apparel impact institute

ANNUAL *IMPACT* REPORT 2024

content

I. Introduction

Letter from Lewis Perkins

Dear Friends,

We're halfway to 2030[1] — a critical year by which the fashion industry must achieve a 50% reduction in carbon emissions to meet our climate goals — and while we've made progress, it's not enough.

The cost of inaction is monumental: If the fashion industry fails to accelerate its efforts toward the 2030 goal of a 50% reduction in carbon emissions, the industry's overall carbon footprint will continue to grow unchecked. This will lead to further exacerbation of global climate change, with severe economic and environmental impacts that will devastate both people and planet. But here's the good news — solutions exist, and momentum is building.

While the challenges may seem daunting, Aii is actively working to provide the industry with a roadmap to success. As you'll see in this report, we're catalyzing emissions reductions by removing barriers to supply chain decarbonization through initiatives like our new supplier journey pathways. We're also activating programs, solutions, and financial tools, like the Fashion Climate Fund, to help suppliers decarbonize their operations in credible ways.

Our goal is ambitious but achievable with sufficient resources: assisting approximately 2,000 suppliers in achieving a 100 Mt reduction in carbon emissions by 2030. This is more than a target — it's a purpose-built approach to scale proven solutions and drive industry-wide impact. These suppliers will be the tipping point, sparking momentum for scalable decarbonization across the sector.

Yet we know achieving our goal — and industry decarbonization — requires all of us.

If you are a supplier, we're here to support and guide you through this transformation, offering not only financial tools but also innovative programs that will help you achieve these goals in a sustainable and cost-effective way.

If you are a brand retailer, partnering with Aii means more than committing to reducing emissions within your own operations — it means leveraging your influence to drive change across the entire value chain. We encourage you to

- Collaborate on Supplier Decarbonization: Commit to working closely with suppliers by supporting their adoption of innovative, low-carbon solutions. Your leadership in providing clear demand signals and volume commitments can empower suppliers to make long-term investments in decarbonization.
- Invest in Scalable Solutions: Engage with Aii through co-investment in programs and initiatives like the Fashion Climate Fund, which provides pooled capital needed to scale solutions. Your participation will help unlock further financing, de-risking investments for suppliers.
- Set Bold, Actionable Targets: Align your brand's decarbonization plan with Aii's Climate Solutions Portfolio (CSP) and encourage others in your sector to join in scaling solutions that collectively move the industry toward its 2030 climate goals.

Together, by aligning brand commitments and supplier action, we can create a ripple effect that transforms the fashion industry at scale.

Warm regards,

Lewis B. Perkins

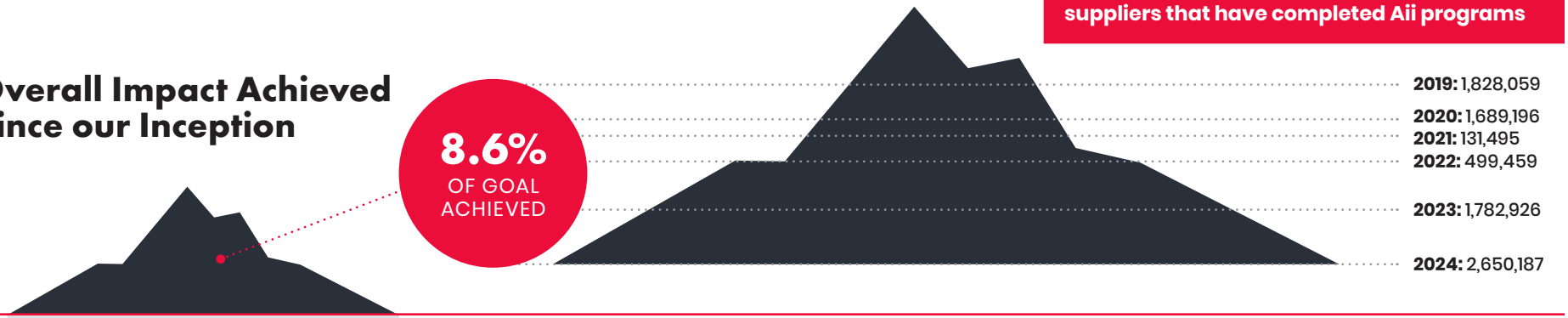
Lewis Perkins
President, Apparel Impact Institute

1 In 2021, with the launch of the Science Based Targets Initiative (SBTi) science-based Net-Zero Standard, many companies set 2030 climate actions to limit global warming to 1.5°C.

Our Impact at a Glance

Total annual actual GHG emission reductions (in tonne CO_2e) per year over useful life by suppliers that have completed Aii programs

Overall Impact Achieved Since our Inception



GOAL:

100 Mt CO_2e
saved over useful life by 2030

STATUS:

8,581,322 tonnes CO_2e
saved over the useful life[2]

OR

901,288 tonnes CO_2e
total annual reduction by producers that have completed Aii programs[3]

2 Sum of total GHG emissions saved by suppliers participating in Aii's Supplier Journey in each year from 2018 until the end of 2024 multiplied by the respective useful life factor. In 2024, we updated our emissions and conversion factors, including historic data — read more about our data and calculation methods in our Methodology/Calculations section.

3 Sum of total actual GHG emissions saved by suppliers participating in Aii's Supplier Journey in each year from 2018 until the end of 2024.

1,261 facilities and 9,689 farms

reached through Aii's Supplier Journey from 2018 until the end of 2024*

*The total number of unique facilities/farms that have participated in at least one Aii program or CSP grant-funded solution since 2018.

Bangladesh	China	India	Vietnam	Other Regions
137 facilities	**450** facilities	**107** facilities **9,689** farms	**160** facilities	**407** facilities





Aii's Supplier Journey, formerly known as the Climate Action Approach (see 2023 impact report), is a framework designed to support suppliers on their journey toward decarbonization.

Capital Unlocked

GOAL:

2 Billion $ capital unlocked by 2030

STATUS:

US $156,235,003

Total capital unlocked

=

US $124,075,726

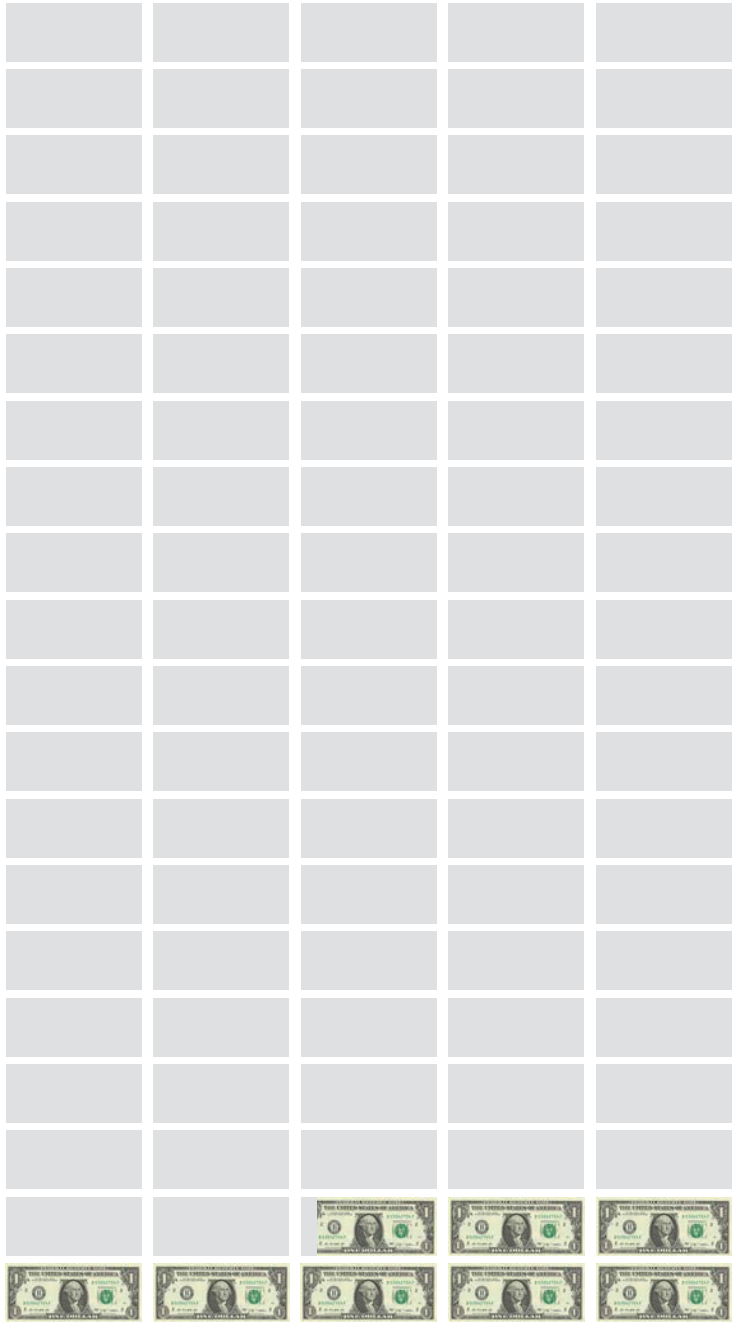
Total investments made by suppliers from 2018-2024

+

US $32,159,277

Total Aii spending[4] from 2018-2024

7.81%
OF GOAL ACHIEVED



4 This includes all expenses made by Aii, e.g. brand contributions, software development

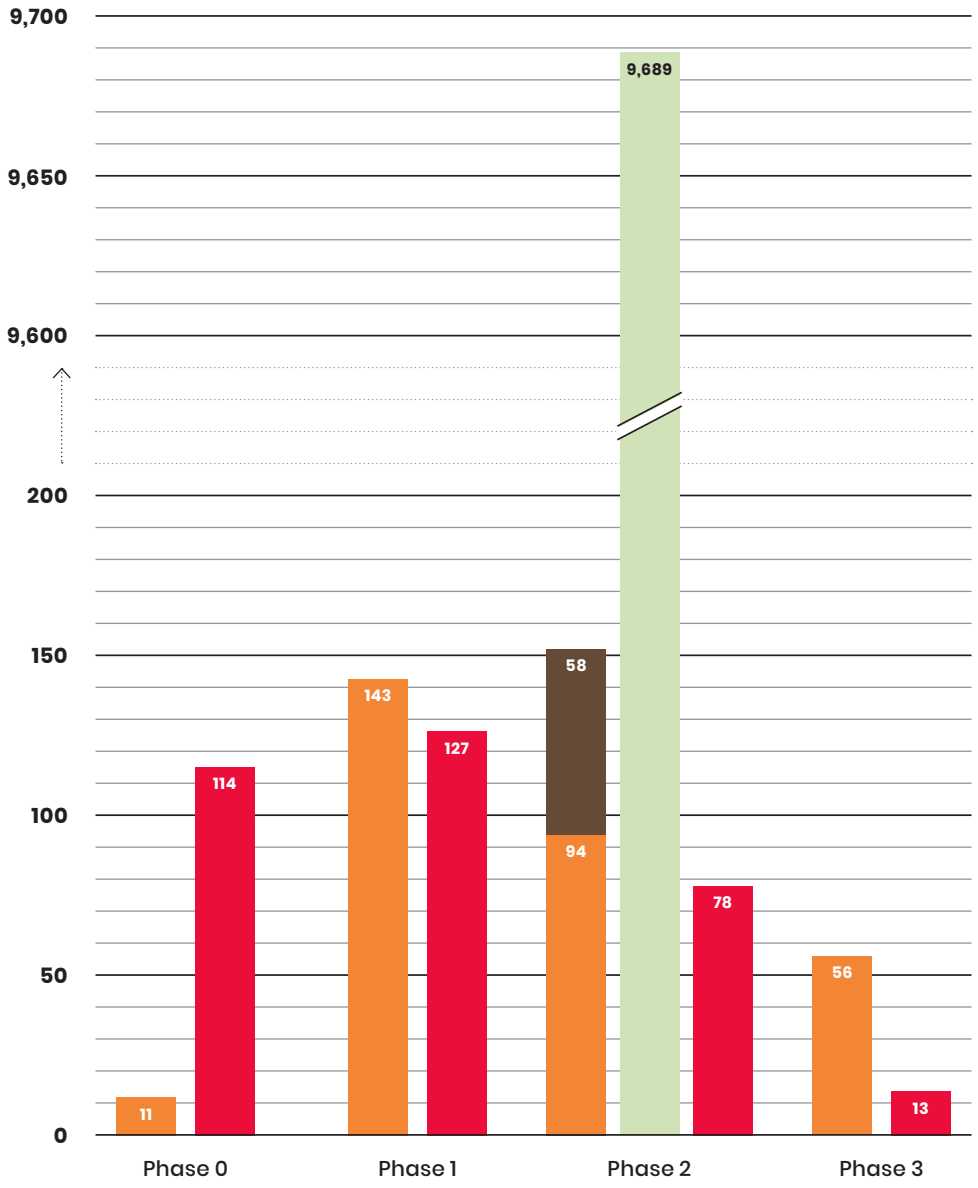
Our 2024 Impact

NUMBER OF ACTIVE SOLUTIONS BY FACILITIES
Aii Programs

NUMBER OF COMPLETED SOLUTIONS BY FACILITIES
Aii Programs

NUMBER OF ACTIVE SOLUTIONS BY FACILITIES
CSP Solutions

NUMBER OF ACTIVE SOLUTIONS BY FARMS
CSP Solutions



TOTAL NO. OF ACTIVE SOLUTIONS:

