

Working Paper
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Agile Sustainable Development

A Primer on Corporate Impact Indicators and Valuation Factors via Agile Models

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Abstract

The world of sustainability reporting and impact measurement faces a triple challenge: scaling adoption while speeding up change and ensuring mutual support of states, civil society, and businesses. Organizations dedicated to the development of various methodologies have become a key to the growth of information ecosystems of producers, users, and intermediaries of sustainability and financial data. Our report is a primer on agile models in this highly active field for an audience of professional leaders engaged in the development and testing across sectors, disciplines, and fields. The findings of this report are the outcome of prior academic research, practitioner engagement and the pilot of the first global sprint. This pilot - the first of its kind - focused on the measurement and valuation of Greenhouse Gas Emissions (GHG) and Occupational Health and Safety (OHS) with participants in Europe and Asia. We introduce first-hand experience with the "sprint model" in global standard and method development, as it is emerging beyond its original fields of software and product development.

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I. Introduction

It took over a decade to establish a measurement system for the Millennium Development Goals and the subsequent Sustainability Development Goals. Most reporting standards will not be in widespread use before 2025. When the first full assurance reports arrive, the global community will have less than five years to work towards the sustainable development goals and halving global carbon emissions by 2030 to achieve net zero. The costs of this “evaluative infrastructure” (Kornberger et al., 2017) is estimated at around USD 250 billion – excluding opportunity costs of measuring the wrong things or measuring the right things incorrectly (Jerven, 2019; UN Statistics, 2019). While artificial intelligence can form part of the solution (Efremova, West, Zausaev, 2019), more important than “what” to measure (Stiglitz, Sen, Fitoussi, 2008) is the way “how” measurements and human judgments are formed.

The world of sustainability reporting and impact valuation, thus, faces a triple challenge: scaling adoption while speeding up change and ensuring mutual support of states, civil society, and businesses. Organizations dedicated to the development of various methodologies have become important drivers in the growth of information ecosystems of producers, users, and intermediaries of sustainability and financial data. But economic and political turbulence, as well as intensifying environmental and social crises, introduce new constraints and complexity. Thus, traditional waterfall project management based on sequential stages and forecasting of future cash flows becomes insufficient. New expert-led and industry-driven task forces, initiatives, and alliances imply a certain “agility” – an ability to move and think quickly and intelligently.¹ Cross-sector partnerships and interdisciplinary teams experiment with new development approaches that are more responsive to different and changing needs through road-testing and piloting. This heightened activity demonstrates impact measurement’s “imperative” role in distinguishing between expected and actual performance.²

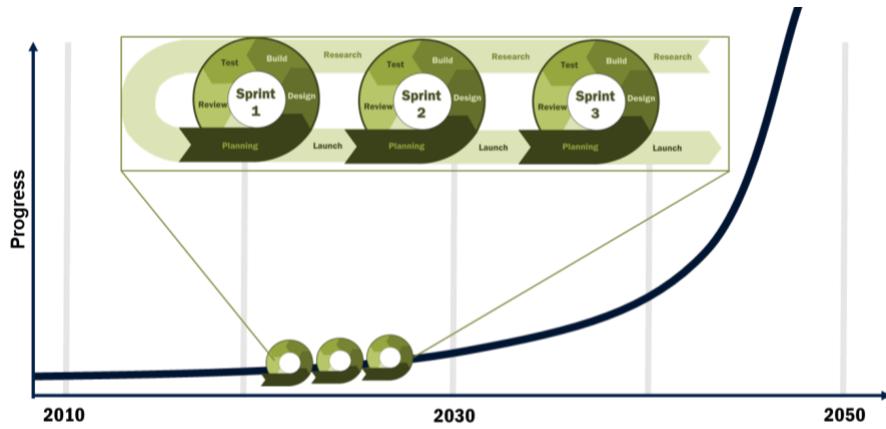
Our report is a primer on agile models in this highly active field for an audience of professional leaders engaged in the development and testing across sectors, disciplines, and fields. The findings of this report are the outcome of prior academic research, practitioner engagement and the pilot of the first global sprint on impact measurement and valuation. This pilot - the first of its kind - focused on the measurement and valuation of Greenhouse Gas Emissions (GHG) and Occupational Health and Safety (OHS) with participants in Europe and Asia. We introduce first-hand experience with the “sprint model” in global standard and method development, as it is emerging beyond its original fields of software and product development.³

¹ Oxford English Dictionary.

² Harij and Nicholls, 2020.

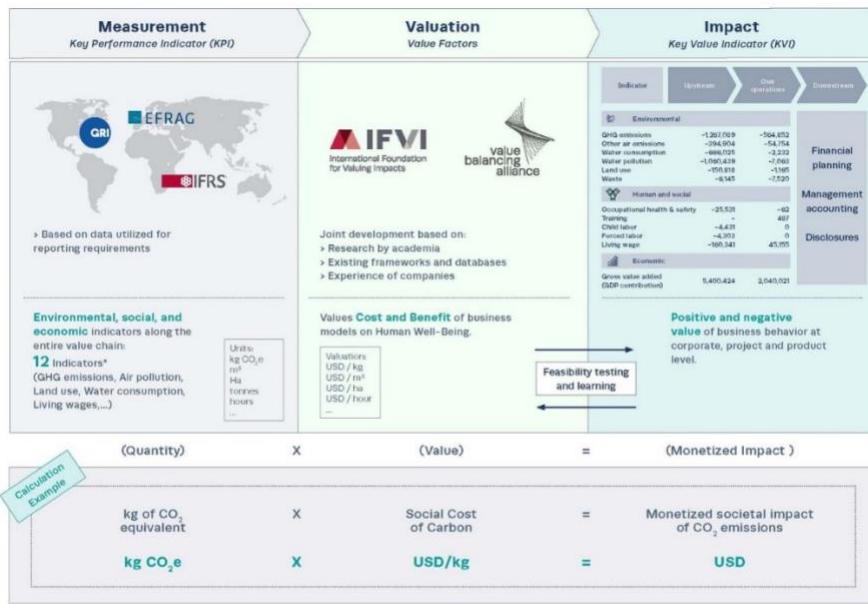
³ West and Jia, 2023.

Figure 1: The Sprint Model addresses the challenge of pace and scale in the just transition.



Initiatives in sustainability reporting, impact measurement, and valuation usually prepare, issue and seek feedback on general conceptual frameworks prior to developing issue- and sector-specific standards. An important preparatory task is to define the purpose, principles, and key terminology by which those specific standards are set. This includes the qualitative characteristics of the information and the distinction between dependencies and impacts.⁴ Figure 1 explains the interrelation of sustainability reporting, impact measurement and valuation.

Figure 2: Relations between sustainability reporting, impact measurement and valuation (Source: Value Balancing Alliance, 2023)



* more indicators are under development.

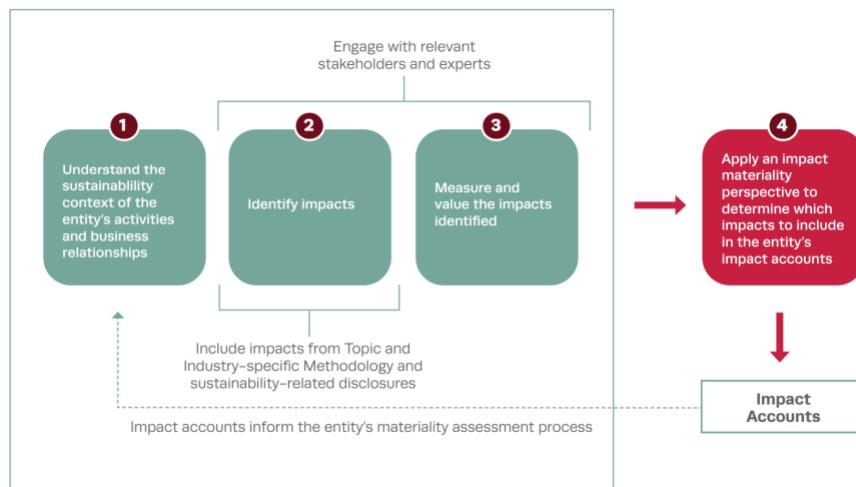
⁴ Also frequently called “double” or “dynamic” materiality as “outside-in” and “inside-out” from an entity’s perspective.

For the purposes of this report, we consider impact as the (actual or potential) links between (a) corporate activities and social-environmental changes and (b) between external risks, dependencies, and changes in corporations. We consider measurement and valuation as:

- the process of judgment based on facts, values, and standards of performance and accountability
- set of qualitative and quantitative methods for measurement, calculation, and financial evaluation for decision-making and reporting

This report collects the views of professional experts on the potential pathways to develop valuation factors⁵ and methods that can meet those ambitions. Impact valuation presents a fertile ground for agile models with regard to monetization models and their numerical inputs. Developing standards and methodologies in general and for GHG and OHS alone is an epic effort. This calculative practice sits at the intersection of measuring and managing impacts linked to policy objects. It aims to enable decision-makers to operationalize high-level policy objectives. As shown in Figure 2, this somewhat circular process of determining the relevance of information. Thus, it has a role to play in the catalytic processes of highlighting, orchestrating, and operationalizing systems change.⁶ Our report sheds light on the complexity and abstraction as integral to this work. While more attention is paid to KPIs and valuation factors, consensus-building and learning about standards, methods, and processes remains a costly and ongoing task. On this journey, critiques of reductionism and over-specification arise from civil society and industry alike. And they remind us of the shared goal to move from measuring to managing impacts.

Figure 3: Impact Materiality (International Foundation for Valuing Impacts, 2023)



⁵ Also known as “value” factors.

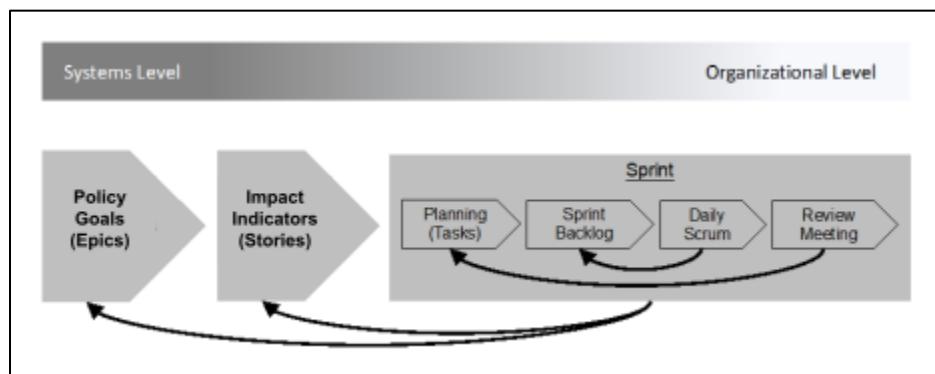
⁶ Besharov et al, 2021.

