



Value  
Balancing  
Alliance  
5<sup>TH</sup> Pilot  
Study

December 2025.



value  
balancing  
alliance



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# 01 Foreword

2025 will be remembered as the year in which sustainability was compelled to evolve. Sustainability initiatives that fail to demonstrably enhance enterprise value, financial performance, or business resilience are increasingly being deprioritized. The era when sustainability could be justified primarily through marketing or reputational benefits has ended.

The forces driving this shift vary across markets and regions. Political polarization, geopolitical tensions, regulatory fragmentation and uncertainty, and eroding trust fueled by greenwashing have created a challenging economic environment. Companies now face heightened pressure to ensure that long-term planning is materially relevant to core business processes and that investments deliver measurable returns, both in the short and medium term. Sustainability, therefore, must clearly generate financial value, strengthen decision-making, strategic controlling, and strategy development.

There is broad consensus that the business environment has undergone a fundamental shift in recent years. Beyond current geopolitical and regulatory uncertainty, structural topics such as technological transformation and its societal implications, climate change, and biodiversity loss increasingly shape discussions on how business models must evolve. In this period of widespread business model transformation, companies are reassessing which data are decision-useful for strategic planning and performance management, as well as capital allocation - and how their overall value contribution can be measured, managed, and communicated.

As a result, management accounting and disclosure systems must adapt. While financial accounting remains the foundation, it is increasingly insufficient on its own to capture the full spectrum of value drivers. In this context, impact accounting for value creation is gaining renewed attention. It translates scope 3 ESG-related data - across natural, human, and social capital - into monetary terms, enabling the integration of impacts, risks, and opportunities into core processes of corporate prepares, investors, and policymakers. In doing so, impact accounting complements and enriches traditional financial accounting frameworks.

Several of our member companies began developing impact accounting methodologies more than 15 years ago to improve internal decision-making. From 2025 onwards - and with increasing momentum into 2026 - we observe a significant acceleration in adoption across the global ecosystem. International organizations such as the OECD (e.g. project ENIVADE), sustainability reporting standards (e.g. double materiality assessment, anticipated financial effects), regulators such as central banks (e.g. climate scenario analysis), ISO (e.g. preliminary work item Sustainable Value Accounting), governments (e.g. EU, China, Japan on societal impact and double materiality), the World Economic Forum, financial market participants, and academia are increasingly addressing this topic. At its core, this work aims to internalize positive and negative externalities into corporate decision-making and enterprise valuation.

A critical success factor will be the standardization of methodologies. From 2026 onwards, this process will advance to a new level through the Impact Value Standards Board (IVSB), convened by the Capitals Coalition, providing a credible, internationally aligned foundation for consistent, decision-useful impact information.

The year 2025 marked the beginning of a reordering of the sustainability and impact ecosystem. We look ahead with confidence to the coming year, in which methodologies for measurement, management, and disclosure - focused on value creation and business resilience - will continue to be standardized and scaled internationally.

Recognizing this potential of Impact Accounting, front-runner companies came together in 2019 and established the Value Balancing Alliance (VBA), an alliance of companies to test and shape Impact Accounting methodologies for business. From the beginning, annual pilot testing has been at the heart of VBA's activities, with member companies leading the way in applying the methodology, sharing use cases and assessing usability of impact accounting in real business settings. The practical feedback has significantly contributed to shaping and updating the methodologies. We would like to thank our members for their continued support, particularly through the practical piloting and application of these methodologies in real business world contexts.

With this fifth pilot study, we aim to provide readers with insights into how impact accounting for value creation has evolved and how its relevance for corporate strategic planning, financial planning, and decision-making is increasingly demonstrated in practice.

**Paul Penepent**, *Head Group Financial Reporting and Accounting, Novartis and VBA Steering Committee Chair*



## 02 Introduction

Market mechanism has been the most efficient and effective way to allocate finite resources to meet society's needs. Traditional market economics has focused only on how much is produced because increasing output is what society needs. Naturally, numbers capturing outputs (GDP) have been the primary measures of economic activities. However, as the world gets more complex and interconnected, what society wants now also covers the wellbeing of people and planet. Output-based economics cannot play a leading role anymore, and the time for the impact economy has come. In this new impact economy, better numbers to assess the economic value of people and planet are needed.

Impact Accounting can be the most appropriate approach for the impact economy. By turning social, environmental and economic values into monetary terms, Impact Accounting can deliver information in the same language that business and finance society are using. This allows corporate leaders to intuitively understand the positive and negative impact created, and easily embed sustainability into their business planning, risk management and strategy development.

Impact Accounting is an innovative idea in that it captures the real impacts companies have on the well-being of stakeholders, translates complex sustainability topics into the easy to digest language of a currency and serves as a bridge between financial and non-financial information. However, to turn this innovative idea to practice, field testing and peer discussion are crucial.

Impact accounting is a concept developed by scholars and experts with the potential to be applied to businesses. To turn this concept to practice, repetitive pilot testing by companies with different industries and context is indispensable because it can help business society clearly see what works and what does not, providing insights into further improvement of the current approaches. Since 2020, VBA's annual pilot testing by member companies has contributed to shaping the applicable and decision-useful methodology. Through this iterative field testing by practitioners, we expect that the idea of impact accounting becomes operational working approach and can trigger a revolution in creating sustainable value for all.

This pilot study presents the key results, insights and practical use cases from the 5th round of the VBA piloting. Through this study, we would like to share with our stakeholders the progress that VBA has made and the evidence that impact accounting is useful in real economy.

The following chapters will (a) introduce the setup of the 5th VBA pilot and the methodology focusing on major updates, (b) share the key learnings of this piloting round, (c) illustrate how impact accounting can be practically used in real business, and (d) present an outlook for further development of the VBA in 2026.

<sup>1</sup> The Rise of the Impact Economy, p5. [What is impact economy? | UBS Global](#)

## VBA IN PARTNERSHIP FOR IMPACT ACCOUNTING METHODOLOGY

In 2019, a group of pioneering companies started their journey, by establishing the Value Balancing Alliance (VBA), to develop a standardized Impact Accounting methodology. With a common goal - to create a more comprehensive way of measuring the value businesses create to society, the economy, the environment, and its shareholders, VBA member companies, alongside the Big 4 accounting companies - Deloitte, EY, KPMG, PwC – have developed and pilot tested draft methodologies every year.

Since 2022, the VBA has been in a close partnership with the International Foundation for Valuing Impacts (IFVI) to jointly develop a common global baseline methodology. In November 2025, IFVI merged into the Capitals Coalition to continue and accelerate the standardization of impact accounting. VBA started a strategic partnership with the Capitals Coalition with the mandate: Coordinate the international business community to reduce fragmentation scale the uptake of impact accounting.

With this strategic partnership, the Capitals Coalition will lead the standardization of impact accounting methodologies, building on the VBA-IFVI work while the VBA will keep contributing to shaping the methodologies and drive discussions in the business community about the practical use of impact accounting.

The methodology development will be independently governed through the newly established Impact Value Standards Board (IVSB). The IVSB builds on the Valuation Technical Practitioners Committee (VTPC) of IFVI and VBA as well as the Value Commission hosted by Capitals Coalition, both of which have been sunset, and aims to set the baseline for impact accounting for value creation.