362 facilities & 9,689 farms

TOTAL NO. OF COMPLETED SOLUTIONS

332 facilities

TOTAL NO. OF BRANDS:[5] **38**

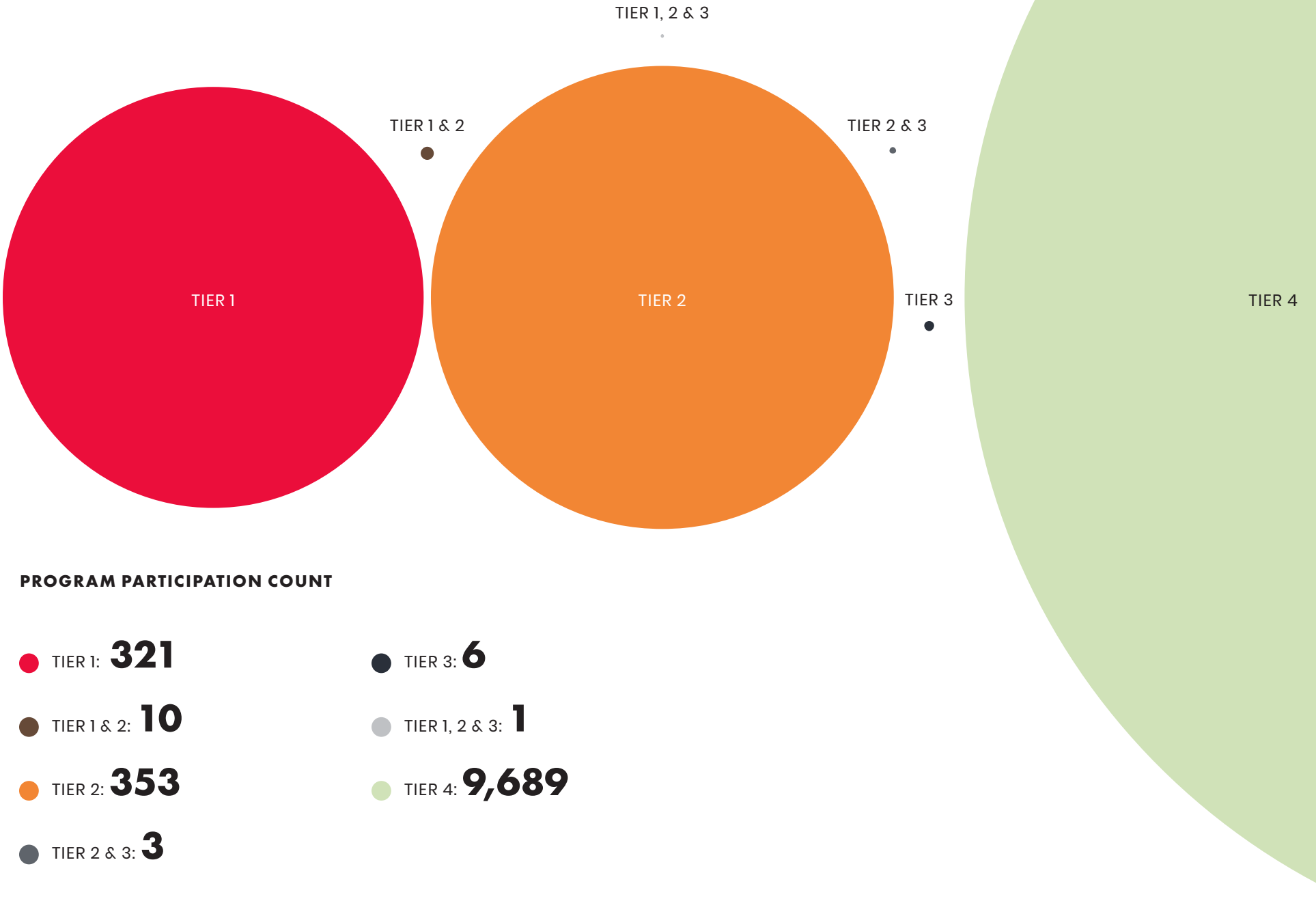
TOTAL NO. OF REGIONS:[6] **30**

Phases 0-3 are described in our Supplier Journey.

5 Total number of brands Aii was working with in 2024 (active and completed programs). Brands include organizations that contributed funding to Aii in 2024.

6 All countries/regions Aii offered programs in 2024. A region has at least one producer that has started program work with Aii

Our 2024 Impact



PROGRAM PARTICIPATION COUNT

- TIER 1: **321**
- TIER 1 & 2: **10**
- TIER 2: **353**
- TIER 2 & 3: **3**
- TIER 3: **6**
- TIER 1, 2 & 3: **1**
- TIER 4: **9,689**

2024 Key Impact Results of Suppliers That Completed a Solution in Phase 2 of Aii's Supplier Journey

Assured

In 2024, Aii Impact Programs[i] achieved the following actual savings:

Total actual GHG emission savings in tCO_2e

223,444

Average actual factory GHG emission savings in tCO_2e

3,061

Average % of GHG emission savings

8.74%

Total actual energy savings in GJ

2,417,333

Average actual factory energy savings in GJ

33,114

Average % of energy savings

8.34

Total actual water savings in m^3

2,366,691

Average actual water savings in m^3

42,262[ii]

Average % of water savings

7.18%[ii]

i. Based on 73 program completions in CbD, CbD+, RETI (excludes 5 program completions in CbD chemicals as it does not create GHG, energy or water savings).

ii. Based on 56 program completions (excludes 8 program completions in RETI & 9 in Tier 1 as they do not create water savings).

X 52,119

Total GHG emissions savings equal to **52,119 cars removed from the roads** in 2024

Total GHG emissions savings equal to 52,119 gasoline-powered passenger vehicles driven for one year. Source: United States Environmental Protection Agency

X 947

Total water savings equal to almost **947 olympic sized swimming pools**

One Olympic-sized swimming pool contains 2,500 m^3 of water. Source: FINA FACILITIES RULES 2015-2017, Wayback Machine (archive.org)

X 14,286,838

Total energy savings equal to **14,286,838 washing machines not used** in 2024

Washing machines not used is calculated using a 17.6 lbs capacity Miele WWD020 WCS machine and assuming it is used for 100 cycles per year. EU energy class: A; Source: Washing machines and washer-dryers (europa.eu)

2024 Key Impact Results of Suppliers That Completed a Solution in Phase 2 of Aii's Supplier Journey

Average actual cost per tCO_2e:

US $18.19

Average actual facility investment cost per tCO_2e:

US $14.46

Average actual Aii cost per tCO_2e:

US $3.73

Average actual cost per tCO_2e includes Aii's total spending (i.e., all of Aii's G&A and program-related expenses) and supplier capital investments to implement actions between 2018-2024.

Actual investments made by factories in USD

35,284,959

Actual savings made by factories in USD

32,056,863

VS

Average actual investment per facility in USD

458,246

Average actual savings per facility in USD

416,322

Average actual payback period:

13 months

2024 Key Impact Results of Suppliers Active in a CSP Solution (Phase 2 of Aii's Supplier Journey)

CSP Solutions

Number of grant-funded solutions:

8

Number of registry solutions:

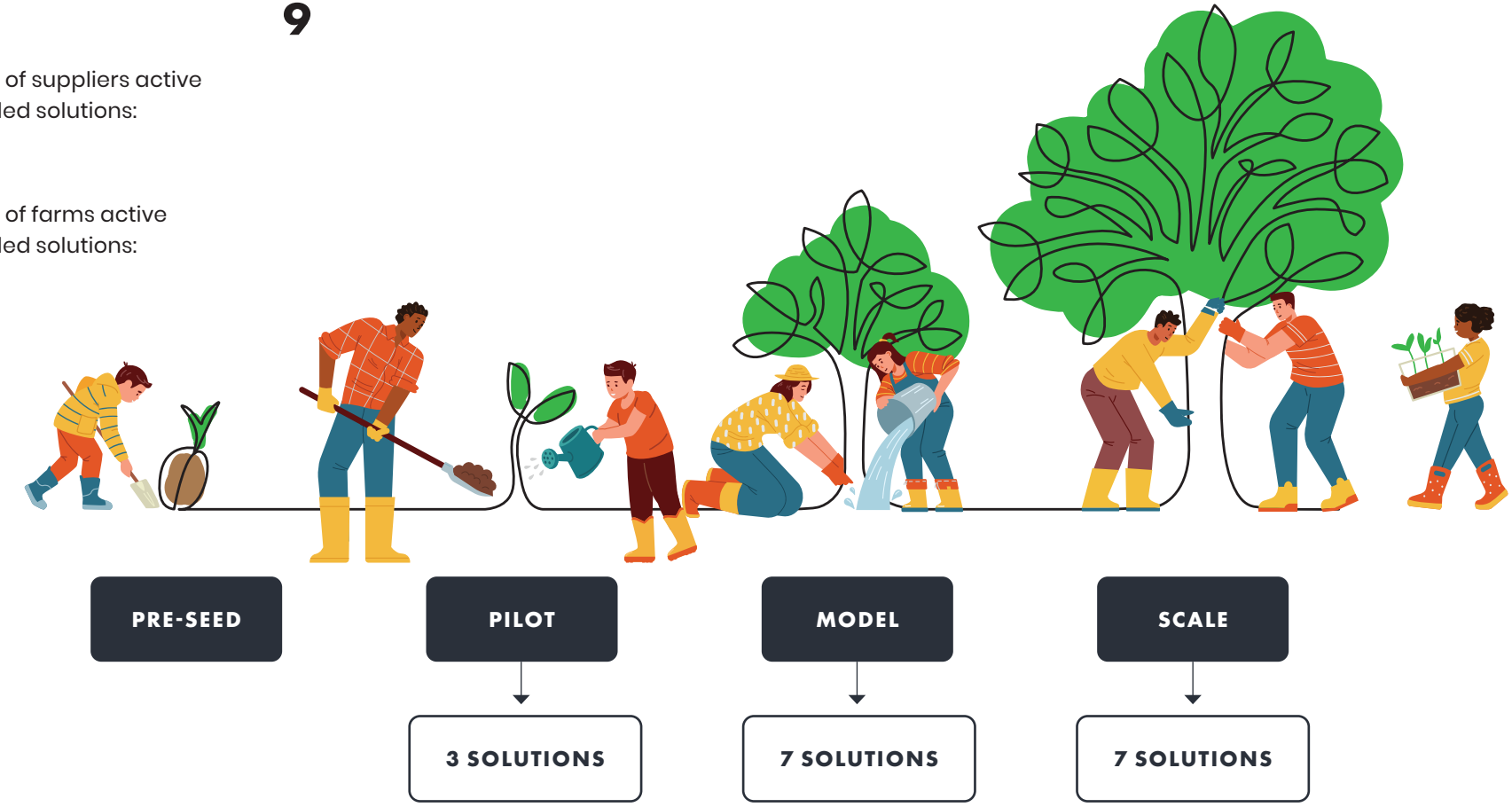
9

Total number of suppliers active in grant-funded solutions:

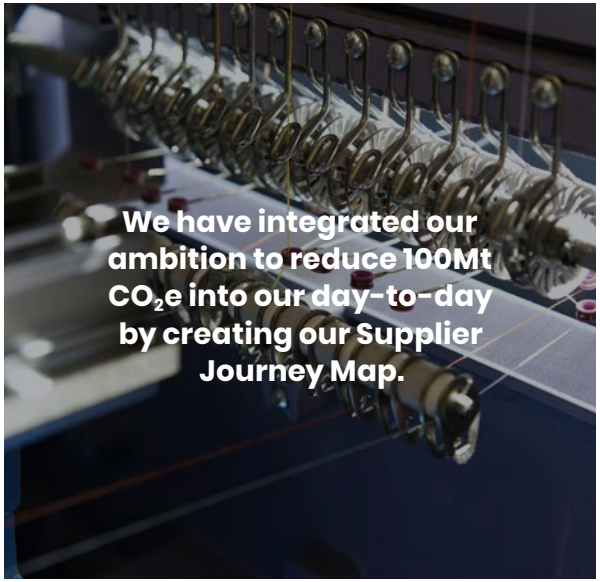
58

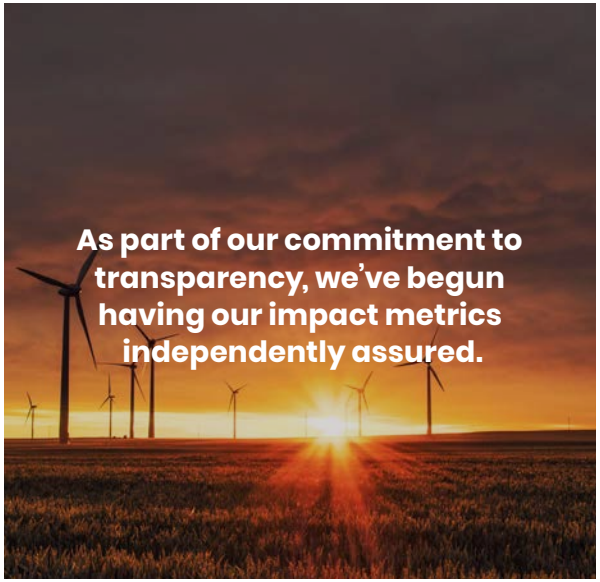
Total number of farms active in grant-funded solutions:

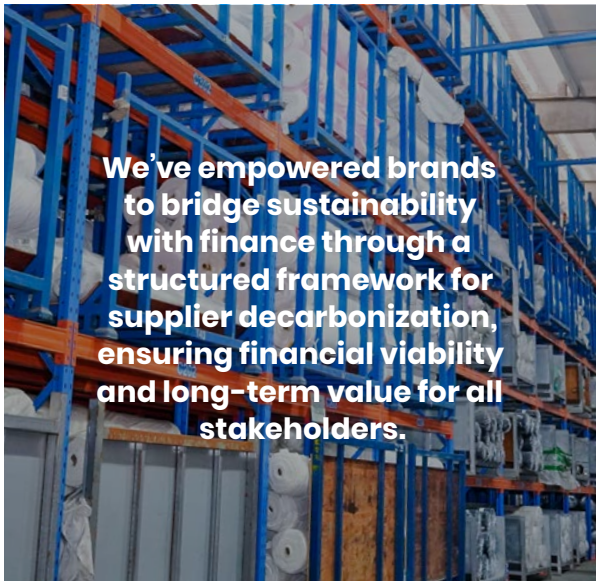
9,689

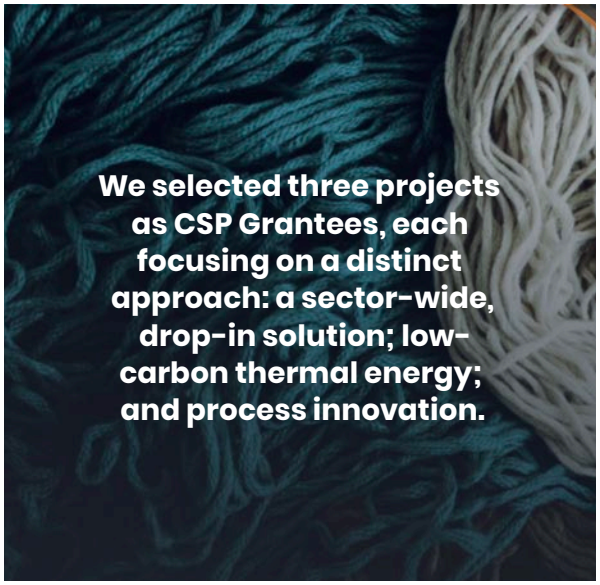


Executive Summary









II.
Our Roadmap To 2030

Aii's Strategy to Enable Suppliers to Reduce their GHG Emissions

From Strategy to Day-to-Day Integration

At the beginning of 2024, we established a cross-functional task force, playfully referred to as "Tiger Teams," to move our strategy of enabling the reduction of 100 million tonnes of CO_2e from the apparel and footwear supply chain by 2030 from idea to daily action. These three Tiger Teams worked across three major pillars — supplier engagement, decarbonization solutions, and sustainable finance solutions.

During Q1 and Q2 2024, the Tiger Teams collaborated across the organization and with external partners to develop roadmaps with key outcomes in 6-, 12-, and 18-month increments, ensuring supplier engagement, decarbonization solutions, and sustainable finance remain central to Aii's value proposition.

Our Strategic Framework

Aii, in partnership with Cascale and RESET Carbon, conducted an initial study based on FEM 2021 data, then updated with FEM 2022 data. The findings revealed the 1,800 highest emitters account for approximately 80% of global textile emissions. These facilities are distributed globally, with concentrations in China, Bangladesh, India, Vietnam, Indonesia, and Turkey. We're "following the carbon" and prioritizing a large portion of our efforts in China, India, Bangladesh, and Vietnam over the next 18 months.

Our Supplier Journey Map is the tool unifying our work, taking a supplier-centric approach to meet suppliers where they are — rather than being constrained by predefined programs. Our goal is to look at three pathways where Aii can engage suppliers: strengthening existing supplier relationships (Pathway 1), activating high-impact suppliers identified in our study (Pathway 2), and supporting brand partners with suppliers outside these groups (Pathway 3).

Our Path to 2030

Maximizing our impact through 2030 hinges on our ability to identify and support the development of a pool of low-carbon suppliers. Alongside our partners at Cascale, we will deploy an Industry Decarbonization Roadmap with coordinated activities and aggregated resources for Industry Strategic Suppliers — a group of 1,800 suppliers accounting for roughly 80% of emissions as indicated by Higg FEM 2022 data.

To measure the impact of the low-carbon supplier pool, Aii is leading the development of industry-accepted benchmarks for GHG emissions and energy use for apparel and footwear manufacturing.

We intend for participating suppliers to not only gain recognition for their achievements but to also provide a clear business case for decarbonization as Aii and our partners align sourcing strategies and policies with high-performing facilities using the carbon benchmark.

III.
Who We Are

Our Vision, Mission, & Values

Our *VISION*

A transformed apparel, footwear, and textile industry that has a positive impact on people and the planet.

Our *MISSION*

We identify, fund, and scale proven quality solutions to accelerate positive impact in the industry.

Our *VALUES*

We are humble.

We put aside ego or concerns about status.

We are quick to acknowledge our mistakes and to point out the contributions of others, and slow to seek recognition for ourselves.

We share credit, emphasize team over self, and define success collectively rather than individually.

We are empathetic.

We know how to effectively interact and authentically connect with others.

We understand the impact of our words and actions on others around us.

We actively listen and genuinely care for one another.

We work to understand each other's strengths and use them strategically.

We are ethical.

We uphold integrity and fairness, making decisions based on credible data.

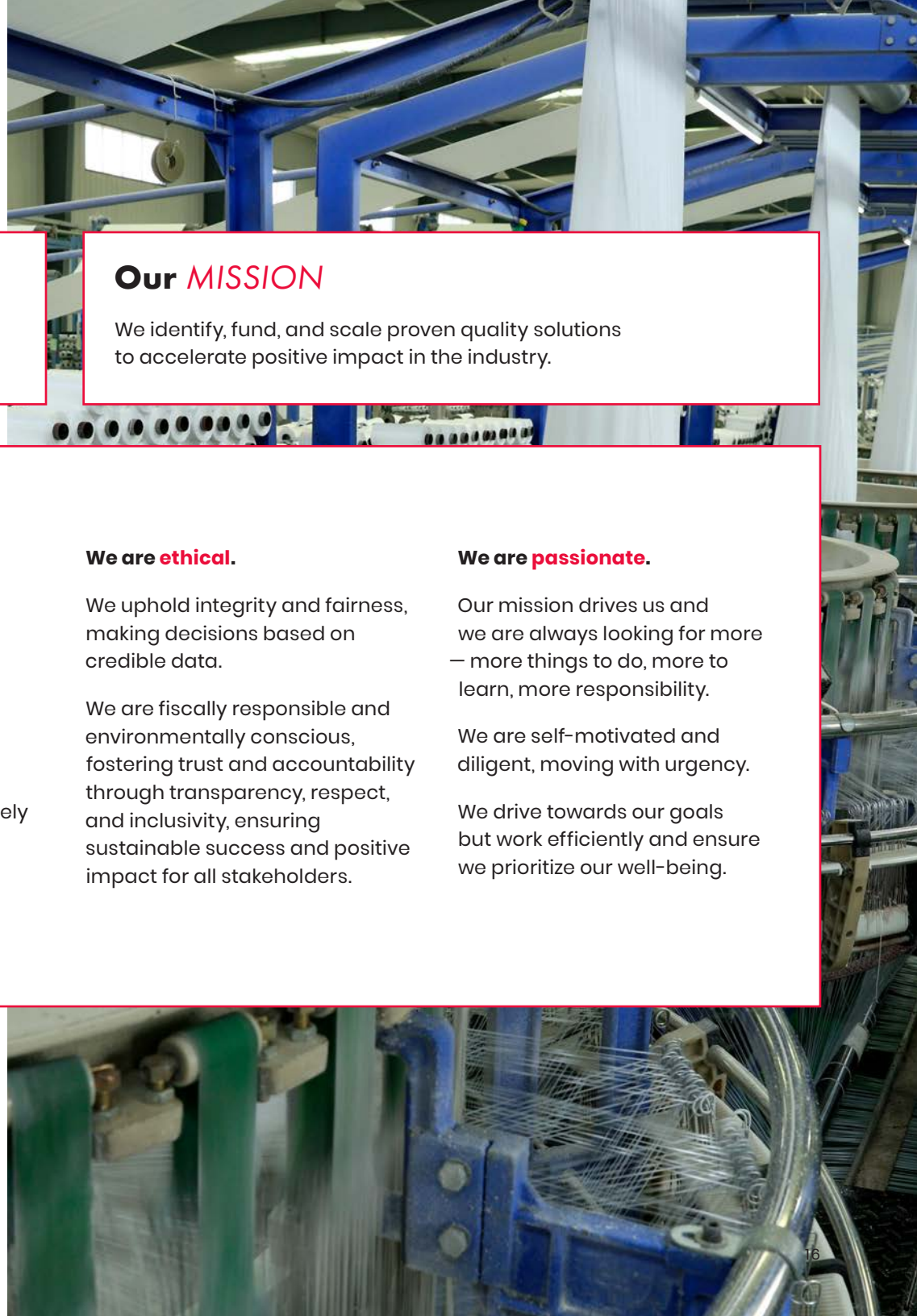
We are fiscally responsible and environmentally conscious, fostering trust and accountability through transparency, respect, and inclusivity, ensuring sustainable success and positive impact for all stakeholders.

We are passionate.

Our mission drives us and we are always looking for more — more things to do, more to learn, more responsibility.

We are self-motivated and diligent, moving with urgency.

We drive towards our goals but work efficiently and ensure we prioritize our well-being.



