

the ROI Impact Method

**Measuring the business value
of sustainability: a hands-on
methodology for managers**

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Acronyms

bp	Basis points (1 bp = 0.01%)
CAC	Customer acquisition cost
CAPEX	Capital expenditure
CFO	Chief Financial Officer
IP	Intellectual property
iRECs	International renewable energy certificates
OPEX	Operating expenses
P&L	Profit and loss statement
ROI	Return on investment

Executive summary

Executive summary

The core concept

We establish a single, consistent formula that translates sustainability investments into clear, monetary terms, expressed as annual revenues or costs, across 14 specific business levers. This approach can capture both positive contributions to business value (value created or risk avoided) and negative contributions (costs increased, risks realized). It keeps results practical, comparable, and relevant for managers, creating a common language inside organizations to evaluate and improve sustainability-related investments.

$$\text{Business value} = \text{Output} \times \text{Outcome} \times \text{Additivity}$$

Where,

$$\text{Additivity} = \text{Probability} \times \text{Attribution}$$

Output

A **measurable, countable result** that a manager directly controls — e.g., *energy saved, employees retained, shutdown days avoided*. Expressed in operational units tracked by the business (e.g., kWh, people, days).

Outcome

The **monetary value per unit of output**, drawn directly from financial data — e.g., *\$/kWh saved, \$/employee retained, \$/day of operation maintained*. Represents how each unit of output translates into financial value.

Additivity

An adjustment factor that reflects how much of the estimated business value is actually realized. It combines the likelihood that an event occurs (**probability**) with the portion of the effect that can credibly be attributed to the organization's actions (**attribution**).

Probability

The **likelihood that an event or effect occurs** within the analysis period (usually one year). Used when value depends on uncertain events (e.g., *disruptions, fines, or supply failures*).

Attribution

The **share of the effect that can credibly be linked** to the specific investment. It allocates credit among various contributing factors to prevent double-counting (e.g., *60% of the turnover reduction is attributed to the sustainability program*).

Executive summary

What this document is

This methodology gives managers a practical way to measure the business value of sustainability investments in monetary terms. It consolidates diverse value drivers into a single equation, ensuring that results are comparable across investments. All results are expressed in annual business value, directly linked to the organization's financials. The approach is sector-agnostic and stand-alone, usable across industries and geographies by teams with basic financial literacy.

What this document is not

It does not attempt to value societal impact; instead, it focuses solely on what matters for internal business decisions, based on the return that investments bring to the business (internal view). We measure revenues and costs only; assets and liabilities are acknowledged as relevant for a complete view of value creation but are not measured through this methodology.

Where to use it

This methodology is designed for sustainability managers, and it is valuable for business unit leaders, operational managers, and CFOs who want a consistent language for comparing sustainability and other investment priorities. Use it when you need transparent, comparable revenue- and cost-based estimates (both positive and negative) to support informed decisions.

How to apply this paper

- 1. Map your sustainability investment to the relevant levers of value creation.** Begin with the investment's primary effects, apply the one-effect-one-lever rule, and keep it simple (most investments will have between 1 and 3 levers).
- 2. Proceed with the data collection.** See the definitions of Output (operational units you control), Outcome (\$/unit drawn directly from financials), and Additivity (probability × attribution). Look for data that can support the calculation of each lever.
- 3. Apply the equation.** Perform the calculation by combining the data collected in the previous step with the proposed consolidated equation in this methodology.
- 4. Explore the evidence, strength, and sensitivity of results.** Use the evidence ladder (Gold/Silver/Bronze) and consistently present low/base/high estimates of results by playing scenarios with the 2–3 dominant assumptions.

1. Core method

Core method

1.1 Methodology background

Over the past decade, leading consultancies and research groups have advanced ways to link sustainability to business value. Approaches from NYU Stern's Center for Sustainable Business, BCG, McKinsey, Deloitte, PwC, and KPMG typically frame sustainability as a driver of long-term enterprise value through themes such as revenue growth, operational efficiency, risk reduction, access to finance, and compliance. Many of these methodologies emphasize materiality analysis, strategic themes, and the impact on free cash flows or company valuation multiples.

These frameworks have been important in shaping board-level understanding of sustainability as a value driver. They help executives recognize sustainability as more than a compliance requirement and show its relevance for corporate strategy, investor confidence, and long-term competitiveness.

At the same time, much of this work remains high-level and strategic. It often relies on complex free cash flow projections or broad categories of "risks and opportunities". While useful for communication and engagement with investors and executives, such approaches can feel too abstract for managers tasked with implementing and evaluating specific sustainability investments.

Our methodology fills this gap. It provides a hands-on, unit-based equation that translates sustainability performance into annual revenues and costs, allowing managers to compare investments on a like-for-like basis. Instead of projecting enterprise value, it focuses on operational metrics that managers control, expressed directly in monetary units per output unit. The method is deliberately simple, transparent, and additive, ensuring results are practical for decision-making while remaining consistent with broader valuation logic.

In this way, our approach complements the existing strategic frameworks. Where the existing literature explains why sustainability matters for long-term value, our methodology equips managers with a tool to measure the business value that specific investments create or destroy.