“CaixaBank is proud to have joined the VBA this year and to have actively participated in the pilot exercise on impact measurement. This initiative has been a fantastic opportunity for us to deepen our understanding of the impacts generated by our activities, particularly the social and environmental footprint of our financing portfolio. It has also allowed us to explore the benefits of impact monetization and foster valuable internal learning. Besides contributing to our customers’ financial wellbeing, our aim is to support the progress of the whole of society - and participating in this project reinforces that commitment. We look forward to continuing this journey and contributing to the development of robust methodologies that drive sustainable decision-making across the financial sector.”

Matthias Bulach, Head of Accounting,  
Management Control and Capital



“By joining the VBA’s piloting process, we’re able to pool resources and directly influence emerging standards alongside industry leaders. It’s a proactive approach to stay ahead, rather than just keeping up. It offers a practical, data-driven way to integrate sustainable value creation into financial decision-making.”

Ian Bishop, Head of Accounting,  
Consolidation & External Reporting, Roche



“To pursue our purpose, “the well-being of people and the planet,” it’s critical to show and review impact of our actions and value we provide. VBA methodology and piloting will help us to make right decisions on our future actions to provide more value to society and stakeholders based on objective data and facts, as well as bring further understanding on our impacts to environment, human, and society.”

Mita Noriyuki, Chief Sustainability  
Officer, Mitsubishi Chemical



03

## An Overview of the 5<sup>th</sup> Pilot and the Methodology

### 03.1. GENERAL SET-UP OF THE 5<sup>TH</sup> PILOT

The VBA conducted its 5th piloting round, running from November 2024 until May 2025. This pilot was designed with multiple goals: to demonstrate the feasibility of impact accounting in real economy, to support member companies in their implementation, and to explore how impact accounting can be aligned with sustainability disclosure processes. The 5th pilot also introduced a new focus on using impact accounting results for business steering, marking a shift from purely measuring impacts to actively applying the insights in strategic and operational decisions.

The pilot took place at a time when companies were grappling with new sustainability reporting requirements that imposed significant additional burdens. This context made the pilot particularly relevant, as it offered companies a way to integrate their corporate reporting processes into decision-making with the impact accounting methodologies, while also providing valuable feedback to refine the methodologies for further alignment with the reporting requirements.

The 6-month pilot was organized into distinct phases and activities to facilitate learning and collaboration culture. In earlier phases, deep-dive sessions were held to introduce members to updated topic methodologies and help them with calculation and implementation of the methodology. In later phases, peer learning sessions were arranged as a platform to openly exchange insights and experiences among members. After finishing the assessments, companies submitted their impact results and provided feedback through surveys and dedicated workshops. The insights and feedback from them were fed back to the VBA methodology team to refine the methodologies in a way that better reflects business environment.

The scope of the 5th pilot consists of two perspectives of value creation: Value to Society (V2S, Inside-out perspective, impact materiality) and Value to Business (V2B, Outside-in perspective, financial materiality). Value to Society measures how companies affect society and environment while Value to Business looks at how dependencies across natural, social and human capital affect companies' financial performance. Various topics methodologies in social, environment and economic aspects were covered, and full value chain impact was tested. VBA members also explored use cases of applying impact accounting methodologies in their business practices.

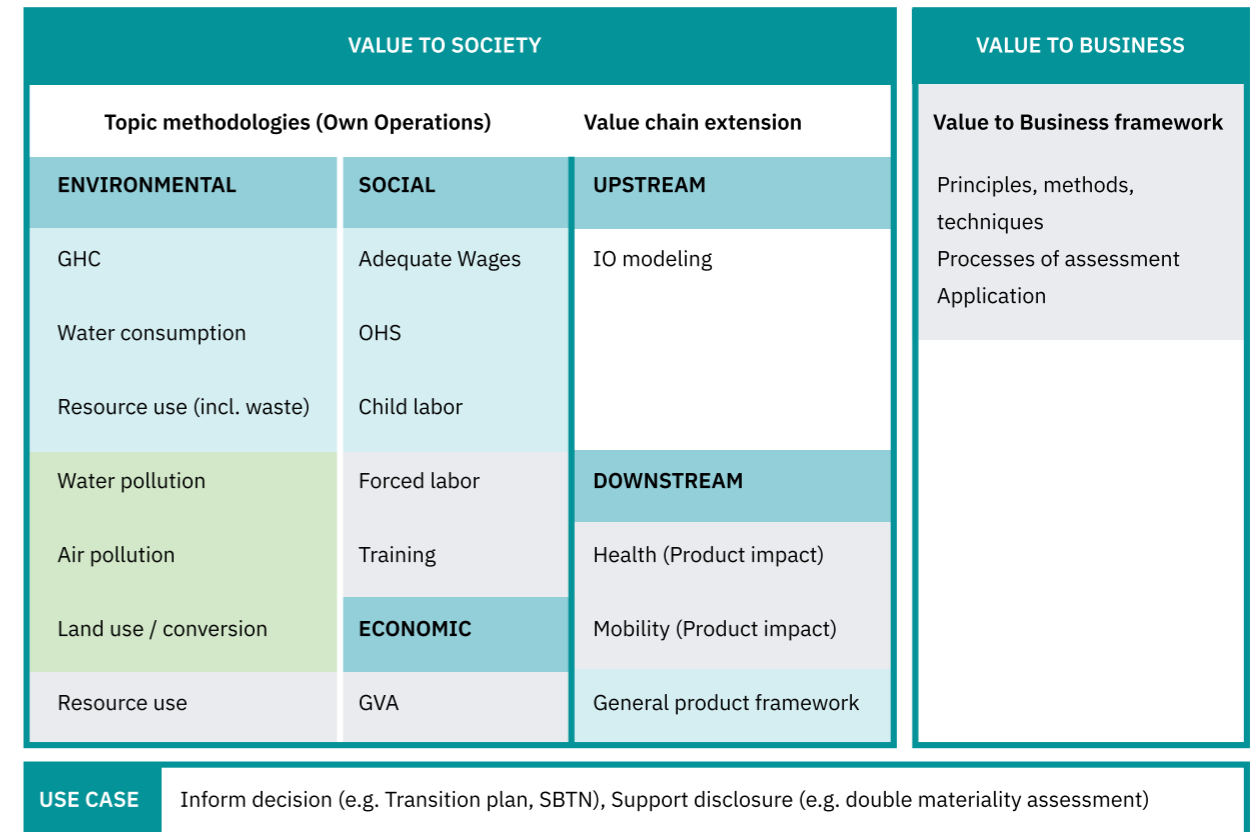


Figure 1: Structure of the 5th VBA pilot

IFVI-VBA methodology<sup>2</sup> IFVI interim methodology<sup>3</sup> VBA Methodology<sup>4</sup>

2 Co-developed with IFVI and refined based on feedback from public consultation process  
 3 Co-developed with IFVI and to be refined via public consultation process. These interim methodologies are aligned with the EU Transparent Project guidelines and addressed specific areas for further development. (IFVI Interim Methodologies)  
 4 Developed internally by the VBA in collaboration with its members

## 03.2. METHODOLOGY SUMMARY

### IMPACT ACCOUNTING

Impact Accounting is an approach to understanding in monetary terms how a company affects society directly or through the natural environment. To consistently measure how a company's behavior leads to changes in the well-being of stakeholders, the Impact Accounting employs impact pathways, which depict the causal relationship between a company's inputs, activities, and outputs, to outcomes and impact based on robust scientific research. The positive and negative impacts associated with a topic consider the local context of the impact, helping decision-makers better understand the magnitude of individual sustainability aspects and better integrate them into corporate steering.