Our History

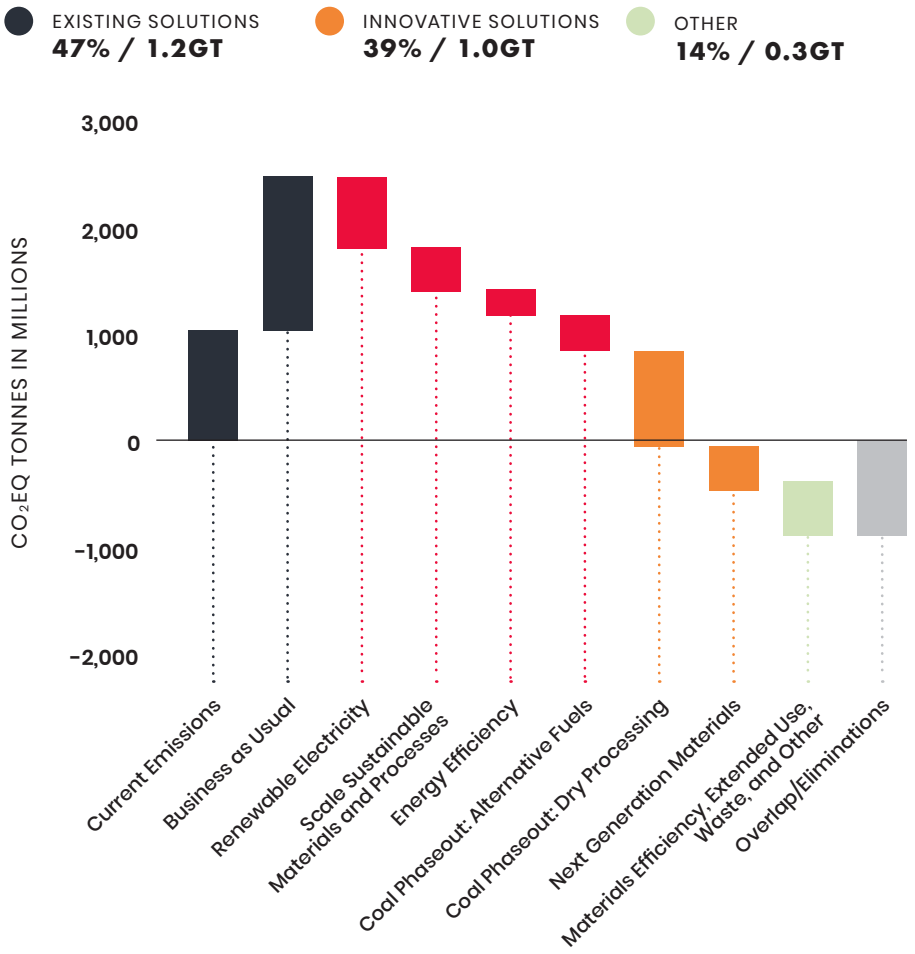
Apparel Impact Institute is a not-for-profit (501c3) registered in the state of California and founded in 2017 by four industry leaders — Cascale, the Sustainable Trade Initiative (IDH), Natural Resource Defense Council (NRDC), and Target Corporation — to accelerate positive change in the apparel, footwear, and textile industry, transforming its impact on people and the planet. The organization emerged organically as a result of a real need that apparel brands and retailers self-identified.

Today, Aii is recognized as an ecosystem leader in carbon reduction programming. You can learn more about our history here.

Aii's Theory of Change

Two Aii reports form the foundation of our theory of change: "Roadmap to Net Zero: Delivering Science-Based Targets in the Apparel Sector," which outlines six solutions for the fashion industry to meet 2030 GHG reduction targets, and "Unlocking The Trillion-Dollar Fashion Decarbonisation Opportunity," which details the funding needed to achieve net zero by 2050. Guided by these insights, Aii blends capital from brands, philanthropy, and financial institutions to scale cost-effective, science-based solutions to cut apparel, footwear, and textile emissions by 50% by 2030 and achieve net zero by 2050.

Pathway to Net-Zero: Reduction Potential by 2050



Solution categories that enable a net-zero fashion industry by 2050.
Source: Aii and FFG analysis (2021).

Our Focus Areas

Our immediate priority is to work toward a zero-carbon fashion industry, with secondary impact in:

Primary Impact Area

CARBON EMISSIONS

Secondary Impact Areas

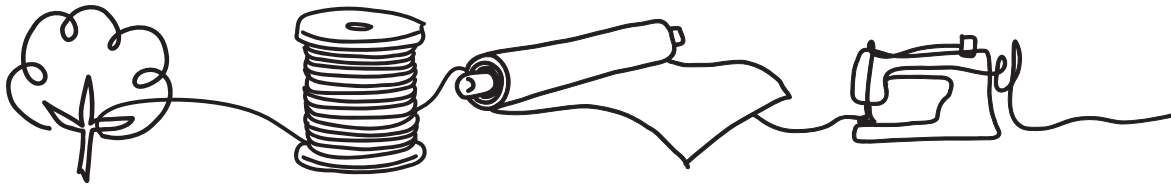
- WATER CRISIS
- DEFORESTATION
- OVERCONSUMPTION
- HARMFUL CHEMICALS
- RESOURCE SCARCITY
- SOCIAL/ LABOR
- AIR QUALITY
- BIODIVERSITY LOSS

Through our programs and solutions we are looking to:

- Reduce process demand for energy and reduce energy losses.
- Reduce/eliminate GHG emitted from generating heat and electricity.
- Reduce emissions from the production of natural & synthetic fibers.
- Minimize waste in each step of production.
- Maximize circular reuse of fibers, fabrics, or chemicals.

Our most recent annual update to the "Roadmap to Net Zero" identified material production as the biggest hotspot of emissions (55% of the total) followed by raw material extraction (21% of the total) (see figure on right). As a result, Aii's programs and solutions primarily focus on material production.

Total apparel GHG Emissions: 878.7 Mt CO_2e (0.879 Gt)



Tier 4

RAW MATERIAL PRODUCTION & PRIMARY PROCESSING

188 Mt Co_2e

21%

The extraction and farming of primary raw materials from the earth (e.g. fossil fiels), plants, (e.g. cotton), or animals (e.g. wool), and the collection of secondary raw materials into a commodity state.

Tier 3

INTERMEDIATE MATERIAL PROCESSING

134 Mt Co_2e

15%

Processing of raw materials into yarn and equivalent state.

Tier 2

MATERIAL MANUFACTURING

482 Mt Co_2e

55%

Production and finishing of materials (e.g. fabrics, trims) that go directly into the finished product.

Tier 1

FINISHED PRODUCT MANUFACTURING

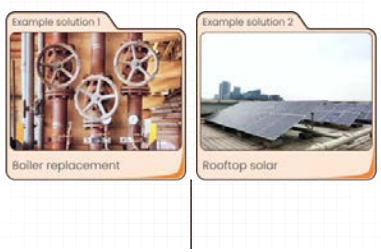
75 Mt Co_2e

9%

Assembly and manufacturing of final products.

How We Work

Aii provides tracking, implementation, and access to programs that result in positive environmental impacts in apparel and footwear production.

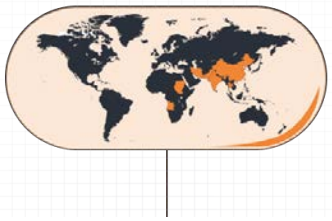


We *IDENTIFY*

We use verified data to identify programs and solutions that are poised to have a significant impact on industry carbon emissions.

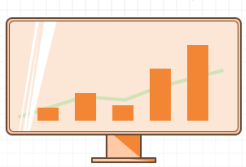
We *FUND*

We aggregate existing resources and attract new ones to build a pipeline of scalable impact in the industry.



We *SCALE*

We remove barriers to accelerate the implementation of proven solutions.



We *MEASURE*

We ingest, analyze, and report critical data to move our partners closer to their climate targets.

Fashion Climate Fund (FCF)

To make urgent and meaningful strides in decarbonizing the supply chain, Apparel Impact Institute has called upon industry leaders to pool $250 million in catalytic capital to unlock $2 billion in supply chain investment. With this support, we can enable approximately 2,000 suppliers to cut 100 million tonnes of CO_2e emissions by 2030 by empowering them to adopt proven carbon-reducing solutions, secure essential financing, and measure their impact. This will drive substantial and replicable change across the industry.

This capital is strategically allocated across four key areas:

OUR PROGRAMS & PROCESS: We're directly supporting suppliers with subsidies to jumpstart carbon technology assessments, efficiency programs such as Clean By Design, and the development of thermal energy roadmaps. Our approach and supporting framework provides a clear pathway for suppliers to be leaders in carbon reduction.

CLIMATE SOLUTIONS PORTFOLIO: Through our rigorous, data-driven Calls for Application and grantmaking processes, we're expanding our Climate Solutions Portfolio, which identifies and scales proven decarbonization programs, solutions, and technologies targeting Scope 3 emissions from production, the most significant source of carbon in the apparel industry.

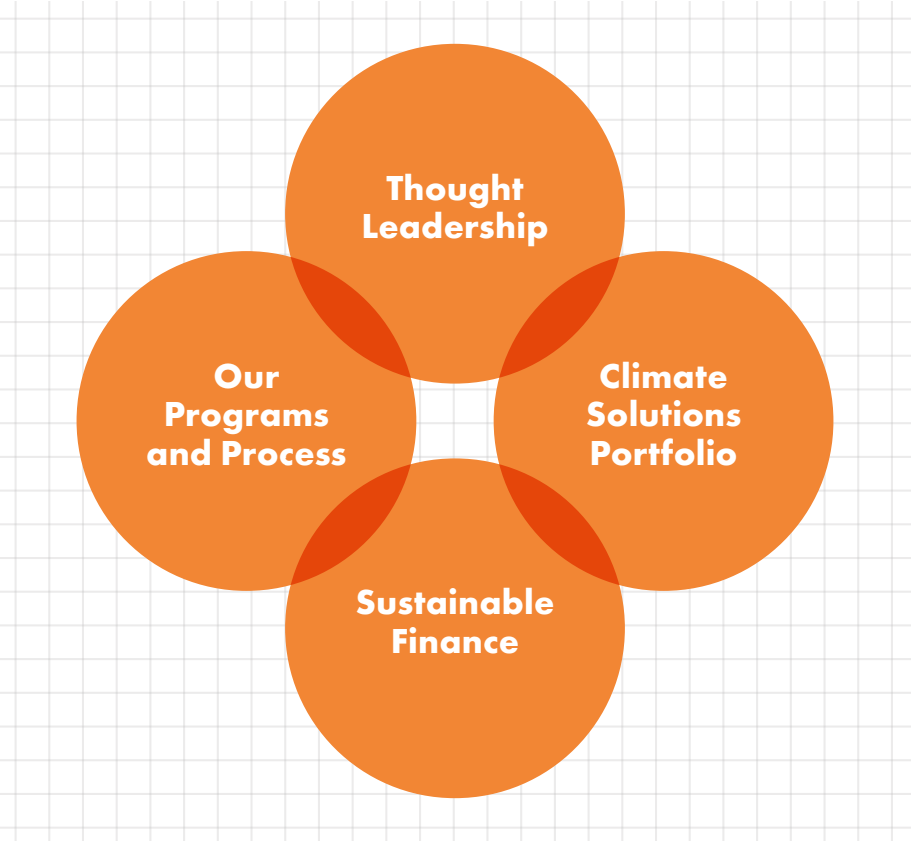
ECOSYSTEM & THOUGHT LEADERSHIP: We fund activities that enable systemic changes, such as cutting-edge research, comprehensive reports, and innovative programs. We convene key stakeholders, including suppliers, brands, investors, philanthropies, and solutions providers. These initiatives are designed to activate and drive project deployment in facilities, unlocking substantial reductions in carbon emissions and fostering the shift to a more sustainable industry.

SUSTAINABLE FINANCE: Given that loans are often either inaccessible or market-rates too high for textile suppliers, the Fashion Climate Fund works with major financial institutions to derisk debt, resulting in accessible and more appealing financing. We identify and provide information on critical financial mechanisms such as first-loss provisions, loan guarantees, and other support necessary for securing sustainable finance, paving the way for substantial industry-wide impact.