Core method

1.1.1 Fit within the Valuing Impact lenses

This work represents the **Business Value lens** of the broader Valuing Impact framework.

Valuing Impact lenses					
Valuation approach	Well-being (eQALY)	Economic value	Cost of solution	Risk/ materiality	Business value
Decision making context	What is the true value to society? How to prioritize society's interest?	What is the value to the economy? How to align the interests of governments, businesses, investors, and others?	How much does it cost, and how to optimize capital allocation to maximize societal and business value?	Risk management and understanding the consequences of not investing in sustainability, CSRD, TNFD, and other reporting.	What is the financial return, directly and indirectly of investing in impact and sustainability?
Use case	- Investing for impact - Sustainability strategy - Communication - Engagement - Due diligence - Strategy	- Engagement with governments - Communication and engagement strategies - Business models	- Sustainability action plan - Engagement - Option appraisal and capital allocation	- Risk management - Reporting/legal compliance - Strategy	- Business model and revenue streams - Get buy/in for impact investing - Internal engagement and prioritization
Empowering decision makers to scale-up businesses and investments for impact					

Whereas the other lenses broaden the view to society, governments, and investors, the **Business Value lens** is deliberately internal. It gives managers and decision-makers a structured way to calculate **revenues gained, costs avoided, or expenses incurred** through sustainability, expressed in clear monetary terms.

Together, the five lenses form a **comprehensive suite**: society's well-being, the economy's gains, the cost of solutions, risk exposure, and business value. Our contribution here ensures companies can link sustainability to **financial performance inside the firm**, while remaining consistent with the overall Valuing Impact logic.

1.2 Methodological principles

This methodology rests on a small number of principles that ensure results are consistent, comparable, and practical for business use:

- **Management perspective**: We assess sustainability only in terms of revenues and costs. Assets and liabilities are key avenues for creating or destroying business value; however, they are not particularly helpful for everyday management and decision-making. Therefore, we deliberately focus only on revenues and costs.
- **Positive and negative contributions**: All levers can either add to or detract from business value. Both sides must be captured to give a complete picture.

Core method

- **Comparability:** All results are expressed as annual business value in monetary terms, enabling side-by-side comparison across investments and levers.
- **Broad applicability:** The approach is sector-agnostic, designed as a stand-alone methodology usable across industries and geographies, and accessible to managers with basic financial literacy.

1.3 The business value equation

At the heart of this methodology is a single, comparable formula:

Where,

$$\text{Business value} = \text{Output} \times \text{Outcome} \times \text{Additivity}$$

$$\text{Additivity} = \text{Probability} \times \text{Attribution}$$

This equation enables managers to translate sustainability investments into clear monetary terms, expressed in annual revenues or costs. Business value can be positive (value created or risk avoided) or negative (costs increased, risks realized).

Output

A **measurable, countable result** that a manager directly controls — e.g., *energy saved, employees retained, shutdown days avoided*. Expressed in operational units tracked by the business (e.g., kWh, people, days).

Outcome

The **monetary value per unit of output**, drawn directly from financial data — e.g., *\$/kWh saved, \$/employee retained, \$/day of operation maintained*. Represents how each unit of output translates into financial value.

Additivity

An adjustment factor that reflects how much of the estimated business value is actually realized. It combines the likelihood that an event occurs (**probability**) with the portion of the effect that can credibly be attributed to the organization's actions (**attribution**).

Probability

The **likelihood that an event or effect occurs** within the analysis period (usually one year). Used when value depends on uncertain events (e.g., *disruptions, fines, or supply failures*).

Attribution

The **share of the effect that can credibly be linked** to the specific investment. It allocates credit among various contributing factors to prevent double-counting (e.g., *60% of the turnover reduction is attributed to the sustainability program*).

Together, these elements produce business value estimates that are both transparent and comparable across levers.

2. Business value levers

Business value levers

2.1 Mapping of relevant levers

Before calculating business value, managers should identify which levers apply to their investment. Not every investment touches every lever. A clear mapping step prevents wasted effort and double-counting.

1. Step 1: Start from the investment's primary effect:

- **If the investment changes customer demand** → start with Brand & reputation, Sales & market share, or Price premium.
- **If it changes production processes** → look at Other operating expenses, Capital expenditures, or Sourcing costs/resilience.
- **If it addresses compliance or external license** → focus on Fines & regulations or License to operate/Business disruption.
- **If it affects employees** → check Payroll, Talent acquisition, and Talent retention.
- **If it alters financial conditions** → consider Debt/interests or Taxes & subsidies.

2. Step 2: Check for secondary effects:

- **Ask:** "Does this investment indirectly influence financing, reputation, or people?"
- **Example:** Energy efficiency (primary = OPEX savings) might also support Brand & reputation or Debt/interests if tied to green loans.

3. Step 3: When uncertain, apply the one-effect, one-lever rule:

- Assign each effect to the most direct lever.
- Do not count the same revenue or cost change in more than one lever.