II. The State of the Art and Science

1. How does the Sprint Model work, and why does it matter?

What does it mean when the Taskforce for Nature-Related Financial Disclosures takes an “open innovation” approach?⁷ In times of rapid technological, economic, social, and ecological change⁸ all work is “work in progress”. The “state” of the art and science – a legal term to designate knowledge and inventions generated and published at an effective date for the allocation of intellectual property rights - is constantly in flux. It still serves as a reference point for organizations and people to structure the division of labor and collaboration. The sprint model, first introduced as the “Climate Sprint” in 2023, adapts agile development methods or “scrum” from software engineering to systems innovations such as standard-setting and methodology development.⁹ The model synchronizes distributed action and utilizes the force of routines for open innovation across organizational boundaries and levels.¹⁰ Beyond business units and functions, it allows for self-organizing teams to achieve a common outcome with high-intensity work in a limited time window. This section provides an overview of sprints in the context of the development of standards and methods of impact measurement and valuation.¹¹

Figure 4: The Global Impact Sprint Model.



⁷ <https://tnfd.global/consultation-and-engagement/>.

⁸ Also described as the “Anthropocene”, cp: Waters et al 2016: <https://www.science.org/doi/10.1126/science.aad2622>.

⁹ <https://www.scrum.org/>, last visited 19/06/2023.

¹⁰ Chesbrough et al., 2006.

¹¹ For detailed information, we refer to the original article by West and Jia (2023) and to the open source Global Impact Sprint Workbook listed in the appendix.

A sprint is based on clear processes and roles within the sprint team. This cyclical process is divided into four iterating sub-processes as follows:

1. generate an idea of the intended result;
2. break down large problems into addressable components;
3. manage the execution of mutually agreed upon tasks; and
4. adjusts progress and learns from previous successes and failures.

The phases described above range from sprint planning to the actual sprint with regular scrum meetings over a predetermined period of time, which are concluded by a demo day and sprint review. As part of the planning, team members must commit to a common "definition of done" (DOD) - the point at which the sprint is successfully concluded. This DOD needs to balance achievability and ambition.

The Sprint Team, Solution Owner, and Sprint Master, as the main sprint roles, are intimately related to this process. The Sprint Team, a group of individuals who are doing the work, are cross-functional such that the team has enough skills to achieve the sprint goals. It is self-organized and decided on how to best deliver on the tasks.

The Sprint Master ensures that the team complies with the Scrum process. The Sprint Master is in charge of communication amongst team members, i.e. facilitating the planned and ad-hoc meetings (daily Scrum, planning and review meetings). The Sprint Master operates as well as a coach to help the Owner and team maximize value from the process and remove impediments. The Scrum Master has a unique role of checks and balances to ensure the integrity of the process and, therefore, neither be performed by a member of the team nor may perform any of the technical work.

The Solution Owner (or simply Owner) is an individual that ensures the vision is kept in the Sprint output. The Owner will prioritize the backlog and give feedback on the new feature. This role requires not performing any work.

Figure 5: The Sprint Roles.

- **Solution Owner:** Responsible for setting the priorities for the indicators and valuation factors in a specific category specified by policy objectives such as the SDGs or similar global policy instruments.
- **Sprint Master:** Responsible for ensuring that the sprint process is followed, and the moderation of the team meetings and feedback loops.
- **Team Members:** Members contribute specialist expertise representing the organizations that develop, pilot test, or write a standard or method for impact measurement and valuation.

Sprint resources and tools centre around a Kanban sprint board, which is a dynamic list of cards. Those cards represent one actionable task. The title of the lists varies but are in the following order: "backlog",

"planned", "to do", "in progress", "review", and "done". They can be promoted to the next list upon completion, passed on to review and finally piled on to the "done" list. Tasks can also be relegated to the previous list if it fails the testing, at which point the task needs another iteration. The sprint backlog is a list of tasks that defines an actionable feature to develop an item - e.g. an impact indicator or a valuation factor.

Figure 6: Sprint Elements and Process.

- **Sprint:** A predetermined amount of time where tasks are completed - from four weeks to six month cycles, proportionate to the scope and complexity of the sprint goal.
- **Sprint Goals:** Policy goals (Epics) that describe the totality of sprint tasks that can be done.
- **Solutions:** A collection of Impact Indicators (user stories) for a given project epic.
- **Sprint Backlog:** A list of tasks to be completed in a sprint that progress the development of impact measurement and valuation methods.
- **Weekly Scrum/ Sprint Meeting:** A 15 minute to one-hour meeting where each team or organization reports prior day's or week's accomplishments and communicates subsequent goals.
- **Sprint Planning Meeting:** A meeting with stakeholders where the owners prioritize policy goals and impact indicators, and the sprint teams break down actions into tasks and assign them to the sprint.
- **Sprint Review Meeting:** Feedback process at the end of each sprint to reflect, share best practices, and adjust current progress of developing the indicators and valuation
- **Sprint Retrospective:** An occasion to learn from previous sprints and to recover from previous ones, taking place at the invitation of the Sprint Master.

Secondly, the climate action field - climate issues are initially prioritized by influential bodies such as the OECD, the Financial Stability Board's TCFD or the IFRS ISSB - demonstrates many similar challenges that the software industry and other industrial sectors have already addressed, such as the International Technology Roadmap for Semiconductors' roadmap following Moore's Law. Climate actions (and in any other sustainability area) serve beneficiaries' needs that vary by geographical location, demographic structure, level of income and other characteristics. The teams that engage in climate action need to embark on transition pathways that last decades. During those long time spans, demands change, and new people take over. Reporting, valuation, and measurement are seen as key to accelerating this transition which, in turn, requires more integration and coordination of the information ecosystem across industry sectors.

Thirdly, the emergence of many information technology service providers addressing the "data gap" in sustainability reporting and impact measurement has introduced the logic of digitalization and automation. Large data providers acquire specialist startups and expand their product lines to include

digitized sustainability reporting and impact measurement services. "ESG tech startups" combine the promises of fintech and climate tech to market solutions offering data analytics, automation, and artificial intelligence for data collection, materiality assessment, verification, valuation, reporting, investing, and many, many other needs of the world of sustainability. Not only corporates and investors but also standard-setters and methodology developers are adapting their work to this landscape. To make use of the opportunities promised by those technologies and software applications, they complement their traditional due process with more agile development methods.

To summarize, the process, roles, and elements of the sprint model provide a way to respond to rapid changes and collaborate in multidisciplinary teams and across different organizations. Each organization and team member knows their own role and those of others. The sprint model provides a system to effectively organize the drafting and review of standards, the generation of prototypes for methods, and their feasibility testing in organizational processes with multiple feedback loops for learning and adaptation to enhance usefulness. Ultimately, it also paves the way for the digitization of reporting through XBRL and other machine-readable languages and applications for automation.

2. Application to Impact Measurement and Valuation

Agile development models require clarity about the "backlog" of tasks prior to, during, and after sprints. Agile models are flexible and iterative in project management, focused on collaboration, adaptability, and continuous improvement. The model allows for frequent feedback, promotes adaptability to complex and changing requirements, encourages collaboration between cross-functional teams, and enables the delivery of high-quality content in shorter iterations at different organizational levels. Impact measurement and valuation initiatives operate in a field of changing and ever-increasing policy requirements that afford interdisciplinarity among knowledge carriers. The metrics selected in this report are drawn from the Guidance on Core Indicators for entity reporting on contribution towards implementation of the Sustainable Development Goals published by UNCTAD.

Initiatives in the field of impact measurement and valuation deal with complex systems and issues that contain many feedback loops and unknowns. Complexity introduces uncertainty and variability into measurement and valuation. This section adapts the idea of the "sprint backlog" (see ___ above) to the universe of potential impact indicators and valuation factors by way of tracking their development on two vertical and horizontal axes that express how certain the relevant expert communities are about a) the policy objectives of standards and b) the cause-effect of their underlying impacts measures. Indicators and valuation factors, thus, become objects of measurement themselves, rendering their development more comprehensible and accountable. We adapt the high-level indicator framework to corporate indicators in what we call the Agile Indicator Board. This device can act like a quality control

mechanism for the design and use of indicators themselves, thus closes the feedback loop between producers, users, and intermediaries of information. As a sprint board, it can be used in the same way as Kanban or scrum boards for task management and team leadership.

Figure 7: Overview of the Core SDG Indicator Framework as per the UN Statistics Office.

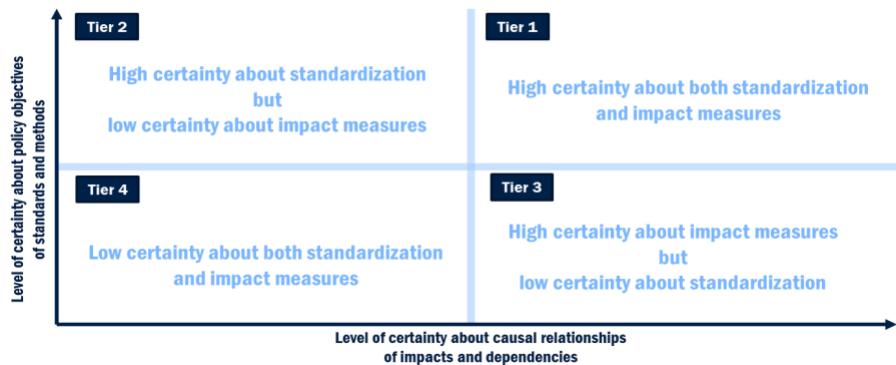
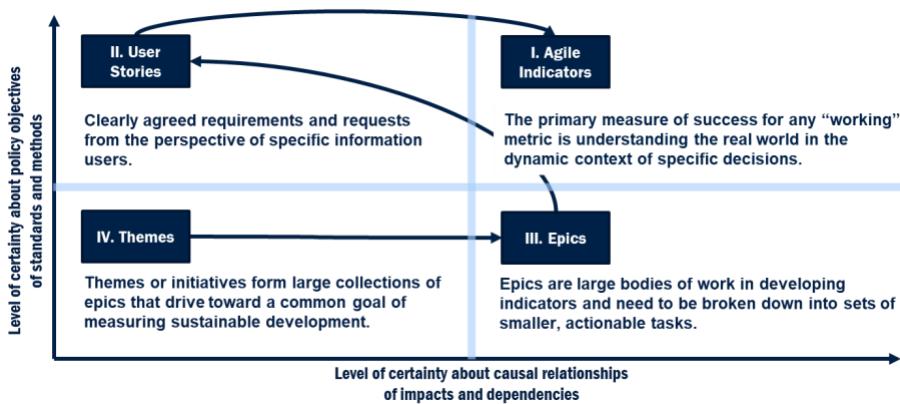


Figure 8: The Corresponding Agile Indicator Board for the Development of Indicators and Valuation Factors.



Thus, this indicator tracking device is dynamic, which means that an indicator or valuation factor can be promoted to a higher or relegated to a lower tier based on new scientific evidence or a change in policy consensus. The framework fulfils the same role as a Kanban-style board for a sprint where tasks are moved out of the backlog to the "in progress", "review", and "done" list or backwards.

It is important to note that the tier system of classifying indicators is not entirely new. The United Nations Statistics Division and other national statistics offices are reviewing and refining their indicator frameworks to enhance the validity and reliability of the methods of counting by which data is produced. For those agencies, the review of indicator frameworks is an important quality mechanism. The global indicator framework for the Sustainable Development Goals encompasses 231 unique

indicators (248, including repeating ones).¹² The Inter-Agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDGs), whose members are representatives of national statistical offices and the Chair of the UN Statistical Commission, as well as observers from other international and regional agencies.

Figure 9: Tier classifications for the indicator frameworks as used by United Nations Statistics Division.

