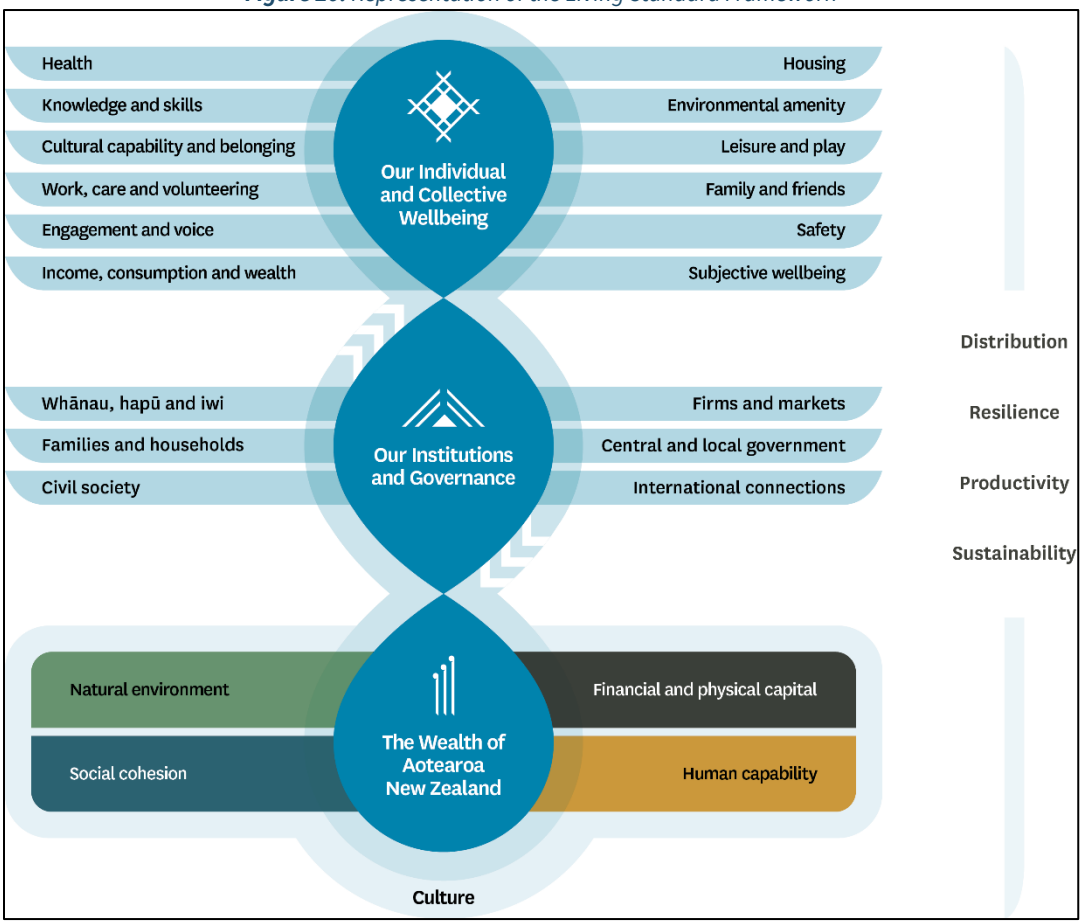
to clarify the trade-offs involved in policy decisions and highlighting the framework's focus on intergenerational equity.

Despite its strengths, the LSF recognized the need for further development in several areas. It aimed to better integrate **Te Ao Māori perspectives** and to develop indicators that can capture New Zealand's unique cultural identity and the pivotal role of child wellbeing in shaping future generations. The framework also acknowledged gaps in addressing risk and resilience, as well as the need to enhance its coverage of institutions, knowledge and skills, and the interactions between human and natural capital. The 2021 version has integrated those gaps.

In practice, the LSF promotes evidence-based policymaking, with its wellbeing indicators serving as a tools for assessing the impacts of government policies on the population's quality of life. It encourages policymakers to adopt a long-term perspective, considering not only the immediate effects of decisions but also their future implications to ensure policies contribute positively to the resilience and sustainability of New Zealand's societal and environmental landscapes. This forward-looking approach is integral to the framework's ongoing evolution and its goal to remain relevant and effective in guiding national strategies and priorities.