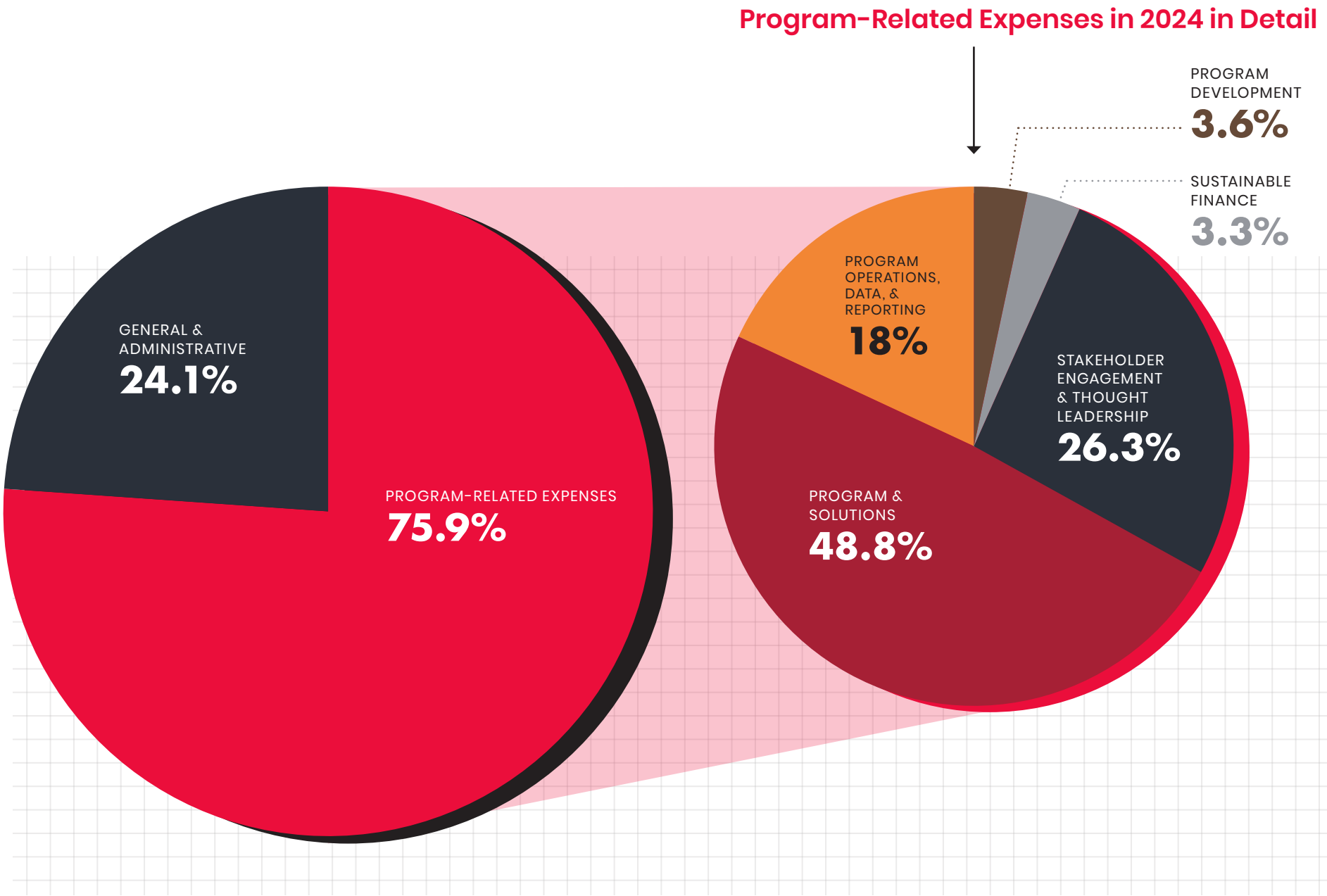
Over the next five years, if we can fully fund the $250M Fashion Climate Fund, Aii will engage with approximately 2,000 diverse suppliers across key production regions. We will provide comprehensive support, including technical assistance, sustainable finance options, and access to the best available technologies. Through these efforts, we aim to empower suppliers to implement effective climate solutions and drive tangible emissions reductions.

Fund Deployment

The FCF supports our work, which can be split into four categories:



Allocation of Funds



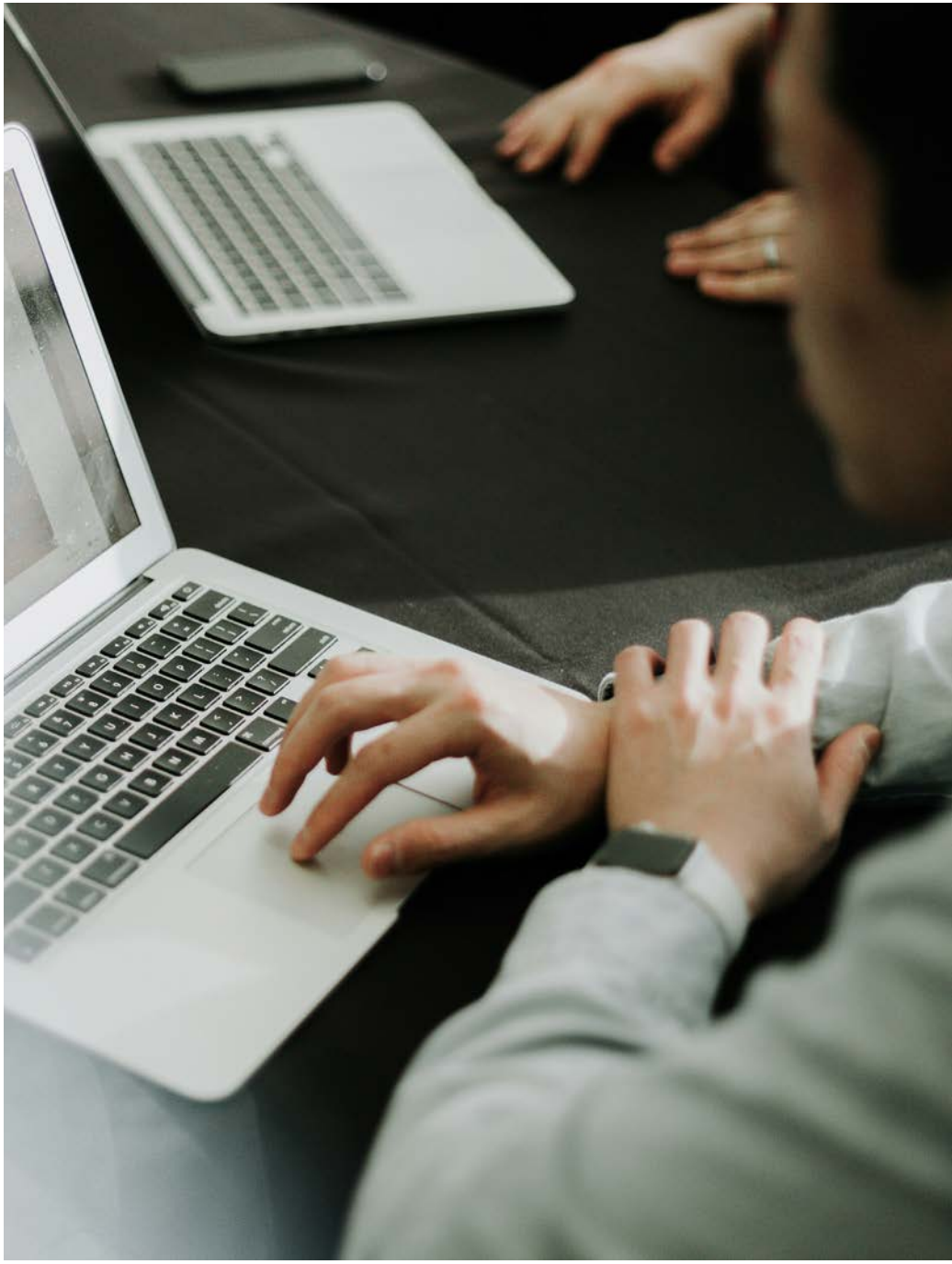
Digital Transformation

In 2024, Aii shifted its software and technology focus to “digital transformation.” Digital transformation is the process of integrating digital technologies in all areas of an organization to improve operations, efficiency, partner experiences, and service delivery value.

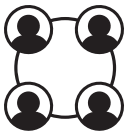
This strategic technology shift will position Aii for success in achieving our 2030 emission reduction goal by streamlining key processes such as program deployment and positioning Aii as lean and adaptable to evolving industry trends.

Key digital transformation areas within Aii include:

- Exploring strategic partnerships to deliver our key products and services more effectively, including the Carbon Toolkit and program reporting.
- Building a best-in-class database to improve and expand the overall quality of data.
- Implementing business intelligence tools to enable faster access to relevant information, identification of trends and patterns, and more impactful insights for the industry.

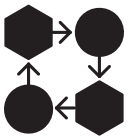


Outlook to 2025



STRATEGIC PARTNERSHIPS

Our aim is to fully digitize Aii's program offerings, not only streamlining our ability to deliver services but also greatly enhancing the overall experience for all stakeholders involved.



OPERATIONAL ENHANCEMENTS

While delivering value back to the industry is essential, it's equally important to ensure that our own subject matter experts within Aii have the tools needed to innovate. Aii is exploring customer relationship management (CRM) and business intelligence (BI) tools to increase efficiency and deliver additional insights to the industry.

DATA REPOSITORY

Data is the foundation for good insights, especially when tracking improvements to baseline metrics for facilities in our programs. Aii is establishing a best-in-class database that organizes data collected from our products and services, implements best practices for data quality assurance and security, and is accessible and actionable to our partners. Note: Aii follows all region-specific data privacy laws.

TECHNOLOGY ADJUSTMENTS

To set ourselves up for success, Aii is restructuring some of our current digital assets by retiring our current CSP platform and moving the registry of CSP registrants and grantees to our main public website, allowing the public to continue discovering impactful programs and technologies.

"While digital transformation may seem like a common strategy implemented by organizations across all industries, its impact relies heavily on commitment to a shared vision and execution. These are areas where Aii truly excels, and I'm already excited at the progress we've made in such a short time as a smaller organization.

The industry will soon see not only Aii's innovative mind at work but also our ability to take an idea and make it into a reality with all industry stakeholders in mind."

DAN XAVIER, Head of Software

Aii Team

Organogram[7]

7 Employees and job titles during the financial year 2023 until 12.31.2024

Geography & Demographics of the Team

Aii maintained an employee count of 26 in 2024.

At the close of 2024, Aii's team consisted of 58% employees identifying as female and 42% male. Aii's executive leadership team is composed of four people — 75% identifying as male and 25% as female.