- **Tier I:** indicator is conceptually clear, established methodology and standards are available and data are regularly produced by countries.
- **Tier II:** indicator is conceptually clear, established methodology and standards are available but data are not regularly produced by countries.
- **Tier III:** no established methodology or standards are available for the indicator or methodology/standards are being developed or tested for the indicator.

Source: UN Statistics Division.

The SDG Indicator Framework focuses on governmental reporting. Conceptual frameworks designed for corporate financial and sustainability reporting have some parallels. The implementation of an indicator depends on its development degree - or tier - and this assessment has different consequences for its subsequent treatment. While Tier I indicators are "good to go", they will still be subject to regular review. Tier II indicators may be implemented partially wherever feasible (regionally or sectorally), but their emphasis is on capacity building. For Tier III indicators, more efforts are required to develop the methodology.

Reporting and impact measurement for corporations show considerable differences. Important differences are the object of accounting, the type and granularity of data, the level of aggregation, the data flow of reporting, and its distinction between general disclosures and sector-specific disclosures. Impact measurement and valuation on the corporate level and its value chain network operate in a distributed information ecosystem with different norms, expectations, and knowledge bases. While learning from the Global Indicator Framework for SDGs, the differences must be reflected in the tracking of indicators for corporate entities.

The horizontal axis tracks the level of certainty about causal relationships of impacts and dependencies. Those fundamental quantities are found in the physical and social systems, such as carbon emissions or human health, and relate to the object of accounting. The causal relationships between those phenomena and the impacts and dependencies in the corporate context need to be contextualized within the organization and its global value chain networks. The objects of accounting - in our case GHG and OHS indicators - require an understanding of the carbon cycle in the ecological system and

¹² <https://unstats.un.org/sdgs/indicators/indicators-list/>.

the health and well-being of people in social systems to determine the fundamental flows and stocks. Once this is sufficiently clarified, the focus shifts from the systems at large to the corporate entity as a participant in this system. Experts need to map the logical stream of inputs, activities, outputs, outcomes, and impacts of an entity on the system and vice versa.

The second vertical axis tracks the level of certainty about policy objectives of, standards and methods. Those objectives are found in policy declarations, legislation, and regulations but also conceptual frameworks and technical guidance. The degree of certainty on both axes follows different logics. While thresholds for evidence and norms for accuracy and validity for causal relationships of impacts and dependencies tend to follow the scientific discourse, more interpretative discretion exists when relevant communities of experts set the boundaries of an entity across time and space. Scientific consensus and its translation by professional experts will determine if, when and how impacts can be attributed to organizational entity.

The corresponding *Agile Indicator Board* structures uncertainty and ambiguity around measuring corporate impacts in a different way based on informativeness and actionability of the indicator. Central to this typology is the distinction of the following indicators:

Table 1: Elements of the Agile Indicator Board.

Element	Example
Themes	“We must halt and reverse nature loss globally.”
Epics	“We want to develop and design a framework to identify, assess, respond, and disclose on nature and biodiversity loss.”
User stories	“Goals and targets under the Global Biodiversity Framework (GBF) in December 2022.” “Provide information for strategy and risk management at the board and management level, for better capital allocation and asset valuation decisions.”
Agile Indicators	Total extent of land/freshwater/ocean-use change ¹³ in km, by type of ecosystem (before and after change) and business activity *absolute and change from previous year), referring to sector-specific guidance on relevant metrics Tied to GBF Target 7.

Determining the certainty about policy objectives follows logical appropriateness and usefulness. Policymakers and standardsetters are concerned with the legitimate production of norms that are appropriate to those constituents that are addressed by those norms. In sustainability reporting and, by

¹³ Excerpt from TNFD Core Disclosure Metrics for Dependencies and Impacts on Nature; ; Source: <https://framework.tnfd.global/draft-recommended-disclosures/disclosure-metrics-annexes/>.

extension, in impact measurement and valuation, the appropriateness of standards and methods is determined by their "decision usefulness".

The SDG Indicator Framework leads us to SDG Indicator 12.6.1 - the number of companies publishing sustainability reports. This indicator is based on target 12.6 explicitly encourages companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycles. The underlying policy objective rests on Sustainable Development Goal 12 - sustainable consumption and production. To operationalize indicator 12.6.1, UNCTAD - the responsible agency alongside UNEP - Guidance on Core Indicators Sustainability and SDG Impact Reporting is prepared and regularly updated by UNCTAD and enhanced by UNEP and the UN Statistical Division.

The stated purpose of the guidance is not to provide a standard for sustainability reporting but primarily to assist governments in their SDG measurement. However, the document became more influential than publicly recognized, as "core" indicators sounded like a minimum requirement to many actors in the global accounting arena. With the IFRS ISSB mandated to create a global baseline, the UN Core Indicators anchor the attention on the feasibility of impact measurement and valuation in jurisdictions where the institutional setting may not meet any minimum reporting expectations.

Together with other global guidance documents, the UN Core Indicators provide a starting point to assess corporate KPIs and valuation factors within the tracking framework outlined in this chapter. The Core Indicators are not developed from scratch and do not follow a single conceptual framework. Rather, they are selected from an existing universe of key initiatives or reporting frameworks that feature in published corporate reports. The selection criteria can be separated into a first-order assessment of appropriateness and a second-order assessment of the usefulness of the specific indicator.

While the former is concerned with how generally accepted the indicator is, the latter determines how technically feasible or calculable it is. A detailed discussion of the criteria will follow in Chapter 3 when we discuss the user experience of indicators. The first-order assessment of appropriateness entails considering three crucial factors: relevance to the Sustainable Development Goals (SDGs) goals, targets, and indicator framework; interoperability with the existing indicator universe; and universality to all reporting entities. Relevance to SDG goals, targets, and indicator framework is essential in ensuring that the chosen indicators align with the global agenda for sustainable development. By evaluating how well the indicators contribute to the desired outcomes

Figure 10: Logics of Impact Measurement and Valuation

Backlog assessment of Key Performance Indicators and Valuation Factors:

1. Policy Appropriateness

- SDG Relevance
- Interoperability
- Universality

2. Decision Usefulness

- Comparability
- Controllability
- Capability
- Suitability
- Connectivity

and progress towards the SDGs, the process ascertains their suitability for measuring and monitoring sustainable development efforts.

Interoperability with the existing indicator universe (e.g. ISSB, GRI) is crucial for harmonizing data collection and reporting processes. It involves evaluating the compatibility and integration of the indicators with the established frameworks, standards, and systems already in place and forthcoming. This step ensures data exchange, comparability, and consistency across various reporting entities and avoids ESG data gaps. Universality to all reporting entities emphasizes the importance of inclusivity and accessibility. The chosen indicators should be applicable and relevant to diverse organizations, sectors, and regions. Considering the diverse nature of reporting entities, the process covers that the indicators are universally applicable and facilitates consistent and comprehensive reporting of sustainable development progress.

The second-order assessment of usefulness involves evaluating several key aspects to determine the value and effectiveness of selected indicators. These factors include comparability across industries, controllability over issues and data collection, the capability of consistent measurement, suitability for consolidated reporting and legal entity reporting, and connectivity between financial and non-financial reporting principles and data. Comparability across industries is vital to ensure that the chosen indicators can be applied consistently across different sectors. Controllability over issues and data collection refers to the ability of reporting entities to influence and manage the aspects covered by the indicators. The capability of consistent measurement is crucial for reliable and accurate reporting. Indicators should be defined in a manner that allows for consistent measurement over time, facilitating meaningful trend analysis and monitoring of sustainability performance. Suitability for consolidated reporting and legal entity reporting involves assessing whether the selected indicators can accommodate the reporting needs of different levels, such as group-level or individual legal entities. Connectivity between financial and non-financial reporting principles and data recognizes the importance of integrating sustainability information with financial reporting.

To conclude, developers of sustainability reporting standards, impact measurement and valuation methods took some considerable steps towards joining corporate impacts to the stocks and flows of their underlying fundamental quanta. Organizations, professional experts, and business leaders engage in breaking down those ambitions into concrete, feasible tasks. This is why tracking the development status of a specific indicator or valuation factor is useful to determine where standardization efforts are at any given point in time and what next steps need to be taken.

3. Key Learnings from the Pilot Sprint

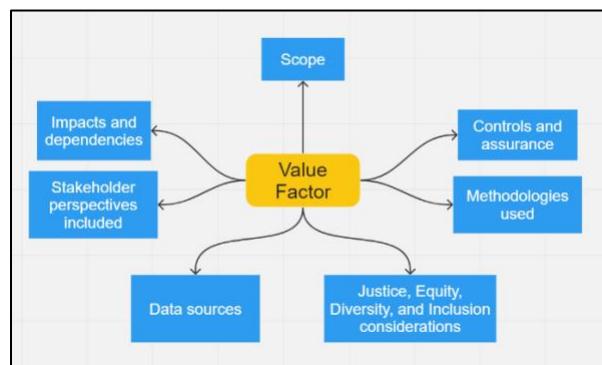
This section discusses key learnings that follow from the pilot sprint's work about the development of indicators and valuation factors. A full list of sprint resources for indicators and valuation factors is

available in the appendix of this working paper. Following the introduction of a tracking framework for corporate indicators, we now turn to the key learnings for the development of key performance indicators and impact valuation factors. We now apply the Agile Indicator Board to some of the current challenges of impact measurement and valuation.

Measuring and valuing impact is primarily about making visible the interventions of an entity in social and ecological systems. The complexity arises from the basic fact that a business entity under normal “going concern” assumptions means that the entity *is in itself* the intervention in the systems it is operating in. Therefore, two major areas of application of the Agile Indicator Board are, first, the development of logic models for each impact indicator and, second, the development of valuation factors. The logic models – or also called impact pathway – requires a clear set of assumptions about causal, correlational, and hypothesized relationships between inputs, activities, and outputs of an entity and its outcomes and impacts on social and ecological systems. Logic models should be distinguished from transition pathways. Transition pathways – as used in climate action – are derived from scientifically grounded reference scenarios towards a pre-defined (near-term and long-term) target. Those transition pathways for net zero goals – as suggested by the IPCC – can be combined with sustainable development goals in the form of climate-resilient development pathways. Therefore, logic models for corporate entities can and should make use of reference scenarios and transition pathways in their evaluation of interventions.

Generally, valuation factors are user-specific (decision, impacts, “stakeholder” focus, organizational level, etc.), context-dependent (dependencies, geographic, cultural, etc.), time-bound (accruals-based, periodic, backward-looking, forward-looking, etc.) and aim to represent a coherent system to measure stocks and flows. According to the Capitals Coalition, the development of valuation factors is comprised of several features:

Figure 11: Draft Transparency Criteria for Value Factors (Source: The Value Commission)¹⁴



¹⁴ <https://capitalscoalition.scribehub.com/documents/18#s55bdb0>.

Design principles that follow the logic of auditability pose certain limitations and boundaries on the usefulness and informativeness. The Transparency Criteria under development by the Value Commission are intended to incentivize organizations to disclose their assumptions behind constructing value factors by which they multiply their impact indicators. Draft transparency criteria are

Figure 12: Case Example from SK Holdings.