For more detailed information on the Impact Accounting, please refer to the methodology statements available on our website.

This round of pilot included the following methodological developments and trials:

#### Updated Topic Methodologies

**Water Consumption<sup>5</sup>** was improved to include more detailed value factors down to the watershed level, which better reflects local context such as water scarcity, latest available datasets, and a clearer connection to sustainability reporting data

**Occupational Health and Safety<sup>6</sup>** was revised to ensure consistency in valuing impact on human health with other topic methodologies, and consider healthcare cost and lost wage

**Water Pollution<sup>7</sup>** was extended to cover a broader list of water pollutants, with harmonized valuation of health impacts, reflecting latest available dose response function of water pollutants on human health

**Air Pollution** was updated with improved meteorological and population data, as well as the latest dose-response functions from epidemiological research, to more accurately estimate health impacts from air pollutants

**Land Use and Land Conversion** was advanced by incorporating the ecosystem values of the Ecosystem Services Valuation Database (ESVD) to reflect the latest research. Further, this update allows to consider not only land use (occupation) but also land conversion (changes in land use) to cover cumulative losses

**Waste** was refined by updating how disamenity impacts are valued, using latest available research on hedonic pricing

**Resource Use<sup>8</sup>** has been established to estimate the ecosystem services losses of selected commodities (e.g., wood products or rubber) translating the land use and land conversion methodology into a resource use lens for specific applications such as assessment related to the EUDR

**Other Environmental<sup>9</sup>, Social and Economic Impact Topics<sup>10</sup>:** The pilot continued to cover important environmental and social impacts that had been part of previous VBA pilots. This included VBA, or IFVI-VBA methodologies for **Greenhouse Gasses** as well as social topics of **Child Labor** and **Forced Labor**, and the **Adequate Wages** methodology. **Gross Value Added (GVA)** effects were quantified as a complementary contextual economic impact indicator

#### Value Chain extension – Upstream:

To **tackle** the often resource-intensive task of calculating value chain impacts, particularly upstream, members piloted WISIT (the WifOR Institute Sustainability Impact Tool), a web-based application developed by WifOR<sup>11</sup>, in partnership with the VBA for implementation in the pilot study, which uses input-output modeling based on companies spend data. By entering supply chain expenditure data, companies could automatically measure and calculate upstream environmental and social impacts occurring in their supply chains

This tool significantly streamlined the process of estimating impacts beyond a company's direct operations, making it easier to approximate impacts across Tier 1 and further suppliers along the upstream

#### Value Chain extension – Downstream:

**Mobility sector:** An industry-specific product impact methodology in the **mobility sector** aimed at capturing the value generated and eroded by road transportation. This approach builds on industry specific knowledge such as leading transportation appraisal guidance and was tailored to quantify positive impacts such as increased quality of life due to access to destinations, goods and services, and others or economic activities enabled through mobility alongside negative impacts, for example, on human health through traffic accidents

**Health sector:** the previously developed methodology by the VBA Health Cluster<sup>12</sup> has also been piloted during the year focusing on the positive social impact of innovative medicine

**General Product framework:** Above industry-specific downstream methodologies built on the guidance of the Framework for Industry-specific Product Impacts developed under the governance of the VTPC

#### Value-to-Business (V2B) Framework:

The pilot introduced the **Value-to-Business framework<sup>13</sup>** aiming to help companies understand how managing sustainability issues can affect cash flows, risks, and ultimately enterprise value. This framework complements the Value to Society methodologies and was tested how both perspectives can be integrated into decision-making processes.

5 [Value Balancing Alliance \(2024\): Water Consumption Topic Methodology \(Exposure Draft\)](#)

6 [Value Balancing Alliance \(2024\): Occupational Health & Safety Topic Methodology \(Exposure Draft\)](#)

7 The topic methodologies piloted for water pollution, air pollution, land use and land conversion, and waste are the IFVI interim methodologies

8 [Value Balancing Alliance \(2025\): Nature in Impact Accounting for Business Steering v0.1](#)

9 [Value Balancing Alliance \(2025\): Nature in Impact Accounting for Business Steering v0.1](#)

10 [Value Balancing Alliance \(2022\): Topic-Specific Method Paper: Social and Economic](#)

11 [WISIT – the WifOR Institute Sustainability Impact Tool - WifOR Institute](#)

12 [Value Balancing Alliance \(2024\): VBA Health Cluster: Social Impact of Innovative Medicine](#)

13 [KPMG & Value Balancing Alliance \(2025\): Value to Business Framework](#)



“In today’s business landscape, companies are realizing the growing importance of measuring the impact of their sustainable business practices for business steering and decision-making. Emphasizing our commitment towards a sustainable future, we strongly support the VBA in developing one common impact accounting methodology aligned with sustainability reporting standards.”

Volker Krug, CEO,  
Deloitte Deutschland



“The Value Balancing Alliance helps us track progress against our sustainability strategy regenerate+ by turning impact data into comparable metrics. This approach enables better decisions and ensures our actions create measurable value for nature, society and business.”

Dirk Voeste, Chief Sustainability  
Officer, Volkswagen Group



“In the face of increasingly complex and interconnected challenges, companies need more than theoretical frameworks - they need practicable approaches and actionable insights. At KPMG, we see targeted piloting of impact accounting methodologies as a crucial step to bring these concepts to life. Especially in areas like business model innovation and strategic decision-making, VBA’s pilot applications offer tangible value and inspire broader adoption across industries. This pragmatic approach helps bridge the gap between ambition and implementation.”

Sebastian Pöhler, Partner, Accounting Advisory  
Services & ESG Service Group, KPMG Germany



04

# Learnings

## 04.1. VALUE-TO-SOCIETY PILOT

In the Value-to-Society pilot, companies examined how monetized impact can be aligned with disclosure requirements and used to provide insights for business steering and decision-makings. The pilot produced a number of significant findings:

### Impact accounting and Sustainability reporting complement each other

One of key findings from the pilot is that impact accounting is becoming increasingly feasible to apply for companies due to improved availability of sustainability data. Many VBA member companies have already been gathering extensive environmental and social data due to sustainability reporting mandates such as the European Sustainability Reporting Standards (ESRS). Because **much of the required data for impact accounting was readily available and aligned**, the additional effort to apply the impact accounting methods was relatively modest.

The pilot revealed also that **sustainability reporting can be improved due to impact accounting practices**. In fact, several members noted that they plan to repurpose the data and insights from this pilot to enhance their upcoming sustainability disclosures, particularly ESRS requirements. Impact accounting is viewed as a means to strengthen double materiality assessments by providing science-based evidence of which topics are material to stakeholders (Easier to objectively compare when topics are expressed in single unit). Most members found that the impact results from the pilot matched the sector's intuition and expectation about where the major sustainability issues lay. This validation was encouraging, as it suggested that companies' qualitative understandings of their impacts were on the right track and that the impact monetization added an extra layer of confirmation and clarity.