4. Step 4: Decide if probability applies. If the lever depends on uncertain events (such as shutdowns, fines, or supply disruptions), apply probability. Otherwise, use observed or contracted values directly.

5. Step 5: Keep the mapping simple. Most investments affect one to three levers (avoiding including a large set of indirect effects with little data backing). If you find yourself mapping to more than one, revisit Step 3 to avoid double-counting.

Business value levers

2.2 Generic levers catalog & playbook

Business value from sustainability investments flows through a set of distinct levers. Each lever can generate positive or negative contributions to business value. The table below summarizes what each lever captures and how to measure it.

● Brand & Reputation

What it captures:	Business value from sustainability investments flows through a set of distinct levers. Each lever can generate positive or negative contributions to business value. The table below summarizes what each lever captures and how to measure it.
Output (unit):	a) Incremental units sold / churn avoided; b) Customers acquired/retained or ad-equivalent reach.
Outcome (\$/unit):	a) Contribution margin per unit or \$ retained per customer; b) \$ CAC (customer acquisition cost) or \$ per ad-equivalent impression.
Additivity guidance:	Attribution always; probability optional (apply if reputational backlash is uncertain).

● IP / innovation

What it captures:	Margin gains or cost savings from sustainability-driven product innovation or process redesign
Output (unit):	Units sold from new offering, or units processed with new method.
Outcome (\$/unit):	Incremental \$ margin per unit or \$ cost saved per unit.
Additivity guidance:	Attribution always; probability optional (if adoption uncertain).

● Sales & market share

What it captures:	Additional contracts or unit sales won (or lost) because sustainability performance meets (or fails) procurement criteria or consumer expectations.
Output (unit):	Units/contracts gained or lost.
Outcome (\$/unit):	\$ margin per unit or per contract.
Additivity guidance:	Attribution always; probability optional (use for tender success likelihood).

Business value levers

● Price premium

What it captures:	Extra price realized per unit (or avoided discount) due to sustainability attributes demanded by customers.
Output (unit):	Units sold at premium.
Outcome (\$/unit):	\$ premium per unit sold.
Additivity guidance:	Attribution always; probability optional (if premium stability is uncertain).

● License to operate / Business disruption

What it captures:	Value preserved by avoiding (or lost by suffering) operational shutdowns, production stoppages, or delays caused by sustainability-related risks (e.g., water, community, permit).
Output (unit):	Operating/shutdown days avoided or added.
Outcome (\$/unit):	\$ gross margin (or avoidable OPEX) per day.
Additivity guidance:	Probability mandatory (likelihood of disruption) × Attribution.

● Fines & regulations

What it captures:	Cos savings from avoiding (or costs from incurring) regulatory fines, penalties, or compliance failures tied to sustainability.
Output (unit):	Breaches avoided or incurred.
Outcome (\$/unit):	\$ penalty or compliance cost per breach.
Additivity guidance:	Probability mandatory (likelihood of enforcement) × Attribution.

● Debt / interests

What it captures:	Change in financing costs due to ESG ratings, sustainability-linked instruments, or investor pressure (e.g., interest rate reductions or increases).
Output (unit):	Basis points (bps) × debt principal.
Outcome (\$/unit):	\$ per bp × debt per year.
Additivity guidance:	Attribution always; probability optional.

Business value levers

● Taxes / subsidies

What it captures:	Net financial effect of sustainability-linked taxes (e.g., carbon, resource) and subsidies/incentives (e.g., energy credits).
Output (unit):	Taxable/creditable activity (tCO ₂ , MWh, units) or direct \$ credit.
Outcome (\$/unit):	\$ tax/credit per unit.
Additivity guidance:	Attribution always; probability optional (if eligibility uncertain).

● Capital expenditures

What it captures:	Incremental or avoided investment required to meet sustainability standards (e.g., pollution control, treatment units, upgrades).
Output (unit):	\$ CAPEX delta (annualized).
Outcome (\$/unit):	\$ annual cost per \$ CAPEX (depreciation + cost of capital).
Additivity guidance:	Attribution always; probability optional (if project risk is high).

● Other operating expenses

What it captures:	Operational cost changes from sustainability measures that reduce or increase energy, water, chemicals, waste, or logistics.
Output (unit):	Resource units saved/used.
Outcome (\$/unit):	Tariff \$ per unit.
Additivity guidance:	Attribution always; probability optional.

● Sourcing costs / resilience

What it captures:	Operational cost changes from sustainability measures that reduce or increase energy, water, chemicals, waste, or logistics.
Output (unit):	Resource units saved/used.
Outcome (\$/unit):	Tariff \$ per unit.
Additivity guidance:	Attribution always; probability optional.

Business value levers

● Payroll / employee costs

What it captures:	Wage and benefit cost changes from sustainability commitments (e.g., living wage, health benefits).
Output (unit):	Headcount × wage delta.
Outcome (\$/unit):	\$ per employee/year
Additivity guidance:	Attribution always; probability optional.

● Talent acquisition

What it captures:	Hiring cost differences or vacancy costs caused by sustainability reputation (e.g., easier or harder to fill roles).
Output (unit):	Hires made or vacancy days avoided.
Outcome (\$/unit):	\$ per hire or \$ per vacancy day.
Additivity guidance:	Attribution always; probability optional.