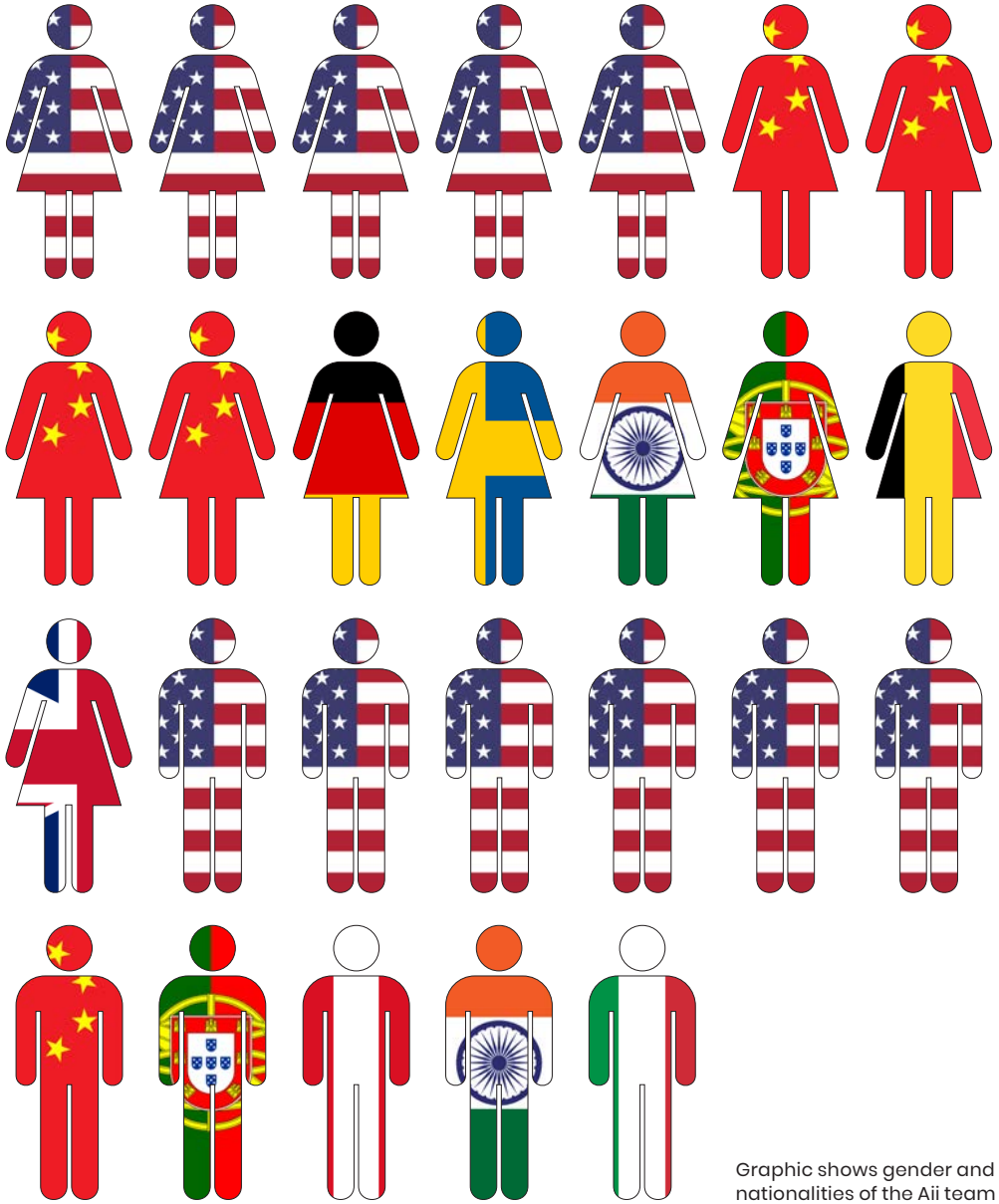
As a smaller team, we are especially proud of our diversity, with employees distributed across 11 countries in three continents, and representing 10 different nationalities.

26
employees

FROM
10 nationalities

BASED IN
11 countries

OVER
3 continents



Graphic shows gender and nationalities of the Aii team

Employee Recruitment, Engagement, & Retention

Aii recognizes that in order to deliver our mission with the urgency it requires, we need to recruit, engage, and retain a team of high-quality and passionate talent.

RECRUIT We have fine-tuned our recruitment process to ensure we are vetting candidates not only for their qualifications but also their alignment with Aii core values: Humble, Empathetic, Ethical & Passionate. In the coming year, we also have plans to increase our regionally-focused recruiting efforts, hiring more employees who live and work in the communities where apparel production is happening.

ENGAGEMENT Once we secure top talent, we work hard to make sure they're satisfied and engaged in their work. We're thrilled to report that our employees are happy! We saw an increase from our already high score of 4.2/5 to 4.3/5 on our 2024 annual employee engagement survey.

RETENTION This year, we had a 92% retention rate and created a retention strategy for future years by polling staff on what is important to them and focusing our efforts on initiatives that will keep staff engaged, supported, and satisfied.

Our climate programs director, hired August 1, 2024, explains her start at Aii:

"My experience with Aii was a model in great recruiting. Responses to queries and clarifications were always received the next working day. The transparency to the process, the interviewers, and the purpose of each stage of the process were clear, informative, and really helped in preparing for each meeting. The meetings, exercises, conversations, and documents, were all concise, focused, and FUN! I met 5 of my new colleagues during the recruitment process and all demonstrated that this would be a positive, committed, and engaging environment — I knew from the get-go that this was a culture in which I could be vocal, be curious, and thrive."

LISA FROST

Remote Organizational Culture

As a remote, globally dispersed workforce, we need to work a little harder to build deep connections among our team. We have initiatives throughout the year such as virtual game nights, asynchronous "hometown video tours," and our monthly staff newsletter to keep employees feeling connected. We solidify connections once a year at our annual in-person staff retreat, a time when we can build deeper bonds as a team to propel our work forward with renewed energy and purpose.

OUR TEAM IN PORTO

This year we chose the city of Porto for our in-person staff retreat, not only because of its tradition of textile manufacturing, but also to get to know the hometown of two of our employees, Bruno and Patricia.

BRUNO CARNEIRO, data & quality assurance manager: **"I have participated in the previous staff retreats, but this year was very special. Having the opportunity to host and show Porto to my colleagues added a new dimension to team building. The sightseeing, the wonderful food, the whole experience of Portugal hospitality just screamed connection and led to amazing moments as a team."**

PATRICIA SOUSA, program operations manager: **"I was thrilled to welcome my team to Portugal for our annual retreat and share with them one of my favorite cities, Porto. It was inspiring to visit local partners, Smartex and Impetus, and to showcase Portugal's textile sector to colleagues from abroad, and I'm hopeful that we'll soon launch a Clean by Design project here. The experience allowed me to strengthen connections with teammates I don't often work with, making it all the more meaningful."**

In addition to the challenges of team building as a remote organization, we also face the challenge of working across cultures — and time zones. We address these challenges through a dedicated culture committee that meets quarterly to discuss obstacles, initiatives, and solutions to bridge any cultural gaps across our team.

Aii Governance

Board of Directors

Aii is governed by its Board of Directors, whose role includes:

- Determining Aii's mission and purpose.
- Monitoring and strengthening programs and services.
- Ensuring adequate financial resources.
- Protecting assets and providing proper financial oversight.
- Building a competent Board, including articulating prerequisites for candidates, orienting new members, and periodically and comprehensively evaluating their own performance.
- Maintaining legal and ethical integrity.
- Enhancing the organization's public standing.
- Establishing a balance of representation from a variety of fields on the Board to maintain diversity and encourage inspiration and innovation from a wide range of sources.
- Approving the final Fashion Climate Fund allocations as part of the budgeting process.

Aii board members serve a three-year term and attend quarterly meetings. The Board has three established committees: Board Development, Audit, and Finance.

Melissa Fifield
Bank of the West
BOARD MEMBER

Amina Razvi
Industry Expert
BOARD MEMBER

Devon Rothwell
Condé Nast
BOARD MEMBER

Amanda Tucker
Target Corporation
BOARD MEMBER

Claire Bergkamp
Textile Exchange
BOARD MEMBER

Pramit Chanda
IDH
BOARD MEMBER

Hasitha Premaratne
Brandix Group
BOARD MEMBER

CSP Advisory Council

The Climate Solutions Portfolio Advisory Council (CSPAC) operates as a diverse multi-stakeholder entity with a primary focus on identifying solutions capable of significantly reducing CO_2e at scale within the textile industry. The aim is to include these impactful solutions in the Climate Solutions Portfolio (CSP).

Aii's inaugural Climate Solutions Portfolio Advisory Council (CSPAC) members are concluding their two-year term this year. We extend our deepest appreciation for their commitment and expertise, which led to the development of a comprehensive strategy, a rigorous evaluation process for the Climate Solutions Portfolio (CSP), and the successful vetting of nearly 20 projects as Registrants and Grantees.

We are pleased to share that several members have renewed their roles, ensuring continuity as the CSP transitions from setup to scaling impact. Additionally, we are excited to welcome new advisory council members who will bring fresh perspectives to this critical work.

Abhishek Bansal
Head of Sustainability, Arvind

Beth Jensen
Senior Director, Climate and Nature Impact, Textile Exchange

Sophie Mather
Material Futurust and Founder, Bio8vition

Kim Hellström
Senior Sustainability Manager Climate, H&M Group

Kurt Kipka
Chief Impact Officer, Aii

Lalit Toshniwal
Senior Director of Owned Brands Raw Materials, Target

Jimmy Summers
VP Environment, Health and Safety, and Chief Sustainability Officer, Elevate Textiles

Apparel Impact Roundtable

The Apparel Impact Roundtable is composed of industry partners contributing to the Fashion Climate Fund and other strategic industry partners. The Roundtable's primary responsibility is to review and provide feedback on the strategies and initiatives of the Fashion Climate Fund.

Stakeholders

2024 Partners

2024 BRAND PARTNERS

Apparel, footwear, or retail companies since Aii's inception who nominate, sponsor, or provide funding to Aii to drive facility-level environmental improvement programs and impact reductions.[8]

Abercrombie & Fitch, Acne Studios, Amazon, Amer Sports, American Eagle, Arc'teryx, ASICS, ASOS, Balenciaga, C&A, Columbia, Decathlon, Eileen Fisher, Express, European Outdoor Group, Everlane, Fast Retailing, Farfetch, FILA, Fjallraven, Gap, G-star, H&M Group, Helly Hansen, Icebug, JCPenney, J. Crew, Kering, Kontoor, Levi Strauss & Co., Li&Fung, LL Bean, Lululemon, Marks & Spencer, Nemo, New Balance, Nike, Nordstrom, Otto Group, Outdoor Industry Association, Prada, Primark, Puma, PVH, Ralph Lauren, Rapha, REI, REWE, SHEIN, Stella McCartney, Tchibo, Tesco, The Reformation, Under Armour, Uniqlo, VB, VF Corporation, Victoria's Secret, W.L. Gore, WSCG, Zalando

FASHION CLIMATE FUND STRATEGIC COLLABORATORS

Non-profit organizations with expertise and knowledge of the apparel, footwear, and textile industry or adjacent sectors collaborating with and providing guidance and insights to Aii in 2024.

Cascale

Fashion for Good

Solidaridad

Textile Exchange

ZDHC Foundation

FASHION CLIMATE FUND LEAD PARTNERS

Organizations committing at least $10M by 2030

H&M Foundation

H&M Group

HSBC

lululemon

PVH Foundation

The Schmidt Family Foundation

Target

FUNDING PARTNERS

Organizations who provided funding to Aii in 2024 to advance our mission for the apparel, footwear, and textile sector.[9]

Chaiken Foundation

Roy A. Hunt Foundation

THOUGHT PARTNERS

Organizations with expertise and knowledge on issues relevant to the apparel, footwear, and textile sector that collaborated with and provided guidance to Aii in 2024.

Accelerate Circularity

Fashion Conveners

The Fashion Pact

Global Fashion Agenda

Pakistan Environment Trust

Race to the Top

The Industry We Want (TIWW)

United Nations Fashion Industry Charter for Climate Action (UNFCCC)

Value Change Initiative

World Resources Institute (WRI)

8 Partners include organizations that previously contributed and/or currently contribute funding to Aii. For confidentiality reasons, some names are not mentioned.
9 Industry & Funding Partners include organizations that previously contributed and/or currently contribute funding to Aii.

2024 Implementation Partners

Solution providers with specialist knowledge in countries that implemented Aii's programs in 2024.

Beijing Jingneng Power
China

BluWin Ltd.
India, Bangladesh, China, Mexico, Honduras, El Salvador, USA

Ckinetics
India

Catoer Wibowo
Indonesia

Energica SRL
Italy

Enerteam Vietnam

Hongyu (Guangzhou Hongyu Ecological Technology)
China

International Energy Management Association (IEM)
China

Leyton
Italy

Pozzi Leopoldo
Italy

Process Factory
Italy

RESET Carbon
Multiple locations

VNCPC
Vietnam

2024 Sustainable Finance Partners

Organizations who contributed finance and blended capital expertise to Aii in 2024 to further our Sustainable Finance Strategy objective of unlocking $2 billion in decarbonization/climate funding for the apparel and footwear industry.

ADB

BluWin

DFI

Guidehouse

HSBC

IFC

Rockefeller Foundation

Workshop

2024 Suppliers Implementing an Aii Impact Program

Names and locations of suppliers

IV. What We Do

Our Programs and Processes

Our Supplier Journey

This map has replaced our previous five-step Climate Action Approach and offers a simplified framework to guide our teams and brands through the daunting challenge of significant carbon reduction.