The pilot also highlighted that better alignment between impact accounting methodologies and standard reporting frameworks could further ease implementation. While the degree of alignment between ESRS and impact accounting requirements is high – as shown by the [mapping tool](#)<sup>14</sup>, in a few instances, the impact methodologies required certain KPIs or data breakdowns that were not exactly the same as those used in mainstream reporting. (e.g., For 'Land use' topic, while ESRS only requires total land area, impact accounting requires further sorting land use type)

### With enhanced valuation, Impact accounting can reveal hidden material issues

When translated in monetary terms reflecting the latest scientific research and local contexts, some topics that initially were deemed as low priority – such as biodiversity-related issues -, actually showed up as material. This underscores how **impact accounting can reveal hidden material issues and challenge assumptions**, prompting companies to re-evaluate priorities. It also highlights the value of objective evidence-based quantification: certain social or environmental issues might be underestimated until their impacts are translated into monetary terms.

The pilot also demonstrated how **updates to Value Factors can change the perceived priority of the topics**. During this round, new and updated value factors were introduced for several indicators. Consequently, companies saw a reprioritization of topics due to the latest evidence available (For example, when the revised value factors were applied, GHG was no longer always the top contributor to one company's total impact as many impact managers imagined; instead, aspects such as water scarcity or land use turned out to have greater monetary significance). This shift encouraged participants to view their impact profiles with fresh eyes and emphasized the need to continuously update and improve methodologies as better science and economic data become available, while maintaining continuity in the methodologies used for inter-temporal comparisons.

### Measuring the upstream impact became easier, but some improvement points still remain

The use of **WISIT, WifOR Institute's Sustainability Impact Tool** for an input-output modeling, significantly reduced the complexity of estimating supply upstream impacts. This brought great insights, especially for companies new to such analyses, by highlighting hotspots beyond their own operations. Despite the improved tools, the value chain assessment remains the most resource-intensive part of impact accounting. Participants noted that the type of data required for these models (e.g., spend data mapped to specific sectors and geographical areas) is very different from data on direct operations and gathering it can still be difficult. Moreover, taking action based on the output of the models can be complex: while direct Tier 1 supplier impacts were relatively straightforward and often aligned with expectations, the further one goes into the supply chain (Tier 2, Tier 3, and beyond), the more separated from the corporate activity the results become, relying on broad industry averages. This can make the later-tier results less actionable.

The lesson learned is that measurement of indirect impact indicators remains quite a challenge and improving the underlying data and models, perhaps through more direct supplier data or hybrid modeling approaches, will be key to getting more precise and decision-useful insights.

### Downstream impact completes the whole picture and industry context matters

Several companies also explored **product impact measurement** as part of the pilot, recognizing this as an essential component of a comprehensive impact accounting. This was especially true for companies in sectors such as healthcare and mobility, where the use-phase or product outcomes have significant societal effects. They found that these are often the main source of positive impacts a company can create. For instance, a pharmaceutical company's positive impact might come from the health improvements its drugs provide. The pilot underscored that including product impacts in the analysis is crucial because it can present the complete story – including not only negative impact in manufacturing processes but also huge positive impact the medicine can create.

However, the participants also noted the methodological complexity of product impact measurement as it requires specific, context-dependent approaches. Therefore, advancing in industry methodologies built on expert knowledge and consensus among companies in the same industry, proved very helpful in ensuring that the results are both credible and comparable.

### Taking ownership of assessing the impact is preferred for accurate measurement

Finally, an interesting insight from the Value to Society pilot was the importance of **corporate ownership of the impact measurement process**. Some organizations assessing monetized impact of companies had used externally generated information such as generic, public data or assumptions to model the target company's impact. While these external assessments were a useful starting point for understanding impacts, the results based on estimation derived from publicly available data were significantly different from the impact result calculated with real internal data of the company.

<sup>14</sup> [Value Balancing Alliance \(2025\): Application Guidance: Mapping tool for ESRS datapoints](#)

For instance, by using generic sector averages, an external estimation suggested that a multinational manufacturer's water consumption impacts were evenly spread across its global operations. However, using internal site-level data, the company found that over 60% of its impacts stemmed from just two facilities in water-scarce regions. This divergence not only revealed that the external model had understated the true risk hotspots but also allowed the company to shift from diffuse, portfolio-wide actions to focused programs in the two water-scarce sites. At those hotspots, management could concentrate resources on context-based measures – such as tighter metering and leak detection, process-water recycling, and closed-loop cooling – paired with site-specific withdrawal caps and intensity targets aligned to local scarcity. Therefore, taking ownership of the assessment and developing impact accounts with internal data is preferred to ensure accurate calculation and well-informed decisions.

## 04.2. VALUE-TO-BUSINESS PILOT

In the Value-to-Business portion of the pilot, companies examined how company's current and future environmental, social, and economic impacts and dependencies translate into financial effects or internalized cost for their businesses – understanding the financial materiality of sustainability-related impacts, risks, and opportunities. The pilot yielded several important insights:

### **Financial effects promoted Cross-functional collaboration**

Conducting a Value-to-Business assessment often required involvement from multiple departments, including finance, operations, and strategy, more so than traditional sustainability reporting, arising as a perfect occasion to bring together diverse teams, but requiring alignment too. When sustainability matters were expressed as changes on cash flows, costs, or revenue drivers, it became a language that finance and strategy professionals found relevant in their daily operations. This helped embed sustainability considerations into broader business discussions in more tangible manner.

### **The Internalized costs are expected to converge with social costs (impact)**

Through the V2B lens, companies understood that certain impacts are being or may be internalized in the future– meaning that they will affect the company's financial statements via regulatory costs, resource scarcity, or market preferences, among other channels. The internalized costs in V2B perspective may be similar to or differ from social costs in V2S, showing the relevance of both assessments for business management. For instance, a chemical company's carbon emissions carried a high social cost or impacts when monetized under the value-to-Society lens (Inside-out perspective). Under V2B (Outside-in perspective), the internalized cost was initially much lower, limited to carbon pricing in certain jurisdictions. However, as carbon markets expanded and customer demand shifted toward low-carbon products, the financial effects or internalized costs began to converge with social costs, showing how both costs can differ at first but may eventually converge, underscoring the need to manage both perspectives.