● Talent retention

What it captures:	Value of lower (or higher) turnover caused by sustainability conditions, through replacement, onboarding, and ramp-up costs.
Output (unit):	Employees retained or excess leavers.
Outcome (\$/unit):	\$ replacement + onboarding + ramp cost per employee
Additivity guidance:	Attribution always; probability optional.

3. Additivity in practice

Additivity in practice

The purpose of additivity is to avoid overstating business value. Sustainability investments often yield similar outcomes, and some outcomes depend on events that may or may not occur. Additivity provides a disciplined approach to maintaining realistic results.

3.1 Attribution: dividing the credit

When more than one investment contributes to the same effect, their shares must be split. Attribution ensures that the combined contribution does not exceed 100%.

- **Rule:** For the same outcome, attribution shares across investments must sum to $\leq 100\%$.
- **Example:** If both an HR program and a sustainability investment reduce turnover, each is assigned part of the observed effect. If turnover dropped by 100 employees, and interviews show that sustainability accounted for 60 of them, the attribution is 60%.
- **Managerial test:** Could the effect have occurred without this investment? If partly yes, reduce attribution accordingly.

3.2 Probability: adjusting for uncertain events

Some business value depends on events that may or may not occur. In these cases, the expected value must reflect the probability of occurrence.

- **Mandatory application:**
 - License to operate / Business disruption: Disruptions are inherently uncertain.
 - Fines & regulations: Penalties depend on the likelihood of enforcement.
 - Sourcing resilience: Supply disruptions require a probabilistic approach.
- **Optional application:** All other levers, if managers judge uncertainty to be material.
- **Example:** A factory that is at risk of drought-induced shutdown: 10 days of disruption $\times$ \$200,000 margin/day disrupted $\times$ 30% probability of occurrence = \$600,000 expected value.
- **Managerial test:** If this event happens only part of the time, would you overstate value by assuming 100% certainty? If yes, apply a probability.

Additivity in practice

3.3 Avoiding double-counting across levers

Sustainability can create value through multiple levers at once. To stay credible, effects must be allocated carefully.

- **Rule:** Count each effect once, in the lever where it is most direct.
- **Example:** A new product may increase sales volume and allow a price premium. Treat these as two separate effects only if they are independent and backed by evidence. Do not assign the same revenue to both.
- **Managerial test:** When rolling up results, check for overlaps by comparing outputs (units). If the same output drives two levers, reconcile to avoid duplication.

3.4 Evidence and sensitivity

Attribution and probability require judgment. To strengthen credibility:

- **Evidence ladder:**
 - Gold: controlled tests, A/B comparisons, or natural experiments.
 - Silver: before/after analysis with partial controls.
 - Bronze: expert elicitation with documented rationale.
- **Sensitivity testing:** Always show low/base/high cases on the 2–3 dominant assumptions (e.g., \$/unit, attribution, probability). This prevents single-point estimates from overstating certainty.

4. Applications and use cases

Applications and use cases

The Return on Impact (ROImpact) methodology can be applied across multiple business contexts: from assessing individual sustainability projects to shaping company-wide investment strategies. It serves both as an analytical tool and as a collaborative framework that helps teams translate impact into measurable business value.

Internal Decision-making examples

- **Investment prioritization:** Use the ROImpact methodology to compare investments on a consistent monetary basis. Identify where sustainability creates the most substantial business returns, where uncertainty is high, and where corrective action is needed.
- **Budget justification:** Link sustainability investments directly to revenues and costs. The method helps managers build business cases that resonate with Finance and executives by expressing value in P&L terms.
- **Performance review and learning:** Track realized business value over time and create internal benchmarks for future decisions.

Strategic and portfolio applications

- **Portfolio optimization:** Aggregate results from multiple investments to understand which levers contribute most to business value. Use this insight to strike a balance between short-term efficiency gains and long-term differentiation opportunities.
- **Sustainability strategy alignment:** Integrate business-value results with your sustainability roadmap. Identify which investments best reinforce core business priorities (e.g., growth, resilience, employee engagement).
- **Competitive positioning:** Highlight the business levers that differentiate your company from peers. Use the findings to strengthen investor and customer communications.

Cross-functional collaboration

- **Finance and ESG integration:** Bridge the gap between sustainability and finance by linking impact metrics directly to monetary outcomes.
- **Operational planning:** Help HR, Operations, Procurement, and Marketing teams see how their functions contribute to (and benefit from) sustainability investments. This encourages ownership and accountability.

Applications and use cases

External and multi-stakeholder use

- **Investor engagement:** Use the ROImpact method to communicate the financial relevance of sustainability to investors and lenders. Demonstrate how environmental and social actions mitigate risks or strengthen revenue streams.

4.1 Integration with other Valuing Impact lenses

The ROI methodology represents the Business Value lens within the broader Valuing Impact framework. Its results can be connected with:

- **Social impact:** Well-being (eQALY) and economic value analyses to evaluate broader societal and macroeconomic outcomes.
- **Risk assessment:** Cost of Solution and Risk/Materiality assessments to understand trade-offs and exposure.