Example: Links between Reporting, Measurement, and Valuation

SK Incheon Petrochem, a subsidiary of SK, reported approximately 280,000 GCal of waste heat per year. Previously, they did not consider the negative impact on the environment. However, the local community is facing energy supply issues and price increases in cooling/heating due to population growth. SK began to question how they could treat waste heat in a smart way and contribute to solving local challenges. Two options were considered: building facilities to reuse waste heat or providing it to nearby residential complexes at a low price. The second option was chosen, despite higher initial costs. By selling the heat, SK could generate sales of USD 2.9m per year, while reducing cooling/heating costs for 40,000 households by 70%. This approach eliminates the need for fossil fuel-based energy generation and avoids around USD 6m in environmental costs. SK concluded that the second option is more sustainable as it creates economic and environmental value beyond their operations. The application of impact measurement and valuation allowed SK to transparently assess the pros and cons of each option.

Source: VBA;
https://www.value-balancing.com/_Resources/Persistent/6/5/d/7/65d77c09700346cc7e1317b79aec525031cf04c5/VBA-Pilot-Study_vo.2_final.pdf

The data produced for indicators and valuation factors come with different levels of uncertainty and varying quality. Data availability challenges for users arise from technical issues around measurability and resource constraints to build an effective data pipeline.¹⁵ Impact valuation – and its prerequisite – impact measurement feed data generated from sustainability reporting into management systems. It plays several roles:

1. Rendering sustainability issues manageable: weighing up trade-offs, identifying hot spots, setting criteria for evaluation, justifying business decisions
2. Meeting transparency expectations: comprehensiveness of information, responding to more evidence from academia and practice about corporate impacts
3. Enabling decision-makers to compare: different impacts on society, with financial numbers, and among different companies and countries.

Sustainability reporting, impact measurement and valuation are interconnected parts of the same information ecosystem and data value chain. Developers of such methods increasingly position their work on a "management first" basis rather than "reporting first". This expands the meaning of decision-usefulness, but challenges remain in aligning this information with financial metrics, adjusting to diverse company, industry and country profiles and, in turn, providing comprehensive and comparable sustainability criteria for analyses and decisions.

Consciously adopting this agile development model to ongoing and future efforts in impact measurement and valuation matters for three reasons. First, standard-setters such as the IFRS ISSB, GRI GSSB, and EFRAG engage expert networks and other participants in short timeframes. Those situations afford high flexibility and capacity for collaboration without much prior preparation or team-building.

¹⁵ Burchell et al, 1980.

This can be observed in discussions with practitioners and from the filled agendas and timetables that often need to be revised in the regulatory and industry working groups. Similar challenges are to be expected with the announced revision of the GHG Protocol, the Science-based Targets Initiative, the industry-led Taskforce for Nature-related Financial Disclosures (TNFD), and the Value Balancing Alliance. Those initiatives engage directly with preparers and users of the information to improve usability and, therefore, uptake of their outputs.

Figure 13: Overview of the impact accounting methodologies for impact accounting and valuation.

Method Name	Total Impact Measurement and Management Framework	General Methodology for Comprehensive Impact	SEE (Social, Environmental, Economic) Impact Valuation
Developer	PwC	IFVI-VBA	Wifor
Principles	Double materiality of impacts and risks Backward-and-forward-looking Boundary flexibility Monetization Attribution Balanced understanding Consistency Comparability Decision-readiness/-usefulness	For the public good business relevance pragmatism scalability transferability	Resilience Transparency Comparability Responsiveness
Approach	Provides a new language for decision-making. Instead of relying on shareholder return alone, it incorporates and values a number of non-financial impacts. It's a holistic view of what businesses need to understand risk, identify opportunities and maintain a positive impact on society. By valuing the TIMM Quadrants (Social Impact, Environmental Impact, Tax Impact, Economic Impact), business leaders are now able to compare the total impacts of their strategies and investment choices.	Establish a system of impact accounting and enable IFVI to publish methodology based on consistent concepts, definitions, methods, and principles that align with standards and allow for the development of topical methodologies. Assist corporate entities and investors in developing impact accounts based on consistent approaches and practical feasibility; Enable corporate managers, investors, and stakeholders to understand impact information that is derived from impact accounts.	Established an enhanced impact valuation and measurement method based on the VBA methodology. Its sector-specific data is originally based on exobase and the Lontieff. Further, it developed and updated the methodology. The modelling system offers monetization that recalls the consumption of external resources.
Conceptual Framework	Developed and published	Exposure Draft published in August 2023	Developed and published
Valuation Factors	Developed / unpublished	In progress as of November 2023	Developed and published in August 2023

Applying the corporate indicator framework set out in the Core Indicators requires an assessment of the uncertainty of the indicators. One might expect that the GCI Core Indicators would mostly fall into tier 1 indicators because part of the uncertainty assessment has already been made by the UNCTAD

team and the consultative group of experts. We recall that the backlog of tasks for any given sprint follows directly from the tracking based on the criteria of the different tiers. To include user stories in the backlog, they need to be broken down into actionable tasks. In employing an agile development approach, defining indicators as "tasks" in the development process means breaking down their features into small actionable bits.

One important application is the Transparent Project which we include in the repository of key performance indicators (appendix A-1). Under the European Green Deal, the Transparent Project established natural management accounting and valuation principles as a means to mobilize private sector investment for the green transition.¹⁶ The Transparent Project establish a common language of impact accounting principles covering environmental KPIs that permit any corporate or financial market participant to account for its impact performance standardized and comparable, and compatible with monetization.

Another important application is the IFC Performance Standards that ensure development finance performs according to the IFC policies. The IFC forms part of the World Bank Group, which invests in emerging and developing countries while ensuring the performance of these investments. It established the IFC's Performance Standards, a set of environmental and social guidelines, that the organization expects its clients to meet the IFC objectives when carrying out their projects. These standards are designed to ensure that projects funded by the IFC are economically viable, environmentally sound, and socially beneficial. The Performance Standards cover a wide range of issues and are considered to be among the most comprehensive sustainability standards for private sector projects.

By conducting a thorough first- and second-order assessment of users based on the criteria above, the members in a sprint select indicators that promote comparability, controllability, consistent measurement, suitability for different reporting levels, and effective integration of financial and non-financial information. This ensures that sustainability reporting provides meaningful insights and supports informed decision journeying on user profiles. However, this step cannot be completed unless the purpose of the indicator or valuation factor is clarified, and we propose that this purpose is anchored in the user needs, as discussed in the following chapter.

¹⁶ General Guidance on Applying the Natural Capital Management Accounting Methodology (NCMA) General Guidance, June 2023, p. 1.

Figure 14: Impact valuation used for the presentation of business models.

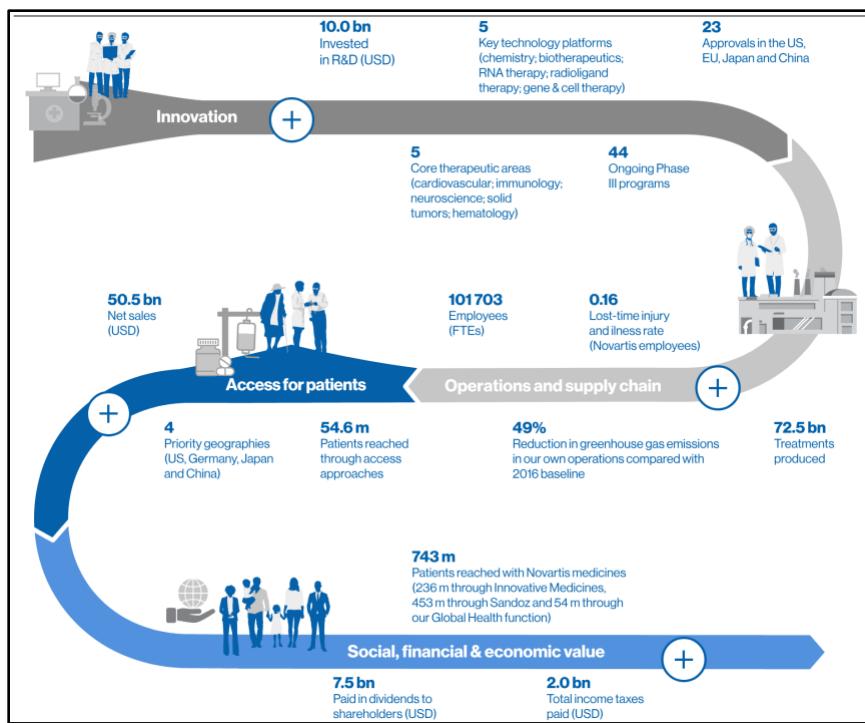
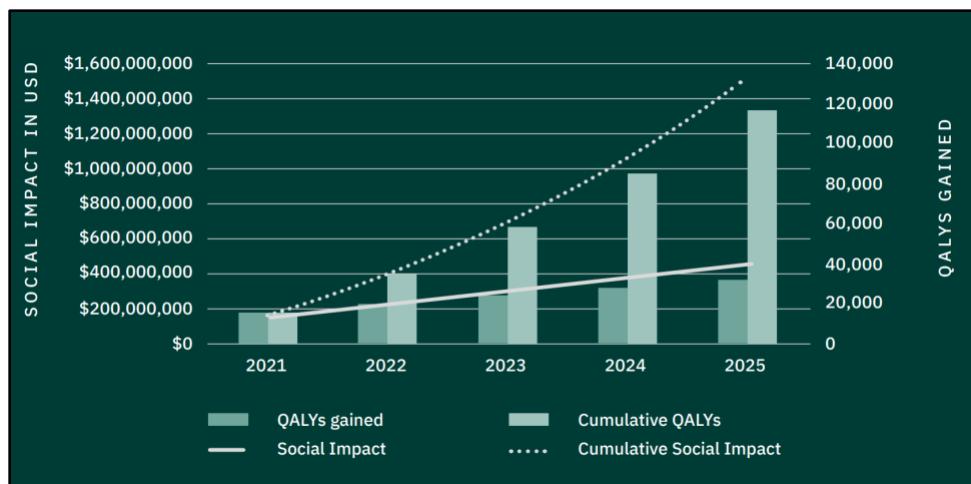


Figure 15: Impact valuation used for the presentation of the value of medicines to health systems for internal use by corporate managers (Novartis).

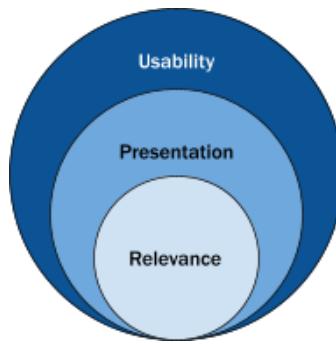


III. Information User Profiles and Decision Journeys

4. How do decision-makers evaluate impacts, and what information do they need?

This question is at the heart of standard-setting and method development, yet "decision usefulness" remains an elusive concept. The reference points for the identification of user needs are linked to external user groups rather than specific users within an organization. The assessment is for reporting themes as a whole and not for individual indicators or valuation factors. The assessment of whether themes such as climate or health & safety are decision-useful builds on the reasonable expectation of user characteristics such as business knowledge and analytical skills. To understand user stories for impact indicators, developers must identify the needs of information users. The narrower the definition of the primary users by a standard or methods framework, the more homogenous those user needs become. Conversely, the broader the definition of uses is, the more diverse their user profiles and decision-making journeys appear. Currently, it is up to preparers – the corporations themselves – to identify the information user needs for a specific report within a given conceptual framework. In the following section, we will outline this approach and provide examples and cases.