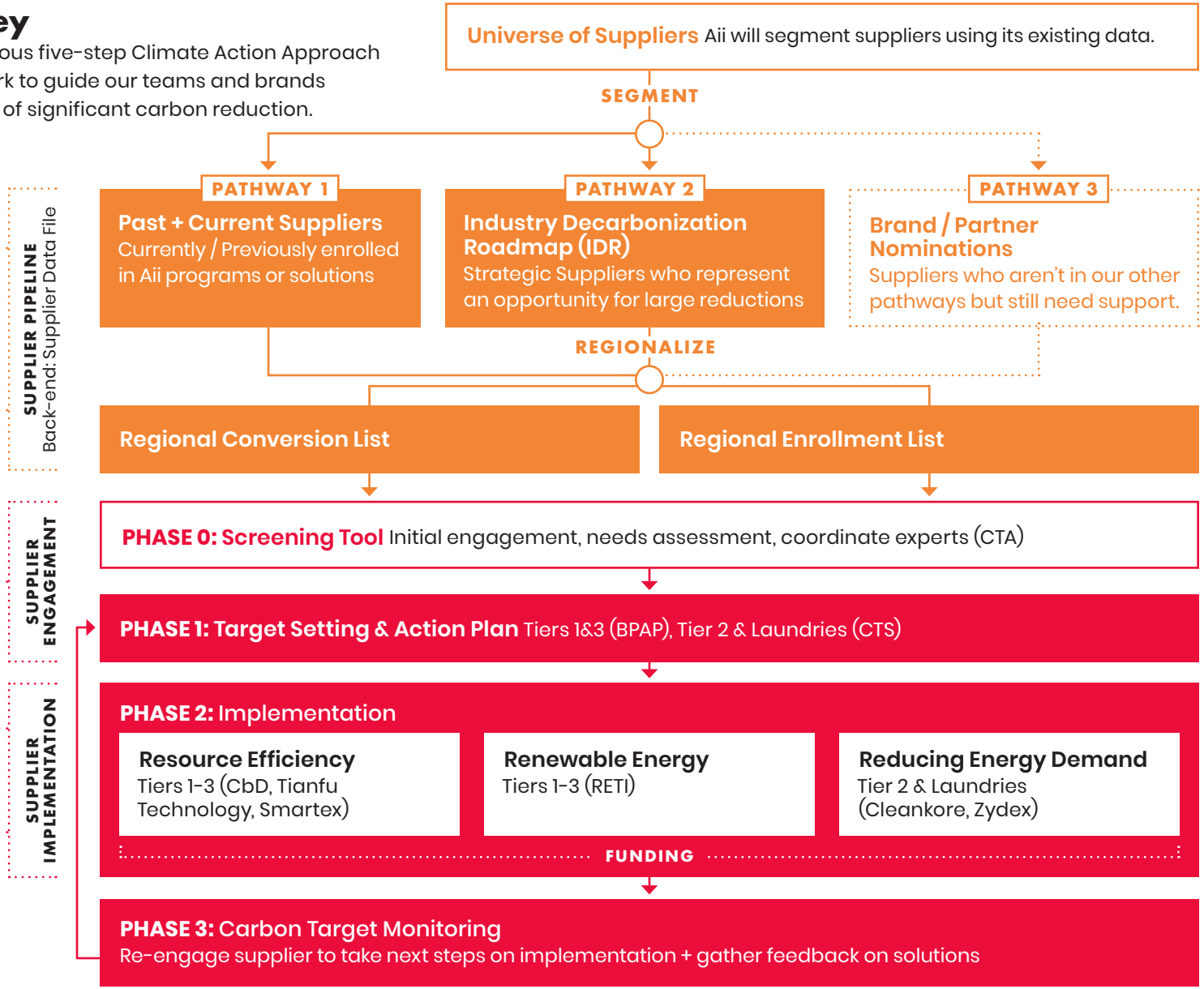
We are building a data-based system that meets suppliers where they are on their journey. The cornerstone of our system is a robust supplier data file, and the tools to filter and analyze supplier data.

To meet our goals, we will need to improve our conversion rate for current and past suppliers. We know suppliers face several barriers to implementation and we should focus our efforts on supporting them through their journey.

We decided that all suppliers must have an assessment and a target before starting implementation. If suppliers come into the Aii system with existing targets, roadmaps or action plans, we will accept these if they meet our criteria.

We are taking a more modular and solution-oriented approach to meeting supplier needs—not constrained to how we've historically bundled solutions inside programs.

This system can and should evolve over time, but we want to create a predictable cycle of updates for our processes and tools to create stability.



Supplier Pathways

We have built a supplier-centric, data-based system to support suppliers through one of three pathways toward their decarbonization goals.

PATHWAY 1:

Past or Current Aii Supplier Participants

We strengthen and enhance our relationship with suppliers thathave or are currently working with Aii, supporting them as they proceed to the next steps of their decarbonization journey.

PATHWAY 2:

Strategic Suppliers & Industry Decarbonization

We partner with suppliers that offer the greatest potential for reductions. Engaging with these suppliers is key to achieving our goal of enabling the reduction of 100 Mt of carbon.

PATHWAY 3:

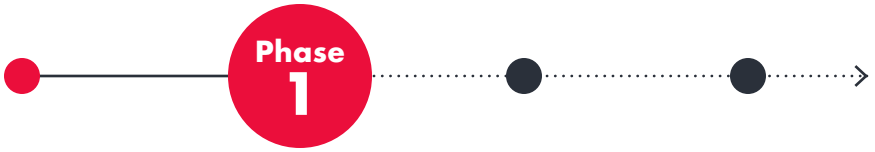
Other Suppliers & Brand Nominations

Working alongside our brand partners, we engage with suppliers that are either not currently working with Aii or are considered an industry strategic supplier. This pathway allows Aii to support suppliers that may have completed action plans elsewhere. By implementing their existing plans, suppliers can continue their reduction efforts rather than starting from scratch.

These three pathways will allow us to take a more modular, solution-oriented approach to meeting suppliers' needs rather than being constrained by programs.

Supplier Implementation

Suppliers complete a questionnaire — the Carbon Tech Assessment (CTA) — which undergoes an expert review. At this stage, we identify the supplier's baseline, determine their maturity level, and offer estimated carbon reduction potential.



The next stage is long-term action planning, which is the foundation for decarbonization implementation. Aii offers two options: Carbon Target Setting (CTS) and Best Practices Action Plan (BPAP).

CTS[10] and action plan development are designed for higher energy consumers and carbon emitters, specifically large mills, dye houses, and garment washing plants. CTS starts the supplier on the mid-term journey to Net Zero with specific process- and regionally-focused carbon reduction solutions.

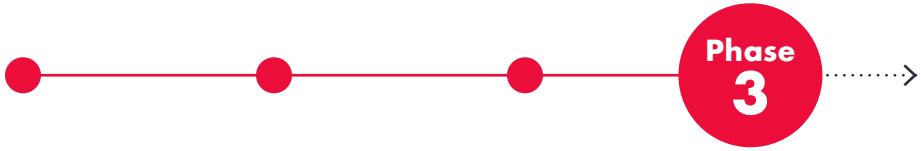
BPAP, in partnership with RESET Carbon, was successfully piloted in 2024 to provide a "lighter-touch" action plan development program more suited to garment production units and facilities without wet processing operations. The BPAP program focuses on industry best practices, renewable energy opportunities, and machinery upgrades.

Phase 2 focuses on activating the longer term targets into implementation. During this phase, suppliers implement the actions on their plan, which may include Clean by Design or programs and technologies in our Climate Solutions Portfolio.

Implementation can be categorized into resource efficiency, renewable energy and reducing energy demand. Our efforts on resource efficiency expanded this year, not only to include registered CSP solutions such as Smartex and Tianfu technology, but also within our own programs. Clean by Design has extended into leather tanneries, with initial results showing tremendous opportunities for decarbonization and efficiency improvements.

In the renewable energy category, we completed our RETI pilots which will move to a full launch in China in 2025 alongside energy solutions pilots in Vietnam and India.

To reduce energy demand, we've begun registering solutions in this category — like Cleankore and Zydex — in the CSP. The CSP has a dedicated section in this report due to its significance in achieving our vision and mission.



Suppliers participate in our Carbon Target Monitoring (CTM) program — in association with the brands — for continuous improvement and action plan implementation. Through quarterly online check-ins and progress reviews, an expert continues to provide advice, data monitoring, solutions updates, and regional and industry knowledge to facilitate further carbon reduction.

10 Previously Step 2 in our Climate Action Approach

Our Programs and Solutions

To visualize the comprehensive nature of our programs and solutions, we've compiled an overview of the tiers and impact areas addressed by each. This overview also incorporates our CSP Solutions, which are an integral part of Implementation (Phase 2), providing you with a holistic understanding of the full scope of our initiatives.

Phase	Programs & Solutions	Type of Program / Solution	Stage	Applicability by Tier Level				Impact Areas							
				1	2	3	4	GHG REDUCTION	ENERGY EFFICIENCY	WATER REDUCTION	CLEANER CHEMICALS	WASTE WATER	RENEW-ABLES	COAL PHASE-OUT	MATERIAL EFFICIENCY
1	Carbon Technology Assessment (CTA)	Aii	Scale	x	x			x	x	x			x	x	
2	Carbon Target Setting (CTS)	Aii	Scale	x	x			x	x	x			x	x	
2	BPAP	Aii	Scale	x				x	x	x			x		
3	Clean by Design Energy & Water Efficiency (CbD)	Aii	Scale	x	x	x		x	x	x					
3	Clean by Design Plus (CbD+)	Aii	Scale		x			x	x	x			x		
3	Clean by Design Chemistry & Wastewater Management (CbD Chem)	Aii	Scale							x	x	x			
3	AI-Enabled, Real-Time Quality Control	CSP Registrant	Scale		x			x							x
3	CleanKore Patented Ring Dyeing Technology	CSP Registrant	Scale		x			x	x	x	x				
3	Bluesign System for Manufacturers	CSP Registrant	Scale	x	x			x	x	x	x	x	x	x	
3	Guangdong Energy & Water Efficiency	CSP Registrant	Scale		x			x	x	x			x	x	
3	Intelligent Facility Technology	CSP Registrant	Scale		x			x	x	x	x	x			
3	Clean by Design Tanneries	Aii	Model		x			x	x	x			x		
3	Clean by Design Bangladesh	CSP Grant	Model		x			x	x						
3	Solar PV Installation Bangladesh	CSP Grant	Model	x	x	x		x					x		
3	Cleaner Production Systems	CSP Grant	Model		x	x		x	x						
3	Electrification of Hot Water Preparation	CSP Registrant	Model		x			x						x	
3	Leaf Color Charts	CSP Grant	Model				x	x							
3	Sustainable Heat from Waste Water	CSP Registrant	Model		x			x	x				x	x	
3	Textile Printing Solution	CSP Registrant	Model		x			x	x						
3	Renewable Energy Transition Initiative (RETI)	Aii	Pilot	x	x			x					x		
3	Production Waste Management (PWM)	Aii	Pilot	x				x							x
3	New Construction Factory Optimization (CFO)	Aii	Pilot	x	x			x	x	x			x		
3	Facility Impact Measurement Software	CSP Grant	Pilot	x	x			x	x	x					
3	Dope Dyed Optical Color-Mixing	CSP Grant	Pilot		x			x		x					
3	Switching to Synthetic Lubricants	CSP Grant	Pilot		x	x		x	x						
4	Carbon Target Monitoring (CTM)	Aii	Scale	x	x			x	x	x			x	x	

Case Study
Auro: Driving Change Beyond Compliance

CHALLENGE

With 1.2 million spindles, Vardhman Textile, Ltd. is one of India's production powerhouses, offering spinning and fabric operations for renowned high-end Indian brands and international household names.

But, with their large scale also came a significant environmental footprint. Auro Textiles, a unit of Vardhman, has been actively working to reduce their emissions for years; however, in 2021, the growing number of brands setting ambitious Scope 3 decarbonization targets presented an opportunity to accelerate progress in three key areas: energy use, natural resource consumption, and chemical impact.

No change comes without its challenges, and for Auro, that was modernizing their operations — many of which relied on older equipment — while balancing environmental impact and financial sustainability.

ACTION

A referral from a brand partner led Auro to Aii and our Clean by Design program.

Once connected to the Aii team and our local experts, Auro began establishing baselines for their facilities. Through thorough assessments of the plant's energy and environmental performance, the Auro team identified critical areas for improvement. Aii and the experts then provided a comprehensive, data-driven roadmap, that includes both high- and low-investment options, empowering Auro to prioritize projects based on their budget and goals. The process was streamlined, systematic, and straightforward.