Together, these lenses allow organizations to optimize for dual value creation, maximizing both business and social returns through a single strategic vision.

5. Applications and short illustrative examples

Applications and short illustrative examples

5.1 Market-related levers

● Brand & reputation

A global beverage company faced rising consumer scrutiny around plastic packaging. To stay ahead, it launched recyclable bottles across its core product line. Beyond compliance, the company sought to determine if this move generated measurable business value. Within a year, two effects emerged: stronger consumer preference led to higher sales, and the earned media coverage reduced reliance on paid advertising.

Achievements

200,000 incremental units sold; \$400,000 avoided advertising spend.

Reasoning

Reputation shapes customer demand and marketing efficiency.

Calculation

- Incremental sales: $200,000 \text{ units} \times \$1.00 \text{ margin/unit} \times 60\% \text{ attribution} = \$120,000 \text{ annual business value.}$
- Advertising savings: $\$400,000 \times 60\% \text{ attribution} = \$240,000 \text{ annual business value.}$

Result

\$360,000 annual business value

Negative case

If consumers had perceived the investment as greenwashing, the brand could have lost sales and faced higher churn.

● IP / Innovation

A textile manufacturer invested in waterless dyeing technology to address water scarcity in its region. The innovation reduced resource use while also improving production efficiency. The firm wanted to assess if the technology paid off financially beyond environmental benefits.

Achievements

1,000,000 meters dyed with the new process.

Reasoning

The innovation delivered a direct cost saving per unit produced.

Calculation

$1,000,000 \text{ meters} \times \$0.05 \text{ saved/meter} \times 80\% \text{ attribution} = \textbf{\$40,000 annual business value.}$

Negative case

If customers reject the colorfastness of the new dye, sales could fall, and the investment would generate a negative return.

Applications and short illustrative examples

● Sales & market share

An electronics supplier sought to win a long-term supply contract with a global buyer. The buyer had strict ESG procurement criteria. By meeting labor and environmental standards, the supplier not only qualified but secured a multi-year deal.

Achievements

50,000 units sold under the contract.

Reasoning

Meeting sustainability standards determined access to sales that would have been lost otherwise.

Calculation

$50,000 \text{ units} \times \$12 \text{ margin/unit} \times 70\% \text{ attribution} = \text{\$420,000 annual business value.}$

Negative case

Failure to comply with procurement criteria would have resulted in exclusion, leading to a clear revenue loss.

● Price premium

A food producer introduced a certified organic product line. Marketing emphasized sustainability attributes, and retailers were willing to accept a higher shelf price. Managers wanted to confirm that the premium translated into tangible business value.

Achievements

300,000 units sold at a \$0.20 premium.

Reasoning

Customers are willing to pay more per unit due to sustainability attributes.

Calculation

$300,000 \text{ units} \times \$0.20/\text{unit} \times 80\% \text{ attribution} = \text{\$48,000 annual business value.}$

Negative case

If competitors also offer organics and premiums erode, the business value becomes either nonexistent or turns negative.

Applications and short illustrative examples

5.2 Risk & compliance levers

● License to operate / Business disruption

A mining company engaged communities and invested in water stewardship. This reduced the likelihood of forced shutdowns.

Achievements

10 shutdown days avoided.

Reasoning

Community acceptance preserved operating days.

Calculation

10 days × \$500,000 margin/day × (30% probability × 70% attribution) = **\$1,050,000**

annual business value

Negative case

Failure to act would mean more stoppages, eroding value.

● Fines & regulations

A chemical producer faced strict effluent regulations. It upgraded treatment systems to stay compliant.

Achievements

5 expected breaches avoided.

Reasoning

Sustainability actions reduce regulatory penalties.

Calculation

5 breaches × \$250,000 fine/ breach × (40% probability × 80% attribution) = **\$400,000**

annual business value.

Negative case

Lax compliance increases exposure and costs.

Applications and short illustrative examples

● Sourcing costs / resilience

A retailer diversified crop suppliers across regions to hedge climate risks. It both reduced disruption exposure and secured better terms.

Achievements

4 disruption days avoided; \$0.05 saved on 1,000,000 purchased units.

Reasoning

Sustainable sourcing improves resilience and cost base.

Calculation

- Disruption: 4 days × \$200,000/day × (25% probability × 70% attribution) = \$140,000 annual business value
- Price delta = 1,000,000 units × \$0.05/unit × 70% attribution = \$35,000 annual business value

Result

\$175,000 in annual business value

Negative case

If diversification increases logistics costs, the net value becomes negative.

5.3 Finance-related levers

● Debt / interests

A utility negotiated a sustainability-linked loan tied to emission targets. Achieving these targets lowered its borrowing spread.

Achievements

15 bps reduction on \$200M debt.

Reasoning

Sustainability performance directly influences financing costs.

Calculation

$0.0015 \times \$200,000,000 \times 90\% \text{ attribution} = \textbf{\$270,000 annual business value.}$

Negative case

Missing ESG targets lead to higher interest rates.