Figure 20: *Representation of the Living Standard Framework*



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Complementary tools and frameworks supporting the initiative

The New Zealand Government utilizes several complementary tools alongside the LSF to implement its comprehensive approach to policy evaluation and development effectively. These tools are instrumental in integrating the wellbeing indicators into practical governmental operations, such as budgetary decisions and policy formulations.

The cost-benefit analysis tool **CBAx** has been introduced by the Treasury in 2015 and is a tool designed to standardize cost-benefit analyses across government agencies. It encourages a long-term and broad view of societal impacts, costs, and benefits, integrating over 270 values for different social impacts based on various valuation methods. CBAx aids in monetizing and discounting impacts where possible and emphasizes transparency in assumptions and evidence. Although primarily used for monetized impact assessments, CBAx results are complemented by non-monetized impact assessments and broader evidence to guide value-for-money advice. This tool has been claimed to enhance significantly the quality of Treasury advice, improving problem definition, impact identification, and the transparency of decision-making processes.

Launched by Stats NZ, **Ngā Tūtohu Aotearoa – Indicators Aotearoa New Zealand** aims to monitor progress across social, economic, and environmental wellbeing. Beginning in mid-2019, this initiative offers a suite of nearly one hundred wellbeing and contextual indicators. Developed through a public consultation process in 2018, these indicators provide essential data that supports the Treasury's Dashboard and other governmental agencies' wellbeing approaches. While IANZ offers comprehensive local insights, it lacks certain in-depth features like international comparisons, which are sourced from other data analyses.

Developed by the Treasury's Tax Working Group in 2019, **He Ara Waiora** is a framework designed to align with Māori perspectives on wellbeing and living standards. He Ara Waiora and the LSF are increasingly being used side-by-side in policy advice, analysis and budgetary priority-setting in New Zealand. Therefore, this framework plays a crucial role in guiding the Treasury to understand and integrate Waiora, enhancing the cultural responsiveness and inclusivity of policy impacts with respect to New Zealand's unique cultural heritage.

International influence

The international influence of the LSF is evident in its recognition by other countries looking to integrate wellbeing measures into their public policy frameworks. Notably, the Wellbeing Budget process introduced by the Ardern government in 2019 has garnered international attention and praise, serving as an inspiration for similar initiatives worldwide. For instance, Jim Chalmers, the Treasurer of Australia, has explicitly mentioned New Zealand's Wellbeing Budget as an inspirational blueprint for their considerations of similar budgeting processes.

Moreover, there has been a productive exchange between New Zealand and other countries, notably the members of the **WEGo**. For instance, this has been the case with Canada for the development of its Quality of Life Framework. These interactions are part of a broader dialogue on how countries can

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effectively integrate wellbeing into their governmental agendas, ensuring that policy decisions comprehensively address the multifaceted needs of their populations.

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National Performance Framework – Scotland

The NPF for Scotland embodies a visionary approach to public governance, focusing on creating a "more successful country with opportunities for all […]to flourish through increased wellbeing, and sustainable and inclusive economic growth". At its core, the NPF is designed to guide public services towards the achievement of a shared vision for the nation, encapsulating wellbeing, fairness, and sustainability as its fundamental objectives.

Origins, main initial objectives, and construction process

The NPF of Scotland was established in November 2007 by the Scottish National Party (SNP) government shortly after it formed its first minority government. Introduced by John Swinney, then Cabinet Secretary for Finance, during the 2007 Budget Spending Review, the NPF was envisioned as a transformative approach towards governance. It aimed to streamline and replace the "proliferation of competing priorities" set by the previous administrations with a unified vision and quantifiable benchmarks to assess future progress comprehensively.

Initially, the NPF was underpinned by a Government's Purpose, eleven Purpose Targets, and five Strategic Objectives. Over time, it has evolved to simplify its structure to include one overarching Purpose, a set of Values, and eleven National Outcomes, moving away from time-limited targets to focus more on long-term goals. This evolution reflects an effort to simplify and focus the framework, making it a more effective tool for strategic governance.

The primary objective of the NPF was dual: firstly, to establish a clear basis for public sector entities to **align their efforts** with the government's agenda, and secondly, to enhance transparency and accountability by enabling the Scottish public to **monitor** the performance of the government and the wider public sector comprehensively. The framework was designed to be a central mechanism through which the government could be held accountable for real and meaningful improvements in public services and the quality of life of its citizens. This accountability was planned to be reflected through **periodic reports**, the first of which was published in 2009, followed by another in 2012, illustrating the government's commitment to being judged by the tangible results of its policies.