Figure 16: General Features of Information User Experience.



Building on those various elements of decision-usefulness, we can derive the core elements of what we term the *user experience* of impact measurement and valuation. The general principles described above are reproduced in many different reporting frameworks in a similar way and sometimes with different nuances. What they have in common is that they are framed as enhancing the quality of inputs for information users when they, more accurately, describe the preparer's output. This conceptual ambiguity becomes clear in the report by the Working Group on Data and Usability of the EU

Sustainable Finance Platform. Their assessment of the usability of the proposed EU Taxonomy approached the problems from three angles: Structural, interpretative, and technical issues.¹⁷

The core elements of user experience for impact measurement and valuation, thus, are *relevance*, *presentation*, and *usability*. Analogously to agile development methods, we adapt the idea of user experience to corporate information features. First, the interpretation and understanding of the underlying norms of the reporting by the user - e.g. the GHG Protocol for scope 1, 2, and 3 emissions or GRI 403 for health & safety incidents of employees in their own operations and the supply chain - determines the *relevance*. Second, structural issues - formatting, numbering, naming conventions, the detailed use of abbreviations and words such as "shall", "may", "could", "would", "should", etc. - are defined by generally accepted reporting frameworks under (fair) *presentation*. Thirdly, the context of the decision-maker builds the core of the *usability* of corporate information. Organizational activities such as capital allocation, product development, sales, investor relations, procurement, etc. - turning information into action and matching problems and solutions at regular and random points in the organizational decision-making process.

The broader definition of users is featured in UNCTAD Guidance on Core Indicators and the Global Reporting Initiative (GRI 1). The Guidance on Core Indicators for Sustainability and SDGs suggests a comprehensive set of indicators that cover the economic, social, environmental, and institutional dimensions of sustainable development. According to the GRI, information users should be enabled to make "informed assessments and decisions about the organization's impacts and contribution to sustainable development." Users are organizations "regardless of size, type, geographic location, or reporting experience." Stakeholders are not defined. Users include: society at large, capital providers, government agencies, and other key stakeholders.¹⁸ The IFVI-VBA enlarges the list of users of impact accounting in even greater detail.¹⁹

Figure 17: IFVI-VBA's Impact Accounting Users

- a. managers of the entity, including executives, finance departments, risk officers, and sustainability experts, can use impact information to inform decision-making related to:
 - i. corporate management, including business acquisitions, mergers, and/or joint ventures, capital budgeting and investment, corporate strategy, distribution, procurement, and supply chain, employee compensation, engagement, and performance targets, governance controls, processes, and procedures, new market entry and restructuring, product portfolio decisions, research and development, and risk management; and
- b. existing or potential investors, lenders and other creditors can use impact information reported in an entity's sustainability-related disclosures or can prepare impact accounts from an external perspective to inform investment decisions based on:
 - i. an assessment of the positive and negative impacts of an entity; and
 - ii. an assessment of an entity's enterprise value, including consideration of risks and opportunities that arise from an entity's impacts.
- c. affected stakeholders, including individuals or groups whose well-being is affected or could be affected by the entity's activities and its *business relationships* across its *value chain*, can use impact information to understand the significance of impacts.
 - i. Affected stakeholders use impact information to inform a range of decisions, including those related to consumption, employment, procurement, and policymaking.

¹⁷ https://finance.ec.europa.eu/system/files/2022-10/221011-sustainable-finance-platform-finance-report-usability_en_1.pdf

¹⁸ UN Core SDG Indicator Framework, https://unctad.org/system/files/official-document/diae2019d1_en.pdf.

¹⁹ General Methodology 1 (2024), par. 22, p.10: <https://ifvi.org/research/methodology-development/general-methodology-1/#:~:text=About%20General%20Methodology%201,topics%20such%20as%20materiality%20assessments.General>.

The IFRS defines users more narrowly. In its first standard, ISSB S1 defines the usefulness of sustainability-related financial information in terms of the needs of "primary users of general purpose financial reporting". Accordingly, significant sustainability-related risks and opportunities need to help decision-makers to assess "enterprise value and decide whether to provide resources to the entity".²⁰ However, guidance from the Conceptual Framework of Financial Reporting mentions potential investors, lenders and other creditors (1.5). While general-purpose financial reports are "not designed to show the value of a reporting entity", the reports help primary users to assess the entity's value (1.7). Those users are expected to "have reasonable knowledge of business and economic activities and who review and analyze the information diligently" (2.36).²¹

The IFRS Practice Statement 2 offers further clarification, which spells out a high degree of discretion on the part of the preparer: General purpose reports cannot meet all specialized and unique information. Rather, they focus on "common information needs" that an entity identifies the needs shared within one of three categories: first for investors (existing and potential) and then separately for lenders and other creditors (all existing and potential). This yields the "total of the information needs", of which some will be common to all three categories, and others are only specific to (21-23).²²

Relevance and faithful representation are essential principles in this context, as they ensure the provision of accurate, reliable, and meaningful financial information. Relevance refers to the information's capacity to influence users' decisions by making a difference in their assessments and evaluations. Accounting information must be relevant to the needs of users, such as investors, creditors, and other stakeholders, to be useful for decision-making purposes. On the other hand, faithful representation entails the depiction of financial information that is complete, neutral, and free from material error or bias. It is crucial for the information to faithfully represent the economic reality it seeks to portray, providing a true and fair view of an organization's financial position and performance.

The framework for financial reporting also outlines other qualitative characteristics that enhance the usefulness and reliability of financial information. Comparability refers to the ability to compare financial information between different entities or periods. It involves presenting information in a consistent manner, using similar accounting policies and methods, which allows users to identify similarities and differences and make meaningful comparisons. Verifiability emphasizes the importance of evidence and the ability to confirm the accuracy of reported financial information. Verifiable information is supported by sufficient and reliable evidence, enabling auditors, assurers, regulators, and other interested parties to assess the reliability and truthfulness of the information presented. Timeliness highlights the need for financial information to be available in a timely manner. It should be provided

²⁰ IFRS S1, Objective 1.

²¹ Conceptual Framework of Financial Reporting.

²² IFRS Practice Statement.

to users promptly to ensure the decision journey. Understandability stresses the need for financial information to be presented in a clear and concise manner, making it comprehensible to users with reasonable knowledge and understanding of business and economic activities.

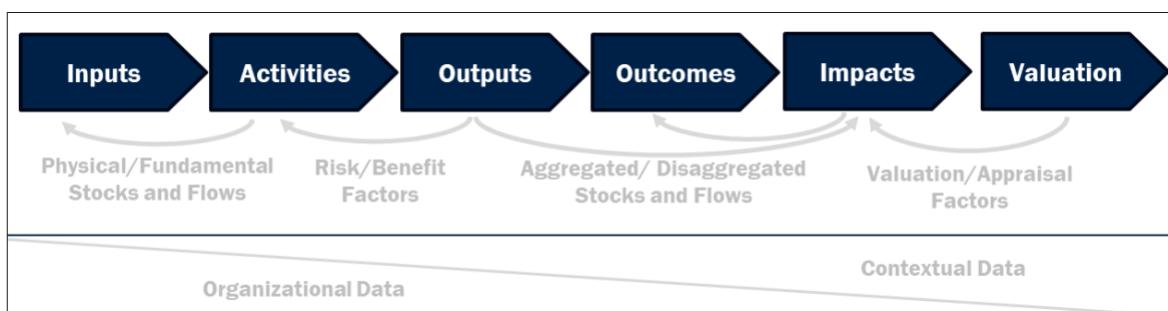
To summarise, the fundamental and enhancing characteristics laid down in the most widely recognized reporting frameworks should be investigated more systematically and empirically in terms of user profiles and the decisions they need to make on their user journey.

5. Applications to Impact Measurement and Valuation

As demonstrated above, user needs are currently assumed as homogenous and not context-specific but this does premise does not hold in reality. For example, every information user - from investors to executive directors to customers - is assumed to require the same level of accuracy, comparability, or relevance for their decisions. Current conceptual frameworks on a "reporting first" approach are missing the basic premise of "integrated thinking" for decision-usefulness. Different users occupy different positions along the data value chain, and while the organization as a whole needs a complete picture, different parts of the organization have different user needs regarding the data and quality.

We, therefore, propose that the concept of *information user experience* – borrowed from user-centred design and systems thinking – allows us to determine the *utility, preferences, and behaviour* of information to different participants of a specific system. For example, strategic decision-makers might have a different utility functions for accuracy than operational decision-makers. Pension funds investing in a real estate portfolio might have different preferences for comparability than private equity investors acquiring shares in a civil infrastructure project. Behaviourally, different information user groups process quantitative information in ways that are qualitatively different. How to determine those groups is, as we argue, not a task individual companies can accomplish alone but it requires collaboration industry-by-industry and partnerships with policy-makers and civil society organizations. The qualitative requirements of usability, presentation, and relevance of quantitative information will vary across organizational contexts from inputs, activities, outputs to outcomes, impacts and valuations.

Figure 18: General Logic Model in Impact Measurement and Valuation.



The arguments set out in this report have important implications, as we see in more detail below when surveying the user definitions and guidance provided by several standard conceptual frameworks. One consequence is that user needs, even if they are narrowly defined as "investors, creditors, and lenders", do not specify which users require what type of information along the logic model²³ from inputs to impacts. Sometimes, the first three – inputs, activities and outputs – are described as "value", "impact" or "performance" drivers which assume a certain underlying causality. The assumptions about the systems, scenarios, interventions/entities are fundamental to evaluating the decision-usefulness of indicators.

Further issues arise from the fact that there is no coherent system for each reporting or impact theme that records both flows *and* stocks of the underlying measurement quantum. For example, GHG emission flows are expressed as an inventory, but this device does not conform with the principles of double-entry accounting, and, hence, an accrual-based carbon balance sheet framework does not exist to this date (Jia, 2023). OHS is not even at a point where it can be recorded as flows because the underlying quantum - human health - cannot be readily counted as a physical material without meeting concerns about the objectification of humans as resources or capital. Here, some developers of impact valuation test the proxies of Quality-Adjusted Life Years (Qualys) and Disability-Adjusted Life Years or productivity as potential candidates for the quantification of "flows" and "stocks" of well-being.

If one follows a more focused user definition - potential and actual investors, lenders and creditors - as the primary user of general-purpose financial reporting, there is considerable diversity in the user needs to be based on the different activities and specific organizational users. This is exemplified in a background study on sustainable finance for the Asian Development Bank.²⁴ The focus of table below is on information users rather than producers and intermediaries. A full public repository will require iterations of this list to include user groups from broad categories of government and civil society: local/indigenous communities, consumers/B-to-C customers, employees/ trade unions, environmental organizations, social movement groups, faith-based financial institutions, general insurance companies, development finance institutions, commercial treasury accounts and insurance policyholders, and consumer finance institutions.

In his report, one key learning from agile development methods is how important it is to separate design principles (how things work) from normative principles (how things should be). We purposefully separate information user experience from *materiality* of accounting information. We argue that while those concepts are mutually dependent, they follow a markedly different structure, logic, and purpose. The former is a set of design principles for the development of methodologies, while the latter is a normative principle in legal and accounting systems. Both originate from different communities of

²³ Also sometimes called "impact pathway".