Applications and short illustrative examples

● Taxes & subsidies

A manufacturer installed solar panels and qualified for renewable energy tax credits.

Achievements 10,000 MWh eligible for \$20/MWh credit.

Reasoning Tax incentives reduce operating costs tied to sustainability investments.

Calculation $10,000 \text{ MWh} \times \$20/\text{MWh} \times 80\% \text{ attribution} = \text{\$160,000 annual business value.}$

Negative case If credits expire, the benefit disappears.

● Capital expenditures

A logistics firm upgraded to low-emission trucks to comply with new standards.

Achievements \$3M additional CAPEX, annualized at 15%.

Reasoning Sustainability standards required extra investment.

Calculation $\$3,000,000 \times 15\% \text{ annualization} \times 90\% \text{ attribution} = \text{\$405,000 annual business value (cost).}$

Positive case Selling of old trucks and parts could offset part of the CAPEX.

5.4 People & operations levers

● Other operating expenses

An industrial plant implemented energy efficiency measures, resulting in a reduction in electricity use.

Achievements 5,000,000 kWh saved.

Reasoning Sustainability actions reduce operating costs.

Calculation $5,000,000 \text{ kWh} \times \$0.08/\text{kWh} \times 80\% \text{ attribution} = \text{\$320,000 annual business value.}$

Negative case Savings shrink if tariffs fall below forecast.

Applications and short illustrative examples

● Payroll / employee costs

A retailer committed to a living wage program.

Achievements

Average payroll increased by \$1,500 across 2,000 employees.

Reasoning

Sustainability commitments directly raise wage and benefit costs.

Calculation

$2,000 \text{ employees} \times \$1,500/\text{employee} \times 100\% \text{ attribution} = \text{\textbf{--\$3,000,000 annual business value (cost)}}$.

Positive case

Reduced turnover is captured separately under the retention category.

● Talent acquisition

A fast-growing tech company earned top ESG rankings, strengthening its employer brand. Recruitment became easier and cheaper.

Achievements

\$2,000 lower hiring cost across 500 hires.

Reasoning

A strong sustainability reputation reduces the cost per hire.

Calculation

$500 \text{ hires} \times \$2,000/\text{hire} \times 70\% \text{ attribution} = \text{\textbf{\$700,000 annual business value}}$

Negative case

Weak ESG reputation would increase costs.

● Talent retention

A software firm expanded well-being benefits. Voluntary turnover dropped by 2%.

Achievements

100 employees retained (2% of 5,000).

Reasoning

Better retention avoids replacement and onboarding costs.

Calculation

$100 \text{ employees retained} \times \$20,000 \text{ per employee} \times 60\% \text{ attribution} = \text{\textbf{\$1,200,000 annual business value}}$

Negative case

Poor practices would increase quits, driving higher costs.

6. Case study

Case study

6.1 Context

An industrial group operating in the manufacturing of consumer goods wanted to evaluate the business value of its sustainability investments. The company had been tracking ESG investments qualitatively but lacked a clear financial picture of its contribution to the overall business performance.

To address this, it applied the ROImpact methodology and the ROI Canvas across three key investments:

Renewable electricity purchase

Securing 100% renewable energy for its plants.

Water risk mitigation

Reducing exposure to drought and water scarcity.

Youth entrepreneurship program

Strengthening local labor markets and future talent pools.

Training of resellers

Building capacity for the micro-entrepreneurs who resell the company's products.

Campaigning for inclusion

Distribution of sample products that were designed for people with disabilities.

Each investment was analyzed individually and then aggregated to form a consolidated view of sustainability's return to the company.

6.2 Method and process

The company formed a small cross-functional team, comprising Sustainability, Finance, Operations, and HR, to complete the ROImpact Canvas for the three investments.

For each, they identified:

1. The relevant business value levers from the catalog in this methodology.
2. The outputs (e.g., kWh sourced, m³ water avoided, employees retained).
3. The outcomes in dollar terms (\$/unit).
4. The additivity factors (attribution and probability) are needed to ensure realistic results.

After validation with finance, each case was expressed in terms of an investment P&L impact (\$ thousands/year) and consolidated to show the total business return.

Case study

6.3 Individual results

Renewable electricity purchase

Renewable electricity purchase

The company migrated all its facilities to renewable energy sources by buying iRECs and signing long-term contracts of energy supply with renewable sources that are incentivized by local public policies (thus lowering the cost of energy supply).

Benefits

Lower electricity sourcing costs from electricity contracts with incentivized producers.

Costs

Purchase of iRECs (renewable energy certificates) and personnel costs to manage electricity supply contracts.

Result

Net gain of \$908 thousand, with an ROI of \$7.5 for each \$1 invested.

Confidence level

Medium to high, based on verified electricity data.

Table 1 – Results of the Renewable electricity purchase return to the business (thousands of USD/year, 2024)

Revenue	\$	-
Incurred cost	\$	-121
iRECs purchase	\$	-55
Contracts management	\$	-66
Avoided cost	\$	1,029
Savings with incentivized electricity supply	\$	1,029
Total	\$	908

Case study

Water risk mitigation

The company has subscribed to a watershed restoration project aimed at reducing future water scarcity risks.