In 2015, the Scottish Government supported the NPF through a comprehensive two-phase consultation process aimed at ensuring the framework genuinely represented the priorities and values of the Scottish people with a campaign called **"Creating a fairer Scotland".**

The first phase focused on public engagement, where the government collected opinions through consultations on its website, social media, emails, freepost, and through over 200 open events across Scotland. This phase saw significant public participation, with 7,000 attendees at events and 17,500 interactions on social media platforms. Feedback from these consultations was categorized into five core themes relating to various aspects of wellbeing, such as living standards, community participation, and health. This public input was instrumental in shaping the National Outcomes, which articulate broad policy goals reflecting what a high-wellbeing society in Scotland should look like.

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The second phase involved expert consultation, where a lead committee, including the Local Government and Communities Committee, collaborated with various stakeholders to refine the National Outcomes and National Indicators. This phase included online surveys and discussions designed to ensure that the NPF accurately reflected the collective vision for Scotland's future. The outcomes of these consultations were meticulously analysed by the Scottish Government's National Performance Framework Team, culminating in an updated framework that not only reflected public values but was also informed by expert insights.

In 2018, the framework underwent a substantial review to integrate new global standards, including the UN Sustainable Development Goals and Scotland's Action Plan for Human Rights. This review was supported by **another round of public consultations**, organized by Oxfam and Carnegie UK Trust, which further ensured that the NPF continued to align with the evolving priorities and aspirations of the Scottish population.

Brief history

The NPF has experienced considerable evolution since its establishment in 2007. It began as a comprehensive set of indicators designed to unify and streamline public policy objectives and has undergone several revisions to expand and refine its scope.

Initially launched as part of the 2007 Budget Spending Review, the NPF aimed to replace a myriad of competing priorities with a unified vision. In 2012, the framework was indirectly influenced by external initiatives like **Oxfam Scotland's Humankind Index**, which introduced a more holistic measure of progress and impacted the wellbeing debate in Scotland. Although the index was short-lived, its conceptual impact lingered, influencing subsequent revisions of the NPF.

The **2015 Community Empowerment Act** significantly shaped the NPF by legislating the framework's use in setting National Outcomes and requiring regular revisions and reports on these outcomes. This act gave statutory backing to the framework's objectives, ensuring that governmental policies align with the stipulated outcomes.

Further engagement and revisions led to a significant update in 2018, dropping all time-limited targets and focusing more on a dynamic and responsive approach to measuring wellbeing. This revision was complemented by the establishment of a dedicated NPF website, enhancing accessibility and public engagement.

The NPF's influence and evolution continued with the **founding of the Wellbeing Economy Alliance** (WEAll) in 2018, emphasizing global collaboration on wellbeing economies. The Scottish Government's engagement in WEAll and the subsequent creation of the WEGo network with other nations underscored Scotland's commitment to pioneering a wellbeing-focused approach to governance.

By 2019, the NPF was further integrated into Scotland's policymaking through the publication of Scotland's Wellbeing report and the implementation of outcomes-focused policymaking.

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Current theoretical structure

The NPF is structured around a set of **eleven defined 'National Outcomes'** that articulate broad policy goals reflecting the country's aspirations for high wellbeing (see Figure **21**). These outcomes encapsulate what Scotland aims to achieve, aligning with the values and aspirations of its people.

To measure progress toward these outcomes, the NPF employs set of indicators that includes a comprehensive mix of social, and environmental indicators. These indicators cover both objective measures such as employment rates and business activity, and subjective assessments like perceptions of loneliness or participation in cultural activities. Environmental indicators, for example, might track the state of natural sites or the proportion of energy derived from renewable resources.

The progress for each National Outcome is tracked using relevant indicators that are grouped under the respective wellbeing category. For instance, the 'Culture' outcome is assessed through indicators such as attendance at cultural events, participation in cultural activities, growth in the cultural economy, and employment in arts and culture. The framework's approach to reporting is to provide a **qualitative assessment**—indicating whether indicators have improved, worsened, or remained stable—rather than relying solely on precise numerical values, reflecting the diverse and complex nature of the indicators involved.

Figure 21: *Representation of the National Performance Framework*

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Complementary tools and frameworks supporting the initiative

To effectively implement and enhance the NPF, the Scottish Government utilizes several complementary tools and frameworks that support the initiative's broader goals. These tools are designed to provide actionable insights, facilitate local development, and ensure alignment with the national wellbeing objectives.