²⁴ Nicholls (2021).

practice and professional networks that developed different thresholds of significance and standards of validity and propriety. One may be more conducive to the logic of audibility or verification, and the other may be more amenable to the logic of due process. The discussion of the conceptual relationship, tensions, and implications has been the subject of social science studies in accounting and merits further analysis²⁵ which is outside of this report's scope.

Table 2: Expanded scope of information user groups (adapted from Nicholls, 2022).

User Group	Activity
Sustainable asset managers	Positive and negative investment and portfolio management strategies based on ESG risk factors and sustainability-enhanced valuation
Endowment fund asset owners	Reputational risk, investment, consistent with founding or charitable aims
Reinsurance	Systematic, transition and physical risks connected with insurance product
Impact investors	Concessionary capital to leverage mainstream investment and outcomes payer in impact bonds based on additionality of interventions, policy perspective and personal ethics
Defined Benefit Pension Plan, Defined Contribution Pension Scheme	Strategic investments based on long term investments, personal perspective of beneficiaries, ESG risk factors and policies
Sovereign Wealth Funds	Strategic investments and support public finances based on ESG risk factors and policies
Life Insurance	Strategic investments based on long term investments, demographic risks of beneficiaries, ESG risk factors and policies
Government agencies	Grant support to support early-stage enterprises, SMEs, and build infrastructure, based policies
International organizations and development finance institutions	Grant support to early-stage enterprises, SMEs, and provide financial facilities based on global policies
High Net Worth Individuals and their philanthropic organizations	Grant support early-stage enterprises, build infrastructure, and family ownership based on sustainability-enhanced valuation
Individual citizen investors in shares and ETFs	Mobilise pensions, banks, and insurances to divestment from carbon intensive shares to invest in sustainable companies
Philanthropic and faith-based foundations	Endowment assets as mission-related investment

²⁵ Miller and Power, 2013.

6. Key Learnings from the Pilot Sprint

In this pilot sprint, we adopted a broad view of information users that are located within corporations. In the exploratory stage, we studied three organizations in different sectors and zoomed into five user information groups. A summary of the findings is listed in Table 3, and the case highlights below.

Table 3: Overview of the cases analyzed by the student teams.

Industry	Pharmaceuticals, Biotech, and Life Sciences	Automobiles and Components	Chemicals and Construction Materials
Company	Novartis	BMW	Holcim
User cases	<p>Alternative suggestion: Novartis' motivation to conduct impact valuation has been driven by three objectives:</p> <ol style="list-style-type: none"> 1. Engage differently and more deeply with a broad range of stakeholders with fact-based dialogue based on our value to society 2. Enhance decision-making with additional impact relevant quantitative insights and forward-looking impact statements 3. Meaningfully increase the transparency of our non-financial disclosures to build trust with the societies we are operating in <p>In line with these objectives, SEE impact valuation results have been successfully used by countries and functions for stakeholder engagements and for business steering.</p>	<p>Since 2001, the BMW Group has published sustainable value reports. Even before, the group had a long tradition of publishing environmental reports, disclosing the impact of its operations on the environment, including mitigating measures. However, since 2005, followed Global Reporting Initiative (GRI) standards in its report on sustainability matters, and since 2008, voluntarily complied with the highest GRI application level. The standard was further raised in 2015 when the General Assembly of the United Nations (UN) announced 17 Sustainable Development Goals (SDGs); the group identified the SDGs to which it can make a direct and thus the greatest possible contribution with its own sustainability goals.</p>	<p>Holcim portrays IP&L as a bridge chart designed to show the cumulative effect of sequentially introduced positive or negative values. The bridge starts with the gross value add (GVA) derived from our total procurement spend with suppliers and then sequentially shows the positive or negative financial and monetized environmental and social impacts. The final bar shows our assessment of the total TBL value reported by the company. Holcim has differentiated in the chart the impacts related to the upstream supply chain and to our own operations. Holcim is working to measure the impact on society from our downstream supply chain and aims to include it in future disclosures.</p>
Information Users	Novartis countries and various functions	Sustainability Managers Reporting and Monitoring Managers	Investor Relations Managers Procurement and Supply Chain Managers Sustainability Managers

Case 1 (Source: Novartis)

Novartis social, environmental and economic impact in 2020 ¹		
Indicator	Results ²	Remarks
Social		
Living wages	USD 1.8 bn	Own operations USD 1.1 bn, indirect USD 0.7 bn
Employee development	USD 1.5 bn	Own operations USD 76 m, indirect USD 0.7 bn, induced USD 0.8 bn
Occupational safety ³	-USD 3.8 bn	Own operations -USD 2 m, indirect -USD 1.8 bn, induced -USD 2.0 bn
Other human capital impacts		Employee well-being, voluntary turnover, human rights beyond living wages not valued in 2020
Medicines	USD 242 bn	Based on 68 Innovative Medicines brands and 71 Sandoz products in 131 countries
Environmental		
Climate, energy and air pollution	-USD 4.7 bn	Own operations USD 138 m, indirect USD 1.7 bn, induced USD 2.8 bn
Water and waste	-USD 1.0 bn	Own operations USD 69 m, indirect USD 305 m, induced USD 433 m, downstream USD 153 m
Land use	-USD 2.0 bn	Own operations USD 43 000, indirect USD 308 m, induced USD 1.7 bn
Other environmental impacts		Biodiversity not valued in 2020
Economic		
GDP contribution	USD 87.4 bn	Own operations USD 49.7 bn, indirect USD 17.0 bn, induced USD 20.6 bn
Employment	957 433 FTEs	Own operations 105 794 FTEs, indirect 342 000 FTEs, induced 510 000 FTEs
Economic inefficiencies		Not valued in 2020 – no methodology available
Total taxes		Not valued globally in 2020

¹ 2021 figures will become available in May 2022 and will be published in our 2022 report.
² Our methodology is based on leading approaches, including WIOR (social impact of medicines, direct GDP contribution, indirect and induced environmental and economic impacts), Valuing Nature (social impact of wages and salaries), VBA (employee development, occupational safety, waste, land use) and Impact Valuation Roundtable (general approach).
³ Higher than in 2019, primarily due to a change in the third-party database used for occupational diseases in the supply chain

Case 2 (Source: Holcim)



Case 3 (Source: BMW)

BMW Group value added statement					
	2022 in € million	2022 in %	2021 in € million	2021 in %	Change in %
WORK PERFORMED					
Revenues	142,610	92.7	111,239	96.0	28.2
Financial income	9,783	6.4	2,904	2.5	-
Other income	1,377	0.9	1,702	1.5	-19.1
Total output	153,770	100.0	115,845	100.0	32.7
Cost of materials*	80,181	52.1	60,173	51.9	33.3
Other expenses	19,479	12.7	13,599	11.8	43.2
Bought-in costs	99,660	64.8	73,772	63.7	35.1
Gross value added	54,110	35.2	42,073	36.3	28.6
Depreciation and amortisation of total tangible, intangible and investment assets	14,456	9.4	11,758	10.1	22.9
Net value added	39,654	25.8	30,315	26.2	30.8
ALLOCATION					
Employees	13,932	35.1	12,286	40.5	13.4
Providers of finance	2,274	5.7	1,808	6.0	25.8
Government/public sector	4,866	12.3	3,758	12.4	29.5
Shareholders	5,481	13.8	3,827	12.6	43.2
Group	12,460	31.5	8,555	28.2	45.6
Non-controlling interests	641	1.6	81	0.3	691.4
Net value added	39,654	100.0	30,315	100.0	30.8

* Cost of materials comprises all primary material costs incurred for vehicle production plus ancillary material costs (such as customs duties, insurance premiums and freight).

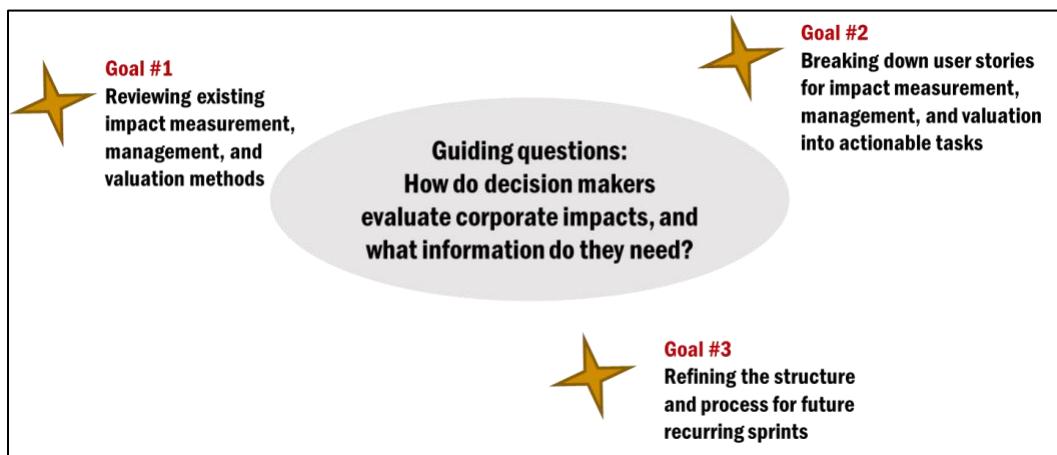
IV. Sprint Review

7. Sprint Goal and Outputs

The Global Impact Sprint on Valuation is informed by organizational research, and it is an agile development model piloted in collaboration with the University of Oxford Said Business School, Hong Kong University of Science and Technology Business School, and the Value Balancing Alliance. The overarching goal of this first Global Impact Sprint was to pilot the sprint model itself and, thus, formalize and refine its process, resources, and usefulness for future sprints.

While the substantive outputs are important, the primary focus was to provide several learning opportunities for the students: a) working in an agile environment, b) collaborating across different time zones and in a diverse team, c) learning from leading experts and a variety of corporations in the field of impact measurement and valuation.

Figure 19: Goals of Pilot Sprint 2023.



The pilot sprint provides the following outputs:

- Presentations and work-in-progress from the Sprint Teams based on the workbook
- Presentations and discussion notes from workshop days and interview calls
- Online Scrum-Kanban Board to learn about the Sprint Model and manage their own sprint
- "Live" collection of materials on sustainability reporting, impact measurement, valuation, management
- Sprint Workbook with tools and guidance for running the sprint

Those outputs are made freely available online and regularly updated subject to internal review.

8. Key Learnings from the Pilot Sprint

Our sprint teams were students selected from the two universities, and they had little or no prior knowledge about the complex topic of impact valuation. The pilot sprint has benefitted from the enthusiastic support from its supporting organizations and representatives from companies such as Novartis, Holcim, BMW, and VW. Students were responsible for breaking down the goals into specific tasks and providing a final presentation using the sprint workbook. Both student teams were given a checklist with 19 standard and method documents from which they had to make a selection for GHG and OHS indicators and valuation factors to achieve sprint goal 1. They were also given another checklist containing five different user groups from which they had to choose two industries and three user groups.

Figure 20: Focus of this Pilot Sprint - Indicators and User Groups.