Benefits

Reduced cost of pumping water and avoided production shutdowns.

Costs

Project subscription and internal labor to map risks and operationalize the project.

Result

Net loss of \$374 thousand, equivalent to an ROI of -\$0.82 for each \$1 invested.

Confidence level

Moderate, as disruption probabilities remain uncertain.

Table 2 – Results of the Water risk mitigation return to the business (thousands of USD/year, 2024)

Revenue	\$	-
Incurred cost	\$	-455
Cost of project subscription	\$	-400
Cost of project operationalization	\$	-55
Avoided cost	\$	81
Risk of business disruption mitigated	\$	78
Risk of increased water supply cost mitigated	\$	3
Total	\$	-374

Case study

Youth entrepreneurship program

The company provided funding for training and entrepreneurship support to local youth, some of whom were later hired.

Benefits

Reduced talent acquisition costs, avoided cost of capital due to tax incentives, and targets linked to bond commitments.

Costs

Program promotion and training expenses.

Result

Net gain of \$4.6 million, or ROI of \$1.6 for each \$1 invested.

Confidence level

Mixed — high for financial data, moderate for attribution.

Table 3 – Results of the Youth entrepreneurship program return to the business (thousands of USD/year, 2024)

Revenue	\$	-
Incurred cost	\$	-2,843
Cost of training	\$	-2,843
Avoided cost	\$	7,471
Avoided cost of interest on bond instruments	\$	6,855
Tax incentives	\$	518
Avoided cost of hiring talent	\$	98
Total	\$	4,628

Case study

Training of resellers

The company utilizes a network of small resellers to distribute its products to consumers. Most of these resellers are micro-entrepreneurs who lack formal education in sales, marketing, or business management. Therefore, by offering training in these areas, the company can increase sales and create positive social value for the entrepreneurs.

Benefits

Higher sales from resellers who are trained and knowledgeable on how to scale their operations.

Costs

Cost of providing the training sessions.

Result

Net gain of \$214 thousand, with an ROI of \$2.5 for each \$1 invested.

Confidence level

Medium to high, based on verified sales data from the selected resellers.

Table 4 – Results of the Training of resellers return to the business (thousands of USD/year, 2024)

Revenue	\$	1,337
Product sales	\$	1,337
Incurred cost	\$	-1,123
Cost of goods sold	\$	-1,039
Training costs	\$	-84
Avoided cost	\$	-
Total	\$	214

Case study

Campaigning for inclusion

The company is consistently innovating its product line to demonstrate leadership in the inclusion agenda. To support these efforts, it decided to launch a campaign where employees could volunteer to distribute samples of inclusive products to consumers with disability via social media and in-store.

Benefits

Higher visibility among consumers (reputation enhancement) and involvement of workers as volunteers (higher worker engagement and lower turnover).

Costs

Cost of producing the products and distributing them.

Result

Net loss of \$42 thousand, with an ROI of -\$0.3 for each \$1 invested.

Confidence level

Moderate, high for the operational costs and lower for the benefits.

Table 5 – Results of the Campaigning for inclusion return to the business (thousands of USD/year, 2024)

Revenue	\$	-
Incurred cost	\$	-108
Cost of goods distributed	\$	-91
Distribution and logistics costs	\$	-17
Avoided cost	\$	75
Talent engagement and retention	\$	41
Avoided cost of marketing and client engagement	\$	34
Total	\$	-33

Case study

6.4 Portfolio results and insights

When aggregated, the three investments generated a combined net business gain of \$5.2 million in 2024, with a weighted average ROI of \$1.5 for every \$1 invested.

Table 6 – Consolidated results of the return to the business from ESG investments (thousands of USD/year, 2024)

Investment	Renewable electricity purchase	Water risk mitigation	Youth entrepreneurship program	Training of resellers	Campaigning for inclusion	Consolidated
Revenue	\$ -	-	-	1,337	-	1,337
Incurred cost	\$ -121	-455	-2,843	-1,123	-108	-4,650
Avoided cost	\$ 1,029	81	7,471	-	75	8,656
Total	\$ 908	-374	4,628	214	-33	5,343
ROI	7.5	-0.8	1.6	2.5^a	-0.3	1.5^a

^a Calculated excluding the “cost of goods sold” from the cost base.

The analysis revealed three key insights:

- **Short-term:** Financial wins came from efficiency measures (energy).
- **Medium-term:** Risk protection (water) required more refined probability data to show true preventive value.
- **Long-term:** Differentiation emerged from social investments (youth), which strengthened reputation and talent pipelines.

These results demonstrated that sustainability investments deliver diverse types of value (efficiency, resilience, and differentiation), which need to be managed together for strategic balance.