One significant component is the **Equality Evidence Finder**[1], a tool that consolidates key statistical and research evidence on equality across Scotland. This platform helps policymakers and the public understand how different groups are experiencing life in Scotland, aligning with the NPF's commitment to inclusivity and fairness. The Equality Evidence Finder provides a resource for identifying disparities and informing targeted interventions that aim to foster a more equitable society.

In June 2022, the Scottish Government also launched the **Wellbeing Economy Monitor**, a tool designed to complement traditional economic metrics by assessing Scotland's performance against a range of wellbeing indicators such as child poverty, greenhouse gas emissions, and the gender pay gap, all aligned with the NPF. This monitor emphasizes resilience through investment in the 'four capitals'—natural, social, human, and produced/financial—which underpin future wellbeing. These capitals interlink to provide a holistic view of economic health, aiming to foster a sustainable and resilient economy. However, the integration of this monitor into decision-making processes remains underdeveloped, suggesting a focus for the upcoming NFP review to enhance its complementarities and their impact on Scotland's economic strategies.

Another key element supporting the NPF at the local level involves the **Community Planning Partnerships**. These partnerships are mandated to produce and publish a **Local Outcomes Improvement Plan**, which aims to tailor the national outcomes of the NPF to local circumstances. These plans are instrumental in mobilizing local resources and initiatives towards achieving tailored community-specific outcomes, reflecting the unique needs and aspirations of local populations.

Additionally, the **Local Wellbeing Economy Monitor** serves as a vital tool for local governance. It offers a comprehensive set of wellbeing indicators for each of Scotland's 32 local authorities, allowing for a comparative analysis of wellbeing across different regions. This monitor draws from the national-level indicators of the NPF but adapts them to reflect local conditions and data availability. By providing a high-level picture of wellbeing, the monitor assists local authorities in identifying both strengths and areas needing improvement, thus supporting targeted local development efforts.

International influence

The NPF was pioneering in integrating wellbeing into public policy since 2007, setting a notable precedent in the beyond GDP movement. However, its international influence has **remained somewhat limited**. While Scotland helped establish the WEGo network in 2019, alongside Iceland and New Zealand, this collaboration has yet to yield widespread adoption or transformational impact globally. The shallow integration of the NPF and its internal challenges are potential factors that may have

[1] http://www.equalityevidence.scot/

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constrained its broader influence. These internal critiques, focusing on the pace of development and the depth of implementation within Scotland itself, suggest that while the NPF was innovative, its practical impact and model as an exportable framework have been restricted.

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National Wellbeing Indicators – Wales

Origins, main initial objectives, and construction process

The NWI in Wales has its foundations in the Government of Wales Act 1998, which established a statutory duty for the Welsh Government to promote sustainable development. This commitment was further solidified with the adoption of the **wellbeing of Future Generations Act in 2015**, which introduced a multifaceted approach to measuring progress through the Shared Purpose Shared Future wellbeing framework.

The 2015 Act marked an essential shift towards a comprehensive view of wellbeing, encompassing the following four pillars: the social, economic, environmental, and cultural dimensions of life in Wales. It mandated public bodies to adopt a forward-thinking approach, focusing on long-term sustainability, community collaboration, prevention of problems, and integrated service delivery. This legislative framework aimed to transform how public agencies operate, ensuring that every aspect of government policy and decision-making contributes to creating a prosperous, resilient, and healthier Wales for current and future generations.

This legislative progression built on earlier efforts, including the establishment of Wales' first prosperity indicators dashboard in 2001, which was developed through a consultative process and evolved through subsequent Sustainable Development Strategies in 2000 and 2004. The wellbeing of Future Generations Act encapsulated these developments, providing a statutory framework that guides the continuous improvement and reporting of wellbeing indicators in Wales.

The development of the NWI was significantly supported by the participatory "The Wales We Want" initiative, launched in 2014. This project played a crucial role in shaping the wellbeing of Future Generations Act by facilitating a **nationwide conversation** about the long-term future of Wales. It engaged more than 70000 people from diverse backgrounds in discussions about their aspirations for the future, effectively gathering public opinions and expectations that would inform the new wellbeing framework. This initiative helped ensure that the framework was not only informed by expert input but deeply rooted in the values and aspirations of the Welsh people. The insights gathered through "The Wales We Want" were instrumental in defining the vision and principles of the Shared Purpose Shared Future framework, emphasizing a collaborative and integrated approach to public policy that resonates with the collective vision of a sustainable and thriving Wales.