	Sustainability Indicators	Valuation Factors
General Conceptual Framework	<input checked="" type="checkbox"/> ISSB S1 <input checked="" type="checkbox"/> GRI Foundation 101 <input checked="" type="checkbox"/> UNCTAD Guidance on Core Indicators <input type="checkbox"/> ESRS 1 General Principles	<input type="checkbox"/> Capitals Coalition <input checked="" type="checkbox"/> Social Value International <input checked="" type="checkbox"/> VBA Methodology – General <input type="checkbox"/> Integrated Reporting
Greenhouse Gas Emissions	<input checked="" type="checkbox"/> ISSB S2 Climate-related disclosures <input checked="" type="checkbox"/> GRI 305 <input type="checkbox"/> ESRS E1 <input checked="" type="checkbox"/> GHG Protocol	<input checked="" type="checkbox"/> VBA Methodology – Environmental <input type="checkbox"/> Impact-Weighted Accounts Initiative - Environmental Impact <input checked="" type="checkbox"/> Transparent Initiative – Natural Capital Accounting
Occupational Health and Safety	<input type="checkbox"/> SASB Human Capital Implementation Supplement <input checked="" type="checkbox"/> GRI 403 <input type="checkbox"/> ESRS S1 and S2	<input checked="" type="checkbox"/> VBA Methodology – Social and Economic <input type="checkbox"/> Impact Weighted Accounts – Employment Impact

	Members of the Board of Directors	Top Executives: CEO, CFO, CTO, COO, PR, GC	Investor relations managers	Sustainability analysts and EHS staff	Procurement and supply chain managers
Automobiles and Components					
Pharma-ceuticals, Biotech and Life Sciences					
Chemicals and Construction Materials					

The pilot sprint simulated many of the conditions that are also encountered in practice, which was part of the learning experience:

- Project organizations deal with complex systems with uncertainty about causal relationships or policy objectives.
- Project teams cannot rely on traditional waterfall project management and clear instructions on stages of work because the sprint goal deals with complex systems with uncertainty about causal relationships or policy objectives.
- Projects with high uncertainty require the engagement of innovative development team members. However, it is often difficult to assemble the required depth and breadth of interdisciplinary knowledge and skills.
- Limited financial budgets, time, and personnel reduce organizational slack²⁶ needed to innovate with comprehensive databases, technology and infrastructure.

Our sprint teams addressed the sprint goals under a high degree of self-organization, limited instructions, and collaboration across sprint teams in different time zones through virtual connection. Since the teams had not been exposed to agile development models prior to the sprint, they spent a significant proportion of time learning on the job. The two sprint teams decided independently to focus on GHG emissions and valuation factors. They opted to coordinate their work and ensured that they cover different industries and user groups.

²⁶ Organizational slack defined as a situation whereby resources and time available in organizations exceeds the necessary minimum for the operational tasks at hand and, in turn, gives space for learning and creativity.

9. Next steps

To utilize sprints as an agile methodology for collaborative research with practitioners and in university education, key learnings relate to prioritization, backlog task management, and refining sprint resources. The next round - an advanced Global Impact Sprint – may also need to take all feedback from participants and contributors of the pilot into account. We will also take on board other instruments, such as the Agile Manifesto.²⁷ For the future study of decision-usefulness of accounting information, we draw attention to the following tasks:

New Tasks Added to the Sprint Backlog	<p>Prioritization of:</p> <ul style="list-style-type: none">• Indicators based on required scenarios and transition pathways• Users and sectors based on scientific theory and evidence <p>Mapping of:</p> <ul style="list-style-type: none">• UNCTAD's Core SDG Indicators and other Core Indicators such as the TNFD Core Indicators, ISSBs and EFRAGs key indicators, and the UNRISD Guidance for Authentic Sustainability Assessment onto the Agile Indicator Board• User profiles and outline decision journeys <p>Collection and evaluation of</p> <ul style="list-style-type: none">• social science research relevant to the indicators under development, including macroeconomic studies.• Internationally recognized databases related to the indicators in the backlog. <p>Review and analysis of;</p> <ul style="list-style-type: none">• Scientific studies on information user behaviour in different domains including reporting• Professional marketing studies on user experience, user profiles, decision journeys
Sprint process	<ul style="list-style-type: none">• Enhancing clarity, frequency, cultural awareness in communication and sprint coordination• Different deployment of complementary sets of expertise and skills• More time and activities for team building prior to the sprint window• Training and development of team members according to the specific roles (e.g. sprint masters)
Sprint resources	<ul style="list-style-type: none">• Guidance on sprint method, outreach and knowledge exchange with other Universities / business schools around the world• Scoring and survey methodology for elicitation of information preferences of different users according to GCI, including ISSB and GRI conceptual frameworks.• Standard forms and lists based on international sources: databases, studies

²⁷ Agile Manifesto: <https://agilemanifesto.org/> (last visited 19/06/2023).

V. Conclusion

The recent use of “agile”-type methods by businesses and standard developers marks a new phase in the growth of new accounting practices. The features of rapidly iterating feedback loops and highly specific technical expertise distinguish themselves from the due process standards by traditional institutions involved in the making of policies, laws, and standards over the last two centuries.

This report provides an analysis of those new collaboration methods used by different organizations in the field of impact valuation and sustainability reporting. We are building on previous work that explored agile development methods in the context of sustainable development and provide insights from a pilot sprint ran by the autors themselves.

To advance scientific and practical knowledge on the decision-usefulness of social-environmental accounting data, we propose to shift attention to information user *behaviours* in the context of organizational and institutional processes. Future work in this area at the intersection of organization, accounting, and sociolegal studies could critique, inspire, complement, and triangulate existing economic models of user preferences in sustainable investing. A first step requires the study of commonalities, differences, ambiguities, and other properties of information user behaviour investigated through rigorous social science methods.

In the spirit of “engaged scholarship”, the unpacking of decision-usefulness is intended to help organizations to move from reporting to decision-making that yield changes in real terms. As demonstrated in this report, the sprint method represents a collaboration method that moves beyond researcher and research subject. The sprint model serves three purposes: first, the model is a discursive-rhetorical tool for sensemaking in an area of modern organization where processes of rationalization and pressures for justification often lead to “reporting first” approaches that obfuscates or confuses action; second, as a collaborative research method to bridge between epistemic communities of professional practice whose different norms, expectations, and motivations often create time inconsistencies and other potential barriers for effective collaboration; third, the sprint synchronizes times of actors that are distributed across geographies, jurisdictions, economic sectors, professional fields, scientific disciplines, and organizational levels.

From a policy and practice perspective, agile collaboration models are one of many ways to understanding information user profiles and decision journeys of different organizational *stakeholders* aides strategic planning and risk management. From a scientific perspective, those research subjects are *participants* in socio-technical and ecological systems whose dramatic developments over the last two centuries have given rise to new evaluative infrastructures.

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Resources

Impact Valuation Factors and Methodologies

True Costs / S&P Sustainable	https://www.trucost.com/
GIST	https://gistimpact.com/
True Price	https://trueprice.org/
The Economics of Ecosystems and Biodiversity (TEEB)	https://www.teebweb.org/
GreenDelta:	https://www.greendelta.com/
CE Delft:	https://cedelft.eu/
Wifor	https://insights.wifor.com/en/download-impact-valuation-factors
PWC: Total Impact Measurement and Management (TIMM)	https://www.pwc.com/gx/en/services/sustainability/total-impact-measurement-management.html
Wharton Business School	https://esg.wharton.upenn.edu/wp-content/uploads/2022/12/Engine_No._1_Total_Value_Framework.pdf
EarthShift Global	https://www.earthshiftglobal.com/
NYU Stern, Tensie Whelan at the Center of Sustainable Business, Return on Sustainability Investment (ROSI)	https://www.stern.nyu.edu/experience-stern/about/departments-centers-initiatives/centers-of-research/center-sustainable-business/research/return-sustainability-investment-rosi/rosi-resources-and-tools
Harvard Business School, The Impact Weighted Accounts Initiative	https://www.hbs.edu/impact-weighted-accounts/Pages/default.aspx
Said Business School, Rethinking Performance Initiative	https://www.sbs.ox.ac.uk/research/centres-and-initiatives/oxford-initiative-rethinking-performance

EY Total Value Framework	https://tca2f.org/wp-content/uploads/2019/09/ey-total-value-impact-valuation-to-support-decision-making.pdf .
Deloitte's Social Impact Measurement Model (SIMM):	https://www2.deloitte.com/us/en/pages/monitor-institute/solutions/measuring-social-impact-data-for-decision-making.html .
KPMG "New Vision of Value"	https://assets.kpmg.com/content/dam/kpmg/pdf/2014/10/a-new-vision-of-value-v1.pdf .
The Impact Institute	https://www.impactinstitute.com/products/global-impact-database/ .
The Value Commission Transparency Framework	https://capitalscoalition.scribehub.com/documents/18 https://capitalscoalition.org/project/the-value-commission/
IFVI-VBA General Methodology for Impact Accounting	https://ifvi.org/impact-accounting-methodology/

Aggregated Databases and Methodologies

Theme	Name	Scope	Link
General	Multi-Regional Environmentally Extended Supply-Use Table (EEIO)	Global	https://www.exiobase.eu/
General	UN System of Environmental-Economic Accounting	International	https://seea.un.org/
General	UN System of National Accounts	International	https://unstats.un.org/unsd/nationalaccount/
GHG	China EEIO Database	China	http://www.ceeio.com/
GHG	EU LCA / IOOI Database	Europe	https://unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.20/2016/Itm_4d FIGARO_UNECE_new.pdf
GHG	ADB LCA/ IOOI Database	Asia	https://mrrio.adbx.online/wp-login.php
GHG	Impact-Weighted Accounts Supplemental Dataset for Corporate Environmental Impact	US	https://www.hbs.edu/impact-weighted-accounts/Documents/IWA-Environmental-Dataset-Final-Sample-External.xlsx

OHS	WHO Disability Adjusted Life Years	Global	https://www.who.int/data/gho/indicator-metadata-registry/imr-details/158
OHS	OECD Database Potential Years of Life Lost	OECD	https://data.oecd.org/healthstat/potential-years-of-life-lost.htm
OHS	OHS Database Australia	National	https://www.safeworkaustralia.gov.au/data-and-research/explore-our-data
OHS	ILO ILOSTAT	Global	https://ilostat.ilo.org/
OHS	Recommended Value of a Statistical Life numbers for policy analysis	OECD	https://www.oecd-ilibrary.org/environment/mortality-risk-valuation-in-environment-health-and-transport-policies/recommended-value-of-a-statistical-life-numbers-for-policy-analysis_9789264130807-9-en

Reports and Methodology Papers

Draft Conceptual Framework for Impact Accounting, General Methodology 1, International Foundation for Valuing Impacts and Value Balancing Alliance, Boston/ Frankfurt, 2023: https://ifvi.org/wp-content/uploads/2023/08/IFVI_VBA_Public-Exposure-DRAFT_General-Methodology-1_Letter.pdf.