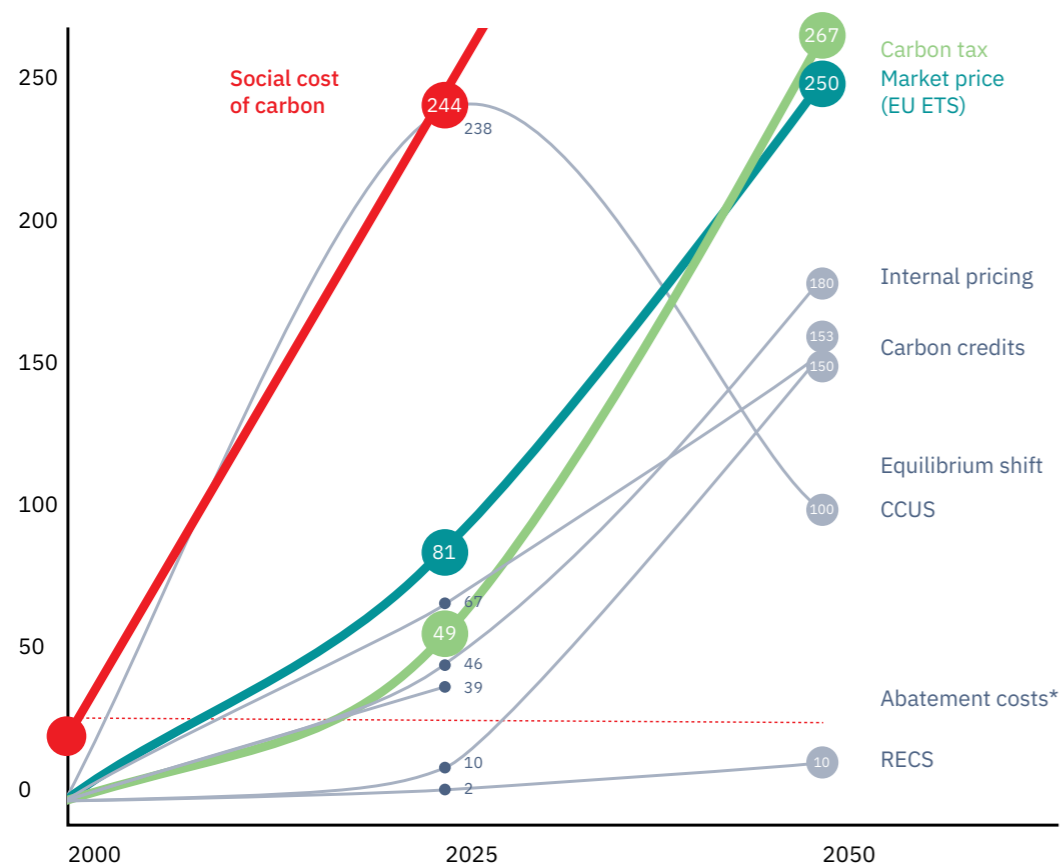


Figure 2: Projection of average carbon prices under different valuation techniques and their convergence to the SCC (Image source: *Aligning Carbon Valuation with Decision-Making (2025)*; Page 4)

### Context-specific valuations are needed for the internalized costs

A recurring response from member companies was that the financial effect of sustainability issues is highly context specific. The pilot showed that while it is possible to create general standardized frameworks for V2B assessment, the final valuation of the effect on a company may depend on industry dynamics and the company's particular situation. For instance, the cost of carbon emissions was very high for an energy company operating in the EU facing carbon taxes, but less immediate for a service firm operating in another region (though still relevant in the long run). Thus, standardized management processes can be developed so that all companies follow a similar approach to assess impacts on their business, but the inputs and valuation assumptions may require tailoring. Companies learned that they must incorporate their own data and context, such as market conditions, regulatory environment, and competitive landscapes, to achieve meaningful results. **One size does not fit all** in quantifying effects on businesses, so any V2B methodology should allow for customization within a consistent overall structure.

### Combining V2S and V2B provides a holistic View of Sustainable Value Creation

Importantly, participants found that using Value-to-Business metrics in conjunction with Value-to-Society metrics provided a more comprehensive view of their company's performance. Many noted that this combined view helps align sustainable business strategy with financial planning. By looking at both perspectives side by side, management can identify actions that create win-win scenarios that are beneficial for both society and business, as well as areas with potential trade-offs. For example, when a manufacturer reduces its energy-related emissions by investing in more efficient equipment, it not only lowers its carbon footprint (V2S) but also cuts energy costs (V2B). This can also improve its competitiveness as customers increasingly favor low-carbon suppliers (V2B).

## 04.2. USING THE RESULTS TO CREATE SUSTAINABLE VALUE

A major theme emerging from the 5th pilot was the question of how companies can use impact accounting results in practice to drive sustainable value creation and business resilience - a business practices to create value both for the company and for the society at the same time. With sustainability metrics increasingly moving from a side activity into core business management, participants discussed and demonstrated various ways that the pilot results could inform real decision-making for their businesses.

One clear takeaway was that impact accounting can greatly **support strategic planning and goal-setting**. Many companies intend to integrate the monetary impact figures into their internal strategy discussion - for instance, by using those figures when evaluating new projects, investments, or product strategies. If a proposed investment has high negative environmental impact (expressed in monetary terms), that cost can be weighed alongside traditional financial metrics, potentially altering the decision, or prompting mitigation strategies.

Conversely, projects with positive societal impact could be given more consideration due to their additional value, which is not currently captured in financial accounting. Some members stated the relevance of considering impact accounting as a tool for setting and tracking sustainability targets. In practice, this means monetized impacts of carbon emissions, water usage, and others are managed and treated as KPIs in the same way that revenue or profit are tracked.

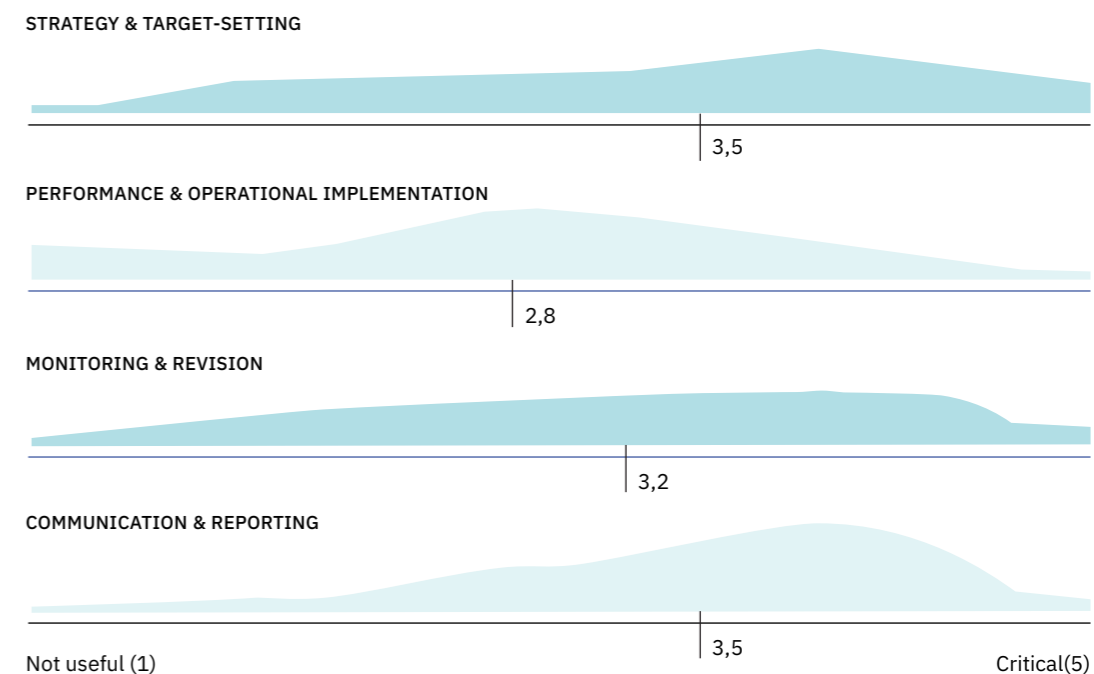


Figure 3: At what stage of business decision-making is impact accounting most useful for sustainable leaders?