Brief history

The NWI have seen incremental developments since their inception. In 2016, the establishment of the Commissioner for Future Generations marked a foundational step, underscoring Wales' commitment to sustainable development and the long-term wellbeing of its citizens. By 2017, a crucial milestone was reached with the first deadline for wellbeing assessments from public bodies, initiating a structured approach to evaluating progress towards wellbeing goals. This framework for ongoing assessment was further solidified in 2018, when public bodies were required to submit their first annual wellbeing reports, thereby institutionalizing a continuous, reflective practice aimed at improving the collective future of Wales.

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Current theoretical structure

This model positions wellbeing not merely as a series of outcomes but as a fundamental aspect of sustainability, mandating public actors to integrate the **four pillars**—economic, social, environmental, and cultural wellbeing—into their operations. This perspective shifts the focus from traditional outcomes to the pathways leading to these outcomes, emphasizing process over end results.

Central to the NWI framework are the **seven wellbeing goals** (see Figure **22**)—prosperity, resilience, health, equality, community cohesion, cultural vibrancy, and global responsibility—which are broad and integrate the diverse determinants of a person's quality of life. These goals reflect a holistic view of wellbeing that acknowledges its multifaceted nature. This approach aims to shift public bodies from working in silos to a more integrated approach where sustainability is embedded in all aspects of decision-making.

The measurement of progress towards the established wellbeing goals is facilitated by **50 national indicators**, namely the NWI. These were developed following a broad public consultation, reflecting a community-driven approach to defining wellbeing metrics. The indicators are designed to be periodically reviewed and updated by Welsh Ministers to ensure they remain relevant and reflective of the current societal needs. Each indicator is explicitly linked to one or more of the seven wellbeing goals.

Moreover, the Act introduces "**five ways of working**" that require public bodies to adopt long-term, integrated, inclusive, collaborative, and preventative approaches to policymaking, thereby fundamentally altering the manner in which policy priorities are conceived and implemented. This approach aims to shift public bodies from working in silos to a more integrated approach where sustainability is embedded in all aspects of decision-making.

The structure of the wellbeing monitor emphasizes the **connection between the indicators** and the corresponding wellbeing goals. This design allows for a clear visualization of how each indicator contributes to the broader objectives, underscoring their role as measures of policy effectiveness rather than final targets themselves. The presentation of the NWI ensures that indicators are understood as tools to assess the extent to which wellbeing goals are being met, fostering an integrated view of progress across multiple dimensions of wellbeing.

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***Figure 22**: Representation of the National Wellbeing Indicators*

Complementary tools and frameworks supporting the initiative

Alongside the NWI, the wellbeing of Future Generations Act provides an integrated vision for advancing sustainable development through collective and individual wellbeing-oriented actions. It establishes **Public Service Boards (PSBs)** across Wales. These boards are decisive in driving the collaborative effort among various public bodies, including the Welsh Government, local authorities, national parks, and health boards. PSBs are tasked with identifying and implementing wellbeing objectives that align with the Act's seven central goals. These objectives aim to articulate a unified vision for Wales' future, emphasizing the importance of sustainability in public governance.

The Act encourages a structured approach to the application of wellbeing indicators and goals, through meticulous planning, execution, and evaluation stages. Public bodies are for instance compelled to **define and disseminate wellbeing objectives**, reflecting a strategic commitment to the Act's ambitions. Moreover, public bodies are required to review their objectives annually to ensure they remain aligned with national wellbeing goals and are effectively contributing to long-term sustainability. This structured review process encourages continuous improvement and alignment between individual objectives and the broader goals of the PSBs, thereby enhancing coherence and efficiency in public service delivery across Wales.

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To facilitate the Act's implementation, it introduced the role of the **Future Generations Commissioner for Wales**. This independent advocate supports and oversees the adherence of public bodies to the Act, promoting sustainable practices, accountability, and the sharing of best practices in sustainable development.

Similarly, **the Auditor General for Wales** plays an important role in overseeing the implementation of the Act by auditing public bodies to ensure they adhere to sustainable development principles. This involves evaluating their effectiveness in meeting wellbeing objectives, providing reports that assess their compliance and progress, and offering guidance to improve practices. Additionally, the Auditor General promotes best practices, ensures accountability through public reporting, and influences policy by highlighting areas for improvement.