Guidance on core indicators for entity reporting on contribution towards implementation of the Sustainable Development Goals

https://unctad.org/system/files/official-document/diae2019d1_en.pdf

Methodology, Impact Statement, General Paper, Version 0.1 explains impact valuation and measurement https://www.value-balancing.com/_Resources/Persistent/2/6/e/6/26e6d344f3bfa26825244ccfa4a9743f8299e7cf/20210210_VBA%20Impact%20Statement_GeneralPaper.pdf

Social & Human Capital Protocol, a primer for business <https://capitalscoalition.org/wp-content/uploads/2021/12/Social-Human-Capital-Protocol-A-Primer-for-Business.pdf>

Sustainable Finance: A Primer and Recent Developments (ADB, Alex Nicholls, 2021)
<https://www.adb.org/sites/default/files/institutional-document/691951/ado2021bp-sustainable-finance.pdf>

System Maps by Impact Management Platform

For organizations: <https://impactmanagementplatform.org/wp-content/uploads/2023/01/System-Map-for-organisations-January-2023.pdf>

For investors: <https://impactmanagementplatform.org/wp-content/uploads/2023/01/System-Map-for-investors-and-financial-institutions-January-2023.pdf>

Establishing China's Green Financial System (2015): https://unepinquiry.org/wp-content/uploads/2015/12/Establishing_Chinas_Green_Financial_System_Final_Report.pdf

United States Securities and Exchange Commission

<https://www.sec.gov/sec-response-climate-and-esg-risks-and-opportunities>

Impact-Weighted Accounts:

<https://impakteconomyfoundation.org/impactweightedaccountsframework/>

<https://www.hbs.edu/impact-weighted-accounts/Pages/research.aspx>

United Nations SSE initiative: 10 Years of Impact and Progress

<https://sseinitiative.org/publication/united-nations-sse-initiative-10-years-of-impact-and-progress/>

Report on Sustainability-related Issuer Disclosures

<https://www.iosco.org/library/pubdocs/pdf/IOSCOPD678.pdf>

Consultation Conclusions on ESG Reporting Guide by HKEX:

<https://www.hkex.com.hk/eng/newsconsul/mktconsul/Documents/cp201112cc.pdf>

In 2021, the 14th Five-Year Plan outlined long-term goals for 2035 and emphasized the key role of green finance. See also UNDP Issue Brief 2021:<https://www.undp.org/china/publications/issue-brief-chinas-14th-five-year-plan>

Legal disclosure requirements related to GHG and social indicators in the Annex of the Commission Delegated Regulation (EU) 2022/1288 of 6 April 2022 supplementing Regulation (EU) 2019/2088 of the European Parliament and of the Council.

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02022R1288-20230220>

IFC's Environmental and Social Performance Standards define IFC clients' responsibilities for managing their environmental and social risks.

https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards

The Impact Principles are a framework for investors for the design and implementation of their impact management systems, ensuring that impact considerations are integrated throughout the investment lifecycle. <https://www.impactprinciples.org/>

Centre on Well-being, Inclusion, Sustainability and Equal Opportunity (WISE) offers Measuring Well-being and Progress: Well-being Research platform <https://www.oecd.org/wise/measuring-well-being-and-progress.htm>

The WBCSD established a database with examples measuring and valuing impact-business and how important it is for business to value its relationship with nature and people.

<https://www.wbcsd.org/Archive/Assess-and-Manage-Performance/Measuring-and-valuing-impact-business-examples>

Capitals Coalition established a database with case studies that provide an overview of impact measurement and valuation. https://capitalscoalition.org/impact/case_studies/?fwp_filter_tabs=case_study

Value Balancing Alliance, Second Pilot Study, 2022 https://www.value-balancing.com/_Resources/Persistent/6/5/d/7/65d77c09700346cc7e1317b79aec525031cf04c5/VB_A-Pilot-Study_vo.2_final.pdf

Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019

GBD 2019 Diseases and Injuries Collaborators

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7567026/>

The Science Based Targets initiative's Progress Framework will advance our work on measurement, reporting and verification (MRV) of science-based targets.

<https://sciencebasedtargets.org/measurement-reporting-and-verification-mrv>

The Case for Impact is a practical guide for business leaders and provides compelling business reasons for engaging actively in impact valuation as explained by Sonja Haut of Novartis
<https://thecaseforimpact.elementor.cloud/>

Technical Support Document for Environmental Proofing of Investments funded under the InvestEU Programme Project Ref. ENV.F.1/FRA/2019/0001”
<https://ec.europa.eu/environment/enveco/pdf/KH0921247ENN.pdf>

Standards: Principles, Frameworks, Guidance

UNDP-OECD SDG Impact Standards: <https://sdgimpact.undp.org/practice-standards.html>

Operating Principles for Impact Management

UNEP FI's Positive Impact Finance and Responsible Banking Principles

UNGCI Principles on Integrated SDG Investments and Finance

Social Value International – Social Value Principles

GIIN Core Characteristics of Impact Investors

IFC's Performance Standards: <https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards>

Ten Principles of UN Global Compact

UN Women's Empowerment Principles

UN Sustainable Development Goals

UN High Level Expert Group Recommendations on Net-Zero Commitments of Non-State Actors

Impact Management Project shared norms (five dimensions of impact and ABC Impact Classifications)

UNRISD Guidance for Authentic Sustainability Assessment:

<https://www.unrisd.org/en/library/publications/spotlight-2022-unrisd-releases-guidance-for-authentic-sustainability-assessment>

OECD Guidelines for Multinational Enterprises

Capitals Coalition Natural and Social and Human Capital Protocols

Social Value International – Standards

Science-based Targets Initiative: <https://sciencebasedtargets.org/>

Glossary

Sustainability

Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Source: United Nations, World Commission on Environment and Development, 1987.

The property of being environmentally sustainable; the degree to which a process or enterprise is able to be maintained or continued while avoiding the long-term depletion of natural resources.

Source: Oxford English Dictionary.

Impact

A change in an aspect of people's well-being or the condition of the natural environment caused by an organization.

Source: Impact Management Platform; Well-being defined as in OECD Well-being Framework.

In aggregate, all significant impacts on the well-being of people and the condition of the natural environment, caused by an organization (valuation, classification or taxonomy approaches may be required to aggregate impacts).

Source: Impact Management Project (IMP)

Dependencies

When an organisation's impacts, or changes in the external environment in which it operates, affect an organisation's cash flows, or future cash flows, and therefore create or erode investors' determination of its enterprise value.

Source: Value Reporting Foundation (VRF)

Sustainable Governance

Sustainable Governance is the set of relationships between the management, board of directors, owners and the broad set of participants in the system by which companies are directed and controlled based on social-environmental considerations.

Source: Encyclopedia of International Economic Law.

Sustainable Finance

Sustainable Finance is the set of relationships among financial market participants and institutions in the system by which resources are allocated based on social-environmental factors and through time.

Source: Encyclopedia of International Economic Law.

Sustainability Reporting

A company's practice of reporting publicly on its most significant economic, environmental, and/or social impacts, and hence its contributions – positive or negative – towards the goal of sustainable development.

Source: Global Reporting Initiative (GRI)

Sustainability-related financial disclosures

Disclosures about sustainability-related risks and opportunities that are useful to users of general purpose financial reporting when they assess an entity's enterprise value, including information about its governance, strategy and risk management, and related metrics and targets.

Source: IFRS International Sustainability Standards Board (ISSB)

Valuation

An estimation of the worth of something.

Source: Oxford English Dictionary

In the context of sustainability:

a process that seeks to understand the relative value that an organization creates, preserves or erodes for its stakeholders, which is understood by expressing sustainability performance information as a common unit of value. Estimating value to different types of stakeholders sometimes requires different methodologies. See Glossary terms Value to society and value to the organization.

Source: Value Accounting Network

Appendix

Appendix 1: Metrics per Impact Area and Performance Driver

Environmental Dimension

Area of Impact	Metrics used as Key Performance Indicators	Performance Driver Type	Recognized as Core SDG Indicator	Value Factors Used by Firms
Athmosphere	Greenhouse Gas Emissions Scope 1	Output	✓	✓
	Greenhouse Gas Emissions Scope 2	Output	✓	✓
	Greenhouse Gas Emissions Scope 3	Output	✗	✓
	Ozone-depleting substances (ODS) and chemicals	Output	✓	✗
Hydrosphere	Other air emissions	Output	✗	✓
	Water use efficiency	Activity	✓	✗
	Water recycling and reuse	Output	✓	✓
	Water stress	Outcome	✓	✗
Bio- and Geosphere	Land use	Input	✗	✗
	Ecosystem services	Outputs	✗	✓
Waste	Reduction of waste generation by reused, re-manufactured and recycled	Outcome	✓	✗
	Waste reused, re-manufactured, recycled	Input	✓	✗
	Hazardous waste	Output	✓	✗
Energy	Renewable energy	Input	✓	✓
	Non-renewable energy	Input	✗	✗
	Energy efficiency	Activity	✓	✗

Social Dimension

Area of Impact	Metrics used as Key Performance Indicators	Performance Driver Type	Recognized as Core SDG Indicator	Value Factors Used by Firms
Health and Wellbeing	Occupational Health and Safety Incidents	Activity	✓	✓
	Expenditures on employee health and safety as a proportion of revenue	Input	✓	✓
	Product health and safety incidents such as mass product recalls or warranty cases	Output	✗	✓
Social and Cultural Capital	Average hours of training per year per employee	Activity	✓	✓
	Expenditure on employee training per year per employee	Input	✓	✗
	Proportion of women in managerial positions	Outcomes	✓	✗
	Child labour incidents	Activity	✗	✓
	Forced labour incidents	Activity	✗	✓
	Percentage of employees covered by collective agreements	Outcome	✓	✗
	Diversity& inclusion, anti-discrimination programmes and social supports	Activity	✗	✓

Economic Dimension

Area of Impact	Metrics used as Key Performance Indicators	Performance Driver Type	Recognized as Core SDG Indicator	Value Factors Used by Firms
Manufactured and Natural Capital	Revenue	Output	✓	✓
	Net value added	Output	✓	✓
	Taxes and other payments to the government	Output	✓	n/a
	Green investment	Input	✓	✗
Human and Intellectual Capital	Living wage	Outcome	✗	✓
	Community investment	Input	✓	✗
	Employee wages and benefits as a proportion of revenue	Outcome	✓	n/a
	Percentage of local procurement	Input	✓	✗
	Total expenditures on Research & Development	Input	✓	✓

Institutional Dimension

Area of Impact	Metrics used as Key Performance Indicators	Performance Driver Type	Recognized as Core Indicator	Value Factors Used by Firms
Corporate Governance	Number of board meetings and attendance rate	Activity	✓	✗
	Board members by age range	Input	✓	✗
	Number of meetings of the audit committee and attendance rate	Activity	✓	✗
	Total compensation per executive and non-executive board member	Input	✓	✗
Business Ethics and Anti-Corruption	Average hours of training on anti-corruption issues per year per employee	Activity	✓	✓
	Amount of fines paid or payable due to settlements, regulatory and court decisions	Outputs	✓	✗

Appendix 2: List of Sprint Resources

The Sprint Resources are available upon request and will be made publicly available with the publication of this report.

- Repository of key impact metrics and Valuation Factor Sources
- Sprint Workbook with tools for sprint teams and guidance for running the sprint
- Online Scrum-Kanban Board to learn about the Sprint Model and manage their own sprint
- "Live" collection of materials on sustainability reporting, impact measurement, valuation, management
- Presentation and meeting templates and guidance
- Example UX Analysis on Information User Behavior
- List of valuation factor database
- List of organizations involved in the development of standards, guidance, and methodologies of sustainability reporting, impact measurement, and valuation