The pilot also highlighted the role of impact results in **enhancing both internal and external communications**. Internally, companies found that sharing the impact outcomes across departments sparked productive conversations<sup>16</sup>. When sustainability teams presented the impact accountings to colleagues in finance, risk management, or operations, it helped those functions to speak the same language and see the connection between their work and sustainability outcomes. Externally, translating impacts into monetary terms provides a powerful communication tool. Some companies use these results in their sustainability reports, investor presentations, and stakeholder dialogues to convey their sustainability performance in a more tangible way. A monetary impact figure can resonate with stakeholders by providing a common language that bridges financial and non-financial performance.

The pilot experience suggests that the most effective path to sustainable value creation is to integrate societal and business perspectives. Leading companies are increasingly treating value-to-society and value-to-business not as separate silos but as interconnected drivers for business decision-making. By embedding impact accounting alongside financial analysis, the pilot revealed, companies can craft strategies that maximize positive societal outcomes while strengthening business performance and **effectively move forward to business transition**.

<sup>16</sup> [World Economic Forum \(2024\): How impact valuation helps companies meet the latest sustainability reporting requirements](#)



“The VBA is demonstrating through pilot testing that impact accounting can be used effectively to real-world business management. I hope more companies apply impact accounting to their businesses, explore various use cases and engage in practical discussions on impact accounting.”

Dong Seob JEE, President, SK  
SUPEX Council SV Committee



“The VBA platform fosters a unique space for collaboration, enabling members to share practical experiences and shape a common language for impact accounting. These discussions help us move beyond theory and embed sustainability into real business decisions.”

Christian Hell, Partner,  
EY-Parthenon



# 05

# Use Cases

Some VBA member companies applied the methodology to real world business practices to test how monetized information can provide added value. The down-to-earth practices such as the following use cases contribute to further shaping the methodology and spreading impact accounting to various business departments.

## SK BIOPHARMACEUTICALS

# Strengthening stakeholder communication through social value of medicine

### BACKGROUND

SK Biopharmaceuticals (SK Biopharm) has developed innovative new drugs focused on the central nervous system field and its epilepsy treatment XCOPRI is supplied primarily to the U.S. market.

In the United States, one of key drivers for caring epilepsy is LTC (Long-Term Care) facilities, where a significant number of epilepsy patients reside, requiring long-term treatment and management. LTC facilities are run as systems where treatment, care, and operations are closely integrated, and therefore, communication with LTC involves diverse stakeholders (such as nursing directors, LTC-specialized pharmacists, facility managers, care providers, etc.).

In the U.S. LTC system, Skilled Nursing Facilities (SNFs) receive a fixed daily payment from Medicare, the public insurance program for people aged 65+, during the early part of a patient's stay. Many LTC facilities, especially SNFs, keep their own formularies, so not all medicines are available. Because of these limits, cost-effective medication choices are especially important in LTC settings. In LTC settings, where managing numerous patients with chronic conditions is essential, efficient human resource management and reducing healthcare costs are critical issues. LTC facilities have a high proportion of epilepsy patients, making expanded XCOPRI prescribing through effective communication with LTC stakeholders crucial for SK Biopharm's business growth.

### MEASUREMENT

SK Biopharm monetized the social and economic impact of XCOPRI, evaluating how it improved patients' health outcomes and reduced the medical costs of LTC facilities.

A commonly used indicator to measure the efficiency and impact of medical services is the Healthcare Resource Utilization (HCRU) metric. Healthcare institutions, governments, and insurance companies refer to this metric to reduce healthcare costs and optimize resource allocation. SK Biopharm measures the social and economic impact of XCOPRI by linking its efficacy to healthcare resource utilization (HCRU).

#### Step 1

Comparing the reduction in hospitalization and emergency room utilization rates among patients taking XCOPRI versus patients taking other anticonvulsant drugs (five newer generation anti-seizure medications later referred to as "Comparator")

#### Step 2

Conducting correlation analysis using data from agencies under the U.S. Department of Health and Human Services and reflecting various variables affecting hospitalization rates/emergency room visits

#### Step 3

Monetizing impacts as impact accounting provides a common financial language to express patient and system-level benefits in monetary terms, making them relevant for business decision-makers

	IMPACT		
	COMPARATOR	XCOPRI	DELTA
Annual inpatient charges (Cohort 1)	\$ 13,172	\$ 8,175	\$ 4,997
Annual inpatient charges (Cohort 2)	\$ 66,742	\$ 37,771	\$ 28,971
Annual emergency charges (Cohort 1)	\$ 884	\$ 776	\$ 109
Annual emergency charges (Cohort 2)	\$ 4,030	\$ 4,089	\$ (59)

\* Cohort 1: patients with zero epilepsy-related IP or ER encounters in previous 180 days  
\* Cohort 2: patients with one epilepsy-related IP or ER encounters in previous 180 days

### COMMUNICATION

SK Biopharm shared the measured impact of XCOPRI with key stakeholders – four LTC facilities through multiple meetings. The LTC facilities provided the following feedback, agreeing XCOPRI's positive impact such as health improvement effects

- Administrative, medical, and labor costs related to hospitalizations/ER visits decreased, enabling more healthcare services to be provided elsewhere
- This could positively impact healthcare service evaluations by government agencies

### BUSINESS AND COMPETITIVE IMPACT

This evidence-based communication strengthened SK Biopharm's position in the U.S. market:

As a result of communication with key stakeholders, LTC facilities increased their prescribing of XCOPRI registering it as a preferred medication in the facilities, expanded contracts with specialty pharmacies, and increased the number of new prescriptions. LTC facilities requested additional meetings, during which further discussions took place regarding clinical and medical value of the product. By linking existing healthcare resource utilization metrics with the monetized impact of the product, it provides a new perspective for efficient operations and optimized service delivery.

Patients also experienced reduced medical costs, such as hospitalizations, due to improved health. This promotes not only cost savings but also enhanced quality of life for patients.

Consequently, XCOPRI is creating social value while simultaneously generating economic value for SK Biopharm.

By demonstrating quantifiable social impact alongside financial gains, SK Biopharm enhanced its market share and competitive differentiation in the U.S. market, showing how impact valuation using HCRU data can directly influence financial performance for both LTC facilities and the companies themselves.

## PURE STORAGE

# Sustainable Data Center Index (SDCI) — A research-backed performance index for data center impacts

### INTRODUCTION

The rapid rise of artificial intelligence and digital services is turning data centers into critical infrastructure for the global economy. As facilities scale to meet demand, the energy, environmental, and societal implications of data center operations have grown in both magnitude and complexity. Advances in artificial intelligence and high-performance computing intensify pressure on energy, water, land, and materials, further exposing gaps in how such impacts are measured, managed and optimized.