While the Future Generations Commissioner promotes sustainable development and advises on achieving wellbeing objectives, fostering collaboration across government layers, the Auditor General audits public bodies to ensure compliance with the Act, assessing the effectiveness of their actions towards achieving wellbeing goals. Together, they provide an oversight and ensure that the principles of the Act are integrated and actionable in public administration.

Furthermore, the Act has spawned a variety of tools and reports to aid in its enactment and to monitor progress towards the wellbeing goals. Notably, it has led to the creation of several **central reports**:

- Annual wellbeing report: This report is published annually by Welsh Ministers and reviews the progress made towards the seven national wellbeing goals based on 50 national indicators.
- Future trends report: Published within 12 months after each parliamentary election, this forward-looking report predicts significant long-term trends affecting the economic, social, environmental, and cultural wellbeing of Wales.
- Local wellbeing plans: These are developed by Public Services Boards and contain an assessment of local wellbeing along with objectives aimed at improving the local area's economic, social, environmental, and cultural wellbeing. Local wellbeing plans outline the specific actions that will be taken to meet these objectives and how these contribute to the national wellbeing goals.
- Future generations report: Drafted by the Future Generations Commissioner for Wales, this report reviews the actions taken by public bodies in relation to the sustainable development principle and assesses their contributions to the wellbeing goals. It includes recommendations for improvement and is a key tool for promoting the sustainable development principle across public services in Wales.
- Auditor general for Wales' wellbeing of future generations report: This report presents the Auditor's assessment of how public bodies are fulfilling their duties to promote sustainable development. This involves the evaluation of whether these bodies are taking appropriate actions to meet their wellbeing objectives in accordance with the sustainable development principle. The report aims to ensure accountability and guide public bodies in enhancing their strategies and operations to align with the goals of the Act.

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These reports, alongside a suite of developed toolkits, provide public bodies with the resources to navigate the Act's requirements effectively.

International influence

The NWI extended its influence internationally through several key initiatives. One such initiative is the Future Generations Leadership Academy, established by the Future Generations Commissioner's Office. The Academy aims to enhance leadership skills among young people and instil best practices related to the Act's implementation. Graduates are encouraged to join an alumni network that promotes ongoing leadership development and international collaboration. Additionally, the Network of Institutions for Future Generations, once chaired by the Future Generations Commissioner of Wales, emphasizes the global necessity to protect future generations. Further expanding its global reach, the initiative has introduced the Future Generations Global Ambassadors program, involving 25 young leaders from around the world, including Wales. This program is designed to share knowledge, engage youth in advocacy for future generations, and foster global change.

The Act's international influence is also evident in its advocacy for a similar commissioner at the United Nations level. This idea has gained traction and was acknowledged in a recent policy brief by the UN Secretary-General (UN Secretary-General, 2021), underscoring the global relevance of safeguarding future generations.

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Annex 3: Details on semi-structured interviews

Table 17 outlines the semi-structured interviews conducted during the analysis phase. The initiatives such as GNH, NIW, and NWI are less represented in these interviews, primarily because these initiatives have already been the subject of extensive academic and practical research (for GNH, e.g.,Colman, 2021; Hayden, 2015; Schroeder, 2014; for the NIW, e.g., Jany-Catrice & Méda, 2021; Méda, 2020; Pagnon, 2022; for the NWI, e.g., Messham & Sheard, 2020; Truijens & Georgieva, 2021; Wallace, 2019). The wealth of publicly available detailed studies on these initiatives diminishes the need for further exploration through semi-structured interviews, as much of the nuanced information about their processes and impacts is already accessible in the public domain. This availability of in-depth material allowed the research to focus on less documented initiatives, optimizing the use of resources and research efforts to fill gaps in existing knowledge.

***Table 17**: Semi-structured interview details*

Interview number	Date	Duration	Initiatives related
1	30/01/2024	99 minutes	MWM
2	05/02/2024	62 minutes	LSF
3	16/02/2024	76 minutes	CIW (& GNH)
4	28/02/2024	98 minutes	CIW
5	15/04/2024	55 minutes	NPF (NWI & LSF)
6	16/04/2024	53 minutes	NPF
7	16/04/2024	79 minutes	BES

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Annex 4: Scenarios in support of the roundtable dialogue

Scenario 1

Primary objective: Monitoring

To monitor the sustainable wellbeing of the EU in the long run, providing insights and advisory inputs to policymakers. The dashboard is granted no specific enforcement mechanism, it does not bind decisions and it does not interfere directly with decision-making processes.