Case study

6.5 Lessons learned

The exercise was successful because Finance, Operations, HR, and Sustainability shared ownership from the outset. Finance validated margins, costs, and credits, which gave the numbers credibility with executives, while operational teams anchored outputs in real activity data. Applying attribution rigor compelled the team to distinguish the initiative's effect from other drivers, ensuring the results didn't overstate impact. The data confidence tags (low/medium/high) proved helpful, as managers immediately identified where assumptions (especially disruption probabilities) needed refinement before making scaling decisions. Finally, viewing the three investments as a portfolio altered the conversation. Even though the water initiative underperformed on its own, it provided risk coverage that strengthened the overall value mix when combined with energy savings and talent gains, reinforcing the need to manage efficiency, resilience, and differentiation together.

6.6 Next steps

The company now plans to:

- Extend the ROImpact method to all major ESG investments.
- Integrate the business value results into its sustainability reporting and capital allocation reviews.
- Combine ROImpact findings with social impact assessments to identify where sustainability creates shared business and societal returns.

7. Appendix

Appendix

7.1 Quick start guide

Setting the goal

Pick the right lever(s), frame the calculation with Output × Outcome × Additivity, assign owners for data/evidence, and agree on sensitivities.

Who to involve

- **Sustainability lead (investment owner):** Describes the primary effect.
- **Finance partner:** validates \$/unit (Outcome) and margin conventions; confirms annual time basis.
- **BU/Operations owner:** owns Output units and operational data.
- **Risk/Compliance:** (if relevant) advises where probability is mandatory.
- **Data analysts:** assemble evidence and sensitivity ranges.

Step-by-step approach

5. **Align scope & objective:** Confirm investment, business period (annual), and the decision you're informing.
6. **Map levers:** Start from the primary effect; check the secondary effects; enforce one-effect-one-lever. Outcome: 1–3 levers max.
7. **Decide on additivity:** Attribution is always applied; Probability for disruption/fines/sourcing, and elsewhere only if uncertainty is material.
8. **Lock data & evidence plan:** Name owners for Output, Outcome, Attribution/Probability; assign Gold/Silver/Bronze evidence and low/base/high ranges.
9. **Draft the calculation skeleton:** For each lever: Output × Outcome × (Probability × Attribution) = \$/year; list sensitivities; note any negative cases to include.
10. **Deliverables:** levers shortlist, calculation skeleton(s), evidence/sensitivity plan, named data owners, next steps. (Keep the mapping simple; if >3 levers, revisit overlaps.)

Appendix

7.2 Probability estimation guidance

When to apply

Use probability whenever the business value depends on an event that may or may not occur. It is mandatory for License to operate / Business disruption, Fines & regulations, and Sourcing resilience (disruptions); optional for other levers if uncertainty is material.

Time basis

Express probability as an annual probability, and (for communication) also as an expected recurrence (e.g., “20% per year $\approx$ once every 5 years”). Keep it aligned to the same period as your Output $\times$ Outcome.

7.2.1 A four-step protocol

1. **Step 1:** Define the event precisely (what, where, when). Name a single event you’ll price (e.g., “permit suspension causing production halt at Site A”). Tie it to the lever you’ll monetize. (Follows your matrix discipline.)
2. **Step 2:** Choose your estimation approach (pick more than one and triangulate when possible):
 - **Historical frequency (base rates):** Use company incidents, industry databases, regulator enforcement data, and insurance/loss records.
 - **Scenario-based estimation:** Apply climate, regulatory, technology, and market scenarios to infer annual likelihood.
 - **External modeling & assessments:** Bring in catastrophe models, third-party ratings, academic studies, and expert consultation.
3. **Step 3:** Convert to annual probability and state recurrence. Report probability as a percentage per year and (optionally) the implied “one in N years”.
4. **Step 4:** Document & validate. Record sources, assumptions, and limitations; set triggers to revisit the estimates; calibrate over time by comparing estimated vs. realized events and benchmarking peers.

Appendix

7.2.2 Worked micro-examples

Business disruption

Event: “Community roadblock stops plant.”

- **Probability estimate:** Base rate of business disruption from the last 10 years → 33%/yr (1 occurrence every 3 years).
- **Calculation:** Shutdown days × margin/day × (33% × attribution).

Fines & regulations

Event: “Enforcement action under new effluent cap.”

- **Probability estimate:** Regulatory enforcement history → 12.5%/yr (1 occurrence every 8 years).
- **Calculation:** # potential breaches × penalty/breach × (12.5% × attribution).

Sourcing resilience

Event: “Tier-1 supplier outage (flood).”

- **Probability estimate:** Category model flood frequency × supplier vulnerability → 25%/yr (1 occurrence every 4 years) × 50% vulnerability (expert assessment) = 12.5% probability.
- **Calculation:** Days disrupted × margin/day × (12.5% × attribution).

7.2.3 Guardrails and best practices

- **One event, one probability:** Don’t average different hazards; build scenarios if multiple correlated triggers exist. (If risks are correlated, model scenarios rather than multiplying independent probabilities.)
- **Keep the probability annual:** Align its period with your annual Output × Outcome.
- **Use bands for governance, not for math:** Calculate with the numeric probability; use Low/Medium/High bands only for dashboarding.
- **Evidence label:** Tag each probability with its evidence level and sources, and set review triggers (e.g., new regulations, repeated incidents).