THE PROBLEM				
Data center decisions are siloed across infrastructure domains				
COMPUTE	STORAGE	COOLING	LOCATION	IMPACT PERFORMANCE
<ul style="list-style-type: none"> <li>Isolated planning</li> <li>Power &amp; capacity strain from AI/Cloud/Edge needs</li> </ul>	<ul style="list-style-type: none"> <li>Efficiency gaps</li> <li>Poor alignment with energy performance</li> </ul>	<ul style="list-style-type: none"> <li>Hidden water-energy trade-offs</li> </ul>	<ul style="list-style-type: none"> <li>Limited climate/regional context</li> </ul>	<ul style="list-style-type: none"> <li>No common sustainability baseline</li> <li>Hard to compare configurations</li> </ul>
Stakeholders lack an integrated tool and a shared language to understand cross-domain trade-offs and make better decisions.				

Figure 4: Data center decisions are siloed across infrastructure domains

### THE SUSTAINABLE DATA CENTER INDEX (SDCI)

To address this challenge, Pure Storage partnered with the Value Balancing Alliance and WifOR Institute to create the Sustainable Data Center Index (SDCI) — a performance index that equips data center operators, procurement leaders, finance teams, and sustainability professionals with a full-spectrum view of data center sustainability performance. It shows the complete picture - not isolated metrics, and allows teams to uncover opportunities to improve efficiency, strengthen energy management, and optimize resource use.

The SDCI presents the environmental impacts in comparable, normalized terms (per rack, per square meter, per megawatt, or per effective petabyte of storage). This approach enables decision makers to assess data centers on a fair, consistent basis and make better-informed decisions. It is an impact-accounting based unified analytics engine, delivering standardized environmental insights for data center design, operations and upgrades.

INPUTS	SDCI ENGINE	OUTPUTS
What feeds the SDCI engine	How the model works	What the SDCI delivers
<p><b>Operational Data</b> Energy usage Cooling system type IT equipment configuration</p> <p><b>Industry Data</b> External official data &amp; empirical studies</p> <p><b>Monetization Models</b> VBA-aligned methods for GHG emissions, water consumption, land use</p>	<p><b>Environmental Intelligence Engine</b></p> <ul style="list-style-type: none"> <li>Combines operational inputs, scientific evidence and monetized models</li> <li>Converts raw data into standardized, comparable environmental insights</li> <li>Normalizes results across key operational dimensions (RU, m<sup>2</sup>, MW, PB)</li> </ul>	<p><b>Monetized Environmental Impact</b> Climate change impact Water consumption (incl. energy-embedded water) Land-use impact</p> <p><b>Physical Impact Estimates</b> GHG emissions by location Water consumption by location</p> <p><b>Normalized Metrics</b> Per rack unit (RU), square meter (m<sup>2</sup>), megawatt (MW), petabyte (PB)</p>
USE CASES		
How teams use the SDCI		
<p><b>Scenario Analysis</b> Explore environmental trade-offs for cooling, compute, storage, and location configurations.</p>	<p><b>Benchmarking</b> Compare designs against regional baselines and specific data center being assessed.</p>	<p><b>Decision Support</b> Enable procurement, design, and sustainability teams to make aligned, impact-aware decisions.</p>

Figure 5: The Sustainable Data Center Index (SDCI) explained

## ILLUSTRATIVE EXAMPLE

To demonstrate functionality, the SDCI includes sample scenarios. These examples are illustrative and do not constitute performance claims or product recommendations.

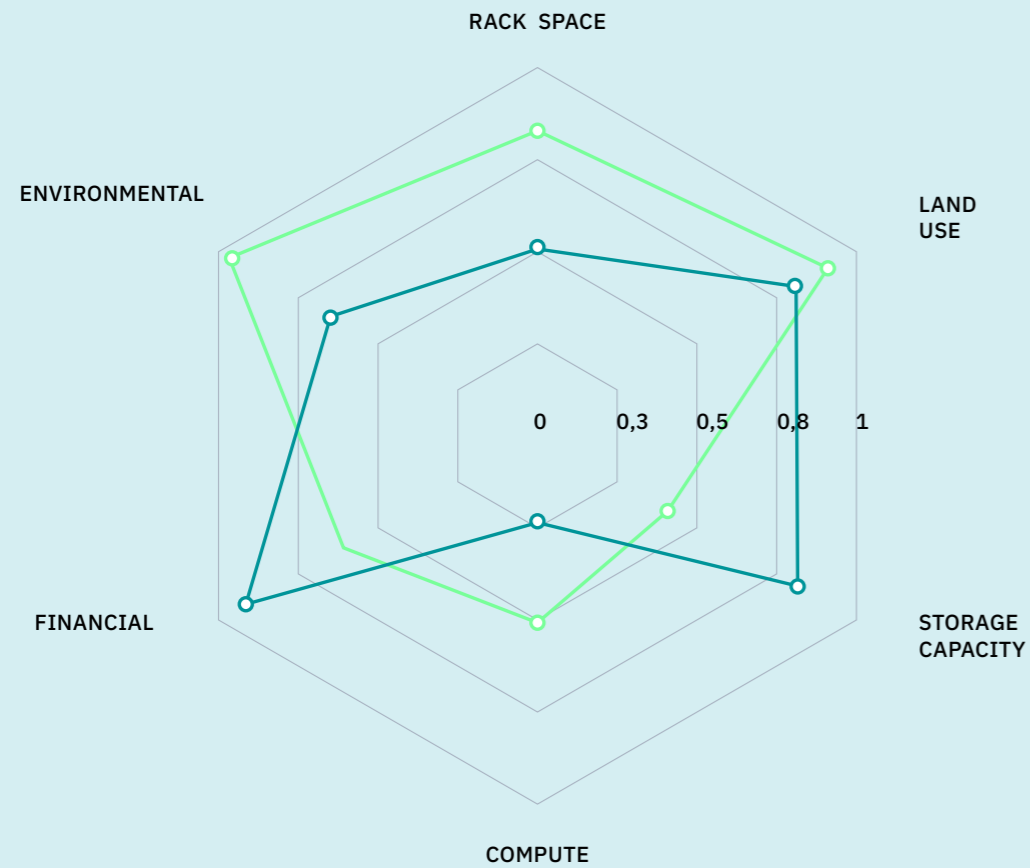


Figure 6: Illustration of multi-dimensional, complex scenarios comparison for better decision making (where performance value 0 is poor and 1 is best) | ● DC Performance Scenario 2 | ● DC Performance Scenario 1

## CONCLUSION

By applying a standardized, research-backed impact accounting approach to data centers, the SDCI provides a foundation for more transparent and impact-efficient decision making. It shows how the same set of choices that reduce externalities - such as energy, water or land use impacts - can also improve utilization and support more cost-effective and sustainable growth in an AI-driven infrastructure landscape.



“Impact accounting reveals hidden costs and true value, turning data into business decisions that leaders can act on. It strengthens capital allocation, drives intelligent decisions, and accelerates innovation.”

Tarek Robbiati, Chief Financial Officer, Pure Storage



“At PwC, we see our collaboration with the Value Balancing Alliance (VBA) as a powerful opportunity to bring innovative impact measurement into real-world business. By applying the underlying thinking to tangible use cases, we help organizations embed impact measurement and management into everyday decision-making.”