Participation level: Stakeholder consultation

The EU consults relevant stakeholders (e.g., citizens, civil society, unions, business…) through widespread calls for contributions and feedback, ensuring that a broad spectrum of opinions is considered during the indicator development process, specifically with regard to the content of the sustainable wellbeing II. This approach aims at limiting direct involvement of stakeholders external to the initiative but maximizing inclusivity and diversity of inputs.

Indicator targets: Trend analysis

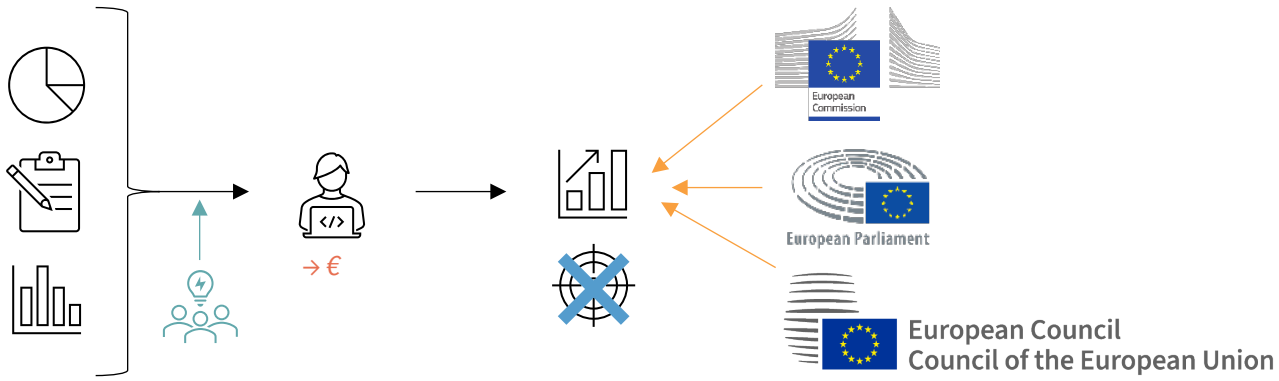
The dashboard does not include explicit targets; instead, it focuses on trend analysis and diagnostic tools to inform EU institutions and member states about the status of sustainable wellbeing dimensions.

Means and resources: Optimization of existing resources

No additional resources will be allocated to the new dashboard. Existing data collection mechanisms and statistical agencies adapt their methodologies to include sustainable wellbeing measures within their regular operations. This involves thus a strategic reallocation of means and resources to include the sustainable wellbeing II in regular operations.

Legislative avenues: The European Parliament and the Council would be invited to:

- Acknowledge the adoption of sustainable wellbeing indicators as monitoring tools for EU policy.
- Maintain current funding levels, optimizing existing statistical processes to incorporate the new sustainable wellbeing measurement initiative.
- Encourage member states to utilize these indicators for developing informed and contextually relevant policies.



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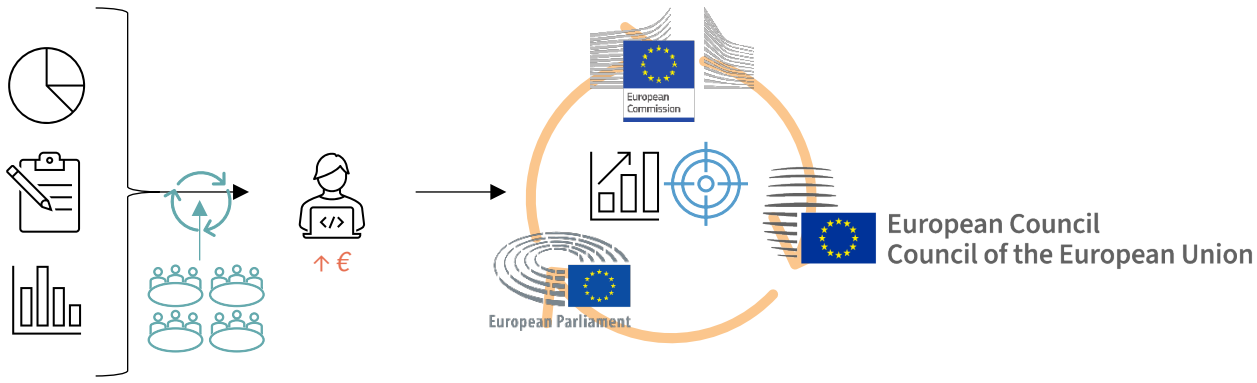
Scenario 2