Results came quickly: Following the experts' recommendations, Auro began insulating boilers. The team noted that beyond emissions reductions, the change boosted their bottom line by saving steam and water, and enhanced employee safety by reducing injuries and overheating.

Their work is resonating with their customers as well. As Auro continues updating its metrics on the Higg Index, they've earned praise from partner brands, further motivating the Auro team to aim for even greater levels of efficiency.

But one of the biggest successes has been how this work has energized employees. By working with Aii and local experts, team members have gained valuable skills in process optimization and developed a stronger sense of ownership over the company's decarbonization efforts. Connecting their day-to-day tasks to the company's environmental goals has made their work more meaningful, leaving them motivated and proud to drive positive change.

WHAT'S NEXT

Working side-by-side with Aii and our network of experts has inspired Auro to set a concrete, ambitious decarbonization target through SBTi. Once that target is finalized, they'll continue to work intensively on all fronts: from electricity to coal, water, steam consumption, and eco-friendly chemistry.

DRIVING CHANGE BEYOND COMPLIANCE

Auro's successes show the impact that systemic, data-driven approaches can have in meeting — and exceeding — environmental goals. If you're ready to accelerate your decarbonization journey, please contact us at info@apparelimpact.org to explore how we can work together to fashion a better future.

Our Programmatic Highlights

Turkey Investigation Trip

In 2023, Aii launched a research initiative focused on identifying key emitting countries, using a comprehensive global factory dataset. Turkey emerged as a focal point due to its significant potential for carbon reduction. Boasting a diverse manufacturing ecosystem spanning from raw materials to finished goods, the country's reliance on fossil energy underscores the urgency for targeted interventions to address emissions and facilitate a transition towards low-carbon practices.

Aii's leadership sought deeper insights into opportunities and needs identified during the earlier research phase. In April 2024, our regional lead in Italy, Daniele Massetti, and our president, Lewis Perkins, visited Istanbul and Ergene. This visit united a network of suppliers, associations, and brands committed to collectively accelerating decarbonization roadmaps and adopting a standard and recognized approach to support Turkey's many SMEs.

Due to the successful outcome of the trip, we have selected an expert and established pricing structures in Turkey. We will open for facility enrollment in 2025.

Luxury Focus in Italy

Italian manufacturers and major luxury brands are becoming increasingly aware of the need and available opportunities for decarbonization. We have therefore expanded our program offerings in Italy and are offering tailor-made support with our regional lead in Italy.

KEY ACHIEVEMENTS:

- 50 new facilities initiated program work,
- Four new brands started a collaboration with Aii,
- In response to the luxury sector's needs, product categories were expanded to tanneries, jewelry, eyewear, and metal hardware.
- In addition to the strategic partnership with our CTS implementation partner Process Factory, a new strategic collaboration with Leyton has been established to support Aii in new product categories and implementation programs such as CbD.

As Italy is a country of innovative solutions with long-standing machine manufacturers, Aii's work in the luxury goods sector value chain in 2025 will focus on solution research, recruitment, and implementation. We expect to significantly grow the number of suppliers starting programs and brands supporting the work. To support this increase, events for engagement and dissemination will be arranged.

Shengze Initiative

In response to the urgent need for sustainable practices in the textile industry, Aii, in partnership with Shengze Town Government, Suzhou Rural Commercial Bank, and GIZ, has launched an initiative to drive the green transformation of Shengze — a key textile hub in China. Our collective mission is to foster innovation, enhance collaboration, and elevate the global standing of Shengze, renowned for its silk production and weaving, as a leader in sustainable textiles.

This initiative calls on all textile enterprises to engage in the transition towards green production by adopting cleaner technologies and improving energy efficiency. It aims to establish a comprehensive green manufacturing system, advance green textile technologies, and promote international environmental standards. By enhancing product quality and reducing carbon emissions, we seek to position 'Shengze Weaving' as a global benchmark for eco-friendly textiles. We invite all stakeholders to join us in leading the way toward a green, sustainable future for Shengze's textile industry.

CbD Award Ceremony

The 2024 CbD Award Ceremony in Guangzhou marked a joyful and long-awaited reunion for China's manufacturers and brand leaders who gathered in person for the first time since the COVID-19 pandemic. Representatives from more than 20 facilities and five major brands joined to celebrate. This year, 41 facilities achieved CbD program certification in China, with 14 earning top honors for excellence.

The award ceremony featured a presentation of Aii's 2023 Impact Report and valuable insights from industry leaders on sustainability strategies. Selected facilities shared their journey with CbD programs, demonstrating the program's significant impact on promoting sustainable development in the manufacturing sector.

"What stands out is how our partners have evolved beyond compliance to become true sustainability champions, actively sharing their knowledge with industry peers."

AIMIN YANG, General Manager, Hongyu

Our Key Focus Areas

Based on the results of the highest emitters study mentioned in the Roadmap to 2030 section, we've identified and are focusing a large portion of our efforts on the key regions of China, India, Bangladesh, and Vietnam over the next 18 months.

China

ANNUAL EXPORT REVENUE
$303 billion
in textiles
in 2022[11]

China is the world's leading producer and exporter of both textiles and garments, with 32.2% of the global market share.

It is the largest supplier to many apparel-exporting countries, particularly those in Asia. China has the world's largest and most complicated textile system, covering every stage from fiber, yarn, grey fabric, finished fabric, garment process, and distribution.

450 facilities
partnered with Aii to date

Challenges: Over the past two years, rising trade uncertainties have led many global brands to scale back textile and apparel sourcing from mainland China. Companies with overseas facilities are increasingly shifting orders and expanding production abroad. Favorable trade agreements in countries like Vietnam with markets in the US, Europe, and Japan have further accelerated this relocation of parts of China's textile industry chain.

Facility tiers in these regions:
TIER 1 / TIER 2 / TIER 3 / TIER 4

● Key manufacturing areas

India

ANNUAL EXPORT REVENUE
$41 billion
in textiles
in 2022[12]

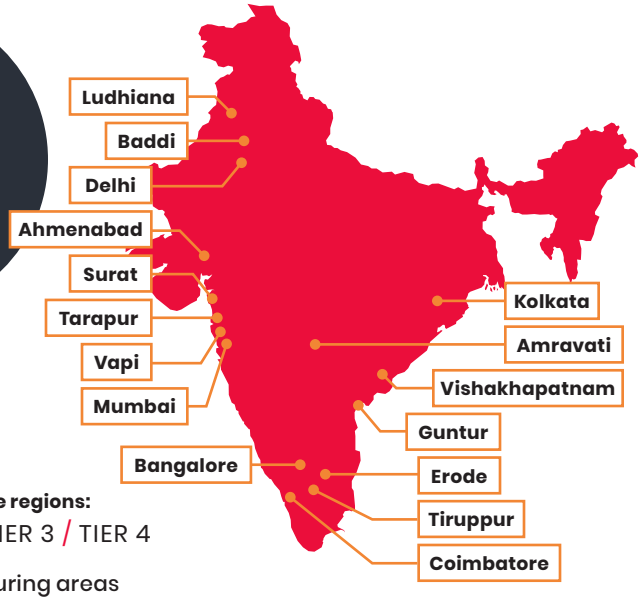
India is the fourth-largest exporter in the industry, with 4.36% of the global market share.[13]

India has a high potential for renewable energy, including solar and wind power, which could transform textile production if integrated into the sector.

Challenges: Manufacturers face many sustainability challenges due to constraints with financing, infrastructure, internal capacity, and enabling energy policies. Suppliers are often unaware of available technologies and financing mechanisms that could facilitate their transition to more sustainable practices. This knowledge gap inhibits their ability to make informed decisions regarding the adoption of energy-efficient machinery and renewable energy solutions.

Textile production in India relies heavily on coal-powered energy, particularly for processes like dyeing, spinning, and weaving. This reliance on fossil fuels contributes heavily to the industry's carbon footprint.[14]

107 facilities
9,689 farms
partnered with Aii to date



Facility tiers in these regions:
TIER 1 / TIER 2 / TIER 3 / TIER 4

● Key manufacturing areas

11 Textiles (HS Section: XI) Product Trade, Exporters and Importers | The Observatory of Economic Complexity

12 Textiles (HS Section: XI) Product Trade, Exporters and Importers | The Observatory of Economic Complexity
13 manufacturingtodayindia.com/the-role-of-renewable-energy-in-transforming-indias-manufacturing-sector
14 fibre2fashion.com/industry-article/9492/overcoming-energy-crisis-for-textile-manufacturing
Landscape and Opportunities to Finance the Decarbonization of India's Apparel Manufacturing Sector | Apparel Impact Institute

Bangladesh

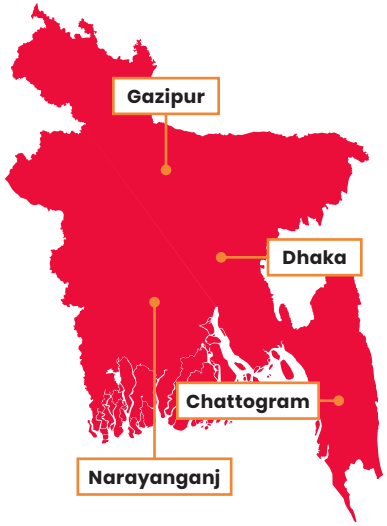
Bangladesh is the second-largest exporter in the industry with 6.13% of the global market share.

Industry activities in this region include activities ranging from raw material processing to the production of ready-made garments. With a rapidly expanding market for clean energy and energy efficiency, Bangladesh is uniquely poised to lead the charge in sustainable manufacturing and trade.

ANNUAL EXPORT REVENUE
$57.7 billion
in textiles in 2022[15]

137 facilities
partnered with Aii to date

Challenges: The apparel and textile industry is a major contributor to Bangladesh's economy – bringing in more than 80% of the country's foreign export revenue. Yet, it is also a source of significant environmental problems. Local production processes heavily depend on fossil fuels, mainly natural gas, which contributed 51% of the country's primary energy in 2021. Aside from GHG emissions, other environmental concerns include water effluent pollution and waste management. Manufacturers face considerable challenges in transitioning to sustainable operations due to financial and incentive constraints, limited internal capabilities, insufficient energy policies, and inadequate infrastructure within the energy sector.[16]



Facility tiers in these regions:
TIER 1 / TIER 2 / TIER 3

● Key manufacturing areas

Vietnam

Vietnam is the third-largest industry exporter, with 5.18% of the global market share.[18]

The country's textile industry has grown significantly since the late 1990s. Now it's the second-largest contributor to Vietnam's export revenue. Vietnam primarily exports to the US, EU, Japan, South Korea, and China, making it an important player in the global market.

Challenges: Vietnam's textile industry has some big hurdles to overcome. High energy use and carbon emissions are major issues, especially in Tier 2 processes like dyeing and finishing, which are energy-intensive. Renewable energy is still hard to access in many areas, though government programs are slowly improving this.

Challenges are particularly noticeable in dyeing which requires significant amounts of water and generates large volumes of wastewater. Factories are facing additional pressure as the government implements stricter regulations for wastewater and chemical use.[19]

160 facilities
partnered with Aii to date

ANNUAL EXPORT REVENUE
$48.8 billion
in textiles in 2022[17]

Facility tiers in these regions:
TIER 1 / TIER 2 / TIER 3

● Key manufacturing areas

15 Textiles (HS Section: XI) Product Trade, Exporters and Importers | The Observatory of Economic Complexity
16 Investing in Sustainability: Opportunities to Finance Decarbonization in Bangladesh's Apparel and Textile Industries; Apparel Impact Institute
17 Textiles (HS Section: XI) Product Trade, Exporters and Importers | The Observatory of Economic Complexity
18 Textile & Clothing Manufacturing in Vietnam: An Introduction - ARC Group
19 A Comprehensive Guide to Vietnam's Textile Industry: trends and insights - VietnamReach

Our 2024 Pilot Programs

We've undertaken multiple pilot projects throughout 2024, enabling us to test, refine, and optimize strategies before moving to the model stage for full-scale adoption. Our team closely supports and evaluates these pilots, extracting insights for continuous improvements and enhanced approaches.

Best Practices Action Plan (BPAP)