Robert Prengel, Director, PwC Germany

# From Water Consumption Data to Strategic Steering - How Roche used Impact Valuation to mitigate future business risks and to demonstrate reductions of negative impacts

## INTRODUCTION

Roche conducted a water impact valuation across its largest manufacturing sites (12 sites representing ~90% of water consumption) to understand the true value of water consumption beyond utility bills. The initiative was jointly driven by Group Financial Sustainability Reporting, Group Health, Safety & Environmental Protection and Group Sustainability to align with a corporate objective to determine the true cost/value of business decisions. Roche adopted a risk-based approach to reduce consumption in high-water-stress areas, recognizing that these regions carry higher business risks related to resource scarcity and operational stability.

## MEASUREMENT

### Step 1

Roche identified its largest water-consuming sites across regions and extracted five years of water consumption data (2020–2024) from internal reporting systems. Focusing on 90 % of total water consumption ensured that the analysis addressed material risk areas for Roche.

### Step 2

Physical water consumption data were converted into monetized impacts, capturing both direct and indirect societal costs (e.g., changes in ecosystem change, affected health from malnutrition, financial costs to access future water, etc.).

REGION	COUNTRY	2020	2021	2022	2023	2024	COMPARATIVE COST OF WATER
Americas	USA	5.18	5.42	5.85	6.10	6.28	High
Europe	Germany	1.64	1.72	1.86	1.93	1.99	Medium
Europe	Italy	8.46	8.86	9.57	9.96	10.26	Very High
Asia	Japan	2.05	2.15	2.32	2.42	2.49	Medium
Asia	China	2.49	2.61	2.82	2.94	3.02	Medium
Asia	Singapore	0.66	0.69	0.75	0.78	0.80	Very Low

VBA Methodology, Value factors (VF) on country level as multipliers for water consumption to measure indirect cost to society (m3 of water consumption x VF = monetized impact)

### Step 3

The analysis revealed regional differences in social cost of water consumption and confirmed Roche’s deliberate reduction of indirect water consumption cost in high-water-risk areas (e.g., in areas with a higher value factor). By combining the consumption data with data on local water risks, the insights have the potential to support decisions on where to focus improvements and investments, such as water efficiency projects or choosing locations for new production sites.

### Step 4

Results were shared with Group Sustainability to align in the next steps. The monetized impacts are set to inform risk assessment, capital allocation, and future-proof siting decisions, ensuring that water-related risks are addressed before they materialize. The results also served as backward-looking proof that Roche’s water consumption reduction measures are on track and risk is being reduced by moving away from high-water-stress areas.

## CHALLENGES AND VALUE ADD OF IMPACT ACCOUNTING

One challenge which Roche overcame was turning technical water consumption data into insights that mattered for business decisions. By monetizing impacts, the company created a shared financial language that allowed sustainability results to be compared directly with traditional business metrics. This approach not only illustrated the financial relevance of water-related risks but also made visible the reduced negative social impact in high-water-stress areas through targeted reductions in water consumption.

The exercise also demonstrates how existing reporting data (such as those used for ESRS) can be leveraged when finance and sustainability teams collaborate. By linking physical water consumption data and monetized societal impacts Roche turned a technical sustainability exercise into a potential strategic steering mechanism, using Impact Accounting not only to measure progress but to guide future-proof, risk-aware decisions on operations and investments.



06

Outlook

*'How can we use impact accounting in transforming core business?'* This has been one of key questions that the VBA member companies had in mind during the 5th piloting. We are still on a journey to find the answers, but two lessons learnt from the pilot provide a clue on where we should head for.

First, **a holistic view is needed**. Transforming business requires coordinated efforts in system rather than silos. Various departments should play their roles in discussion on strategy, implementation and evaluation, and not only impact but also dependencies need to be considered. Second, **context matters**. As we dig deeper into business transformation, industry- specific or company specific context become increasingly important. Because business models are rooted in intricate business environments and relationships within the eco system, transforming them requires sensitive approach.

Taking these factors into account, the VBA is poised to move forward to the next phase of pilot and business discussion.

## **TOWARD A MORE HOLISTIC VIEW: SUSTAINABLE VALUE CREATION**

On 21<sup>st</sup> March 2025, when the 5<sup>th</sup> piloting was almost finalized, leaders of finance, sustainability and accounting of VBA members and Big 4 gathered to discuss how to integrate sustainability into core business. The discussion revealed that even though companies were well equipped with ESG data management system and started to navigate risks and opportunities related to sustainability, a structure to turn these data into a force for value creation is missing<sup>17</sup>.

This has led the VBA to the idea of Sustainable Value Creation – a perspective in which business models are designed to create value both for the company and for society at the same time. The VBA, through collaboration among members, has developed the Sustainable Value Creation framework, an actionable guidance for companies to adopt both perspectives of Value to Society and Value to Business in business strategies such as Transition Plan. The framework, with Impact Accounting at the core, will provide clear steps and best practices to balance profitability with social and environmental impact in decision-making.

## **TOWARD A MORE CONTEXT-BASED DISCUSSION: USE CASE PILOTING**

VBA pilots have focused on feasibility tests of the methodology, and the scope of the pilots have been nearly the same from company to company. Recently VBA members were seeking to move beyond feasibility test and navigate the use of impact accounting in specific business areas and contexts that their strategic focus lies.

Use cases can be effective in helping members take context-based approach in impact accounting for business transformation. By delicately considering industry specific contexts and the circumstances unique to the company, companies are expected to enhance impact discussion into more practical and actionable ones.

Therefore, the upcoming VBA piloting will be transformed in a way that focuses more on practical use cases, and the VBA members will run this pilot in more flexible and tailored manner<sup>18</sup>. As outcomes of use case piloting, individual case studies will be introduced to impact eco system and beyond.

Witnessing an increasing interest of companies and financial institutions on impact accounting, the VBA, as a leader of business community for impact accounting, plans to foster an ecosystem where impact accounting can be easily implemented and discussed. Based on partnerships with key organizations such as Capitals Coalition, the VBA will extend its influence, know-hows, supporting system while lowering the threshold to impact accounting. The VBA members' role will be even more important in this new way forward.

<sup>17</sup> [Value Balancing Alliance \(2025\): Sustainable Value Creation Insights Report](#)

<sup>18</sup> The 'corporate footprint' piloting is still important especially in testing new indicators. Through this part of piloting, the VBA members will keep providing practitioners' voice to the upcoming methodology development.



“We are observing increased efforts at the international level, and in several jurisdictions, to standardize methodologies for measuring the societal value. A globally coordinated business voice, substantiated by concrete application experience, will be critical to ensure both decision-useful and practicable standards. As the VBA, we will contribute our experience to this process: Impact accounting represents the most promising approach to measuring value creation and strengthening business resilience.”

Christian Heller, CEO,  
Value Balancing Alliance



“The strength of the VBA is the member dialogue: by testing the method together, we accelerate a practical, comparable standard that connects impact accounting to enterprise value and business performance.”

Paul Penepent, Head of Financial  
Reporting and Accounting, Novartis

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