Primary objective: **Supporting decision-making process**
A new dashboard of indicators is designed to monitor the sustainable wellbeing of the EU and support the decision-making process, without playing a binding regulatory role.
Participation level: **Co-construction with institutional stakeholders**
The development of indicators involves collaboration between EU institutions, member states, and civil society organizations through a structured participatory assembly. These structured participatory assemblies will facilitate periodic reviews and updates of the indicator set.
Indicator targets: **Qualitative guidance**
The indicators include qualitative, directional, targets that outline desired outcomes (without quantifying the target). These targets serve as guidelines to steer member state policies towards agreed-upon sustainable wellbeing goals.
Means and resources: **Moderate resource enhancement**
The EU allocate moderate additional resources towards the data collection required for this new indicator. A dedicated unit within the European Statistical System is created to collect and analyse data, ensuring that the indicators are updated in a timely way and reflect the latest socio-economic developments.

Legislative avenues: **The European Parliament and the Council would be invited to:**

- Endorse the establishment of a co-constructed sustainable wellbeing framework, leveraging existing institutions and processes.
- Approve the additional funding for the European Statistical System to handle the expanded scope of data collection.
- Support the qualitative target setting that aligns with EU-wide strategic wellbeing goals.



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Scenario 3

Primary objective: **Binding decision-making process**
The indicators aim to monitor, support, and bind the decision-making process regarding sustainable wellbeing in the EU. These indicators have a direct impact on policy formulation and implementation.

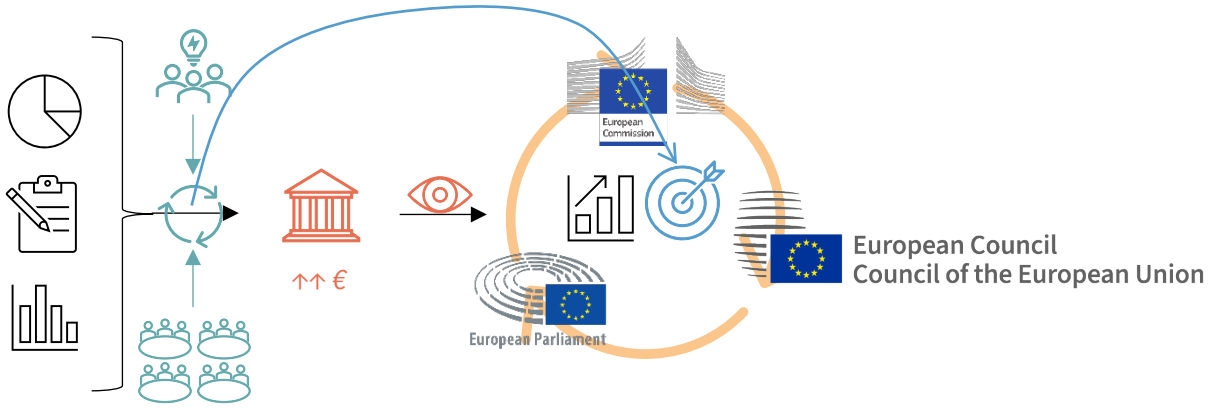
Participation level: **High stakeholders' engagement**
The construction process involves delegating power to citizens alongside a high level of stakeholder consultation, including calls for public submissions and participatory assemblies composed of citizen representatives. Participation is also integrated into the setting and reviewing of sustainable wellbeing targets.

Indicator targets: **Quantitative and binding**
The indicators include specific quantitative targets that enable the characterization of the gaps between current situations and desired objectives. These targets are actionable, providing clear benchmarks for achieving sustainable wellbeing goals. The participation process come into support of the target setting and reviewing.

Means and resources: **Creation of a new dedicated agency**
The scenario includes the establishment of a new EU agency, the Sustainable Horizons for European Generations (SHEG), dedicated to the development and maintenance of the indicator. This agency does not only collect new data but also evaluate and report on the EU's compliance with its commitments under the indicators' framework.

Legislative avenues: **The European Parliament and the Council would be invited to:**

- Establish a new agency, the SHEG, tasked with the development and enforcement of binding sustainable wellbeing targets.
- Allocate substantial resources to support the comprehensive data collection and analysis capabilities of the SHEG.
- Implement a rigorous accountability framework to ensure adherence to the framework by all member states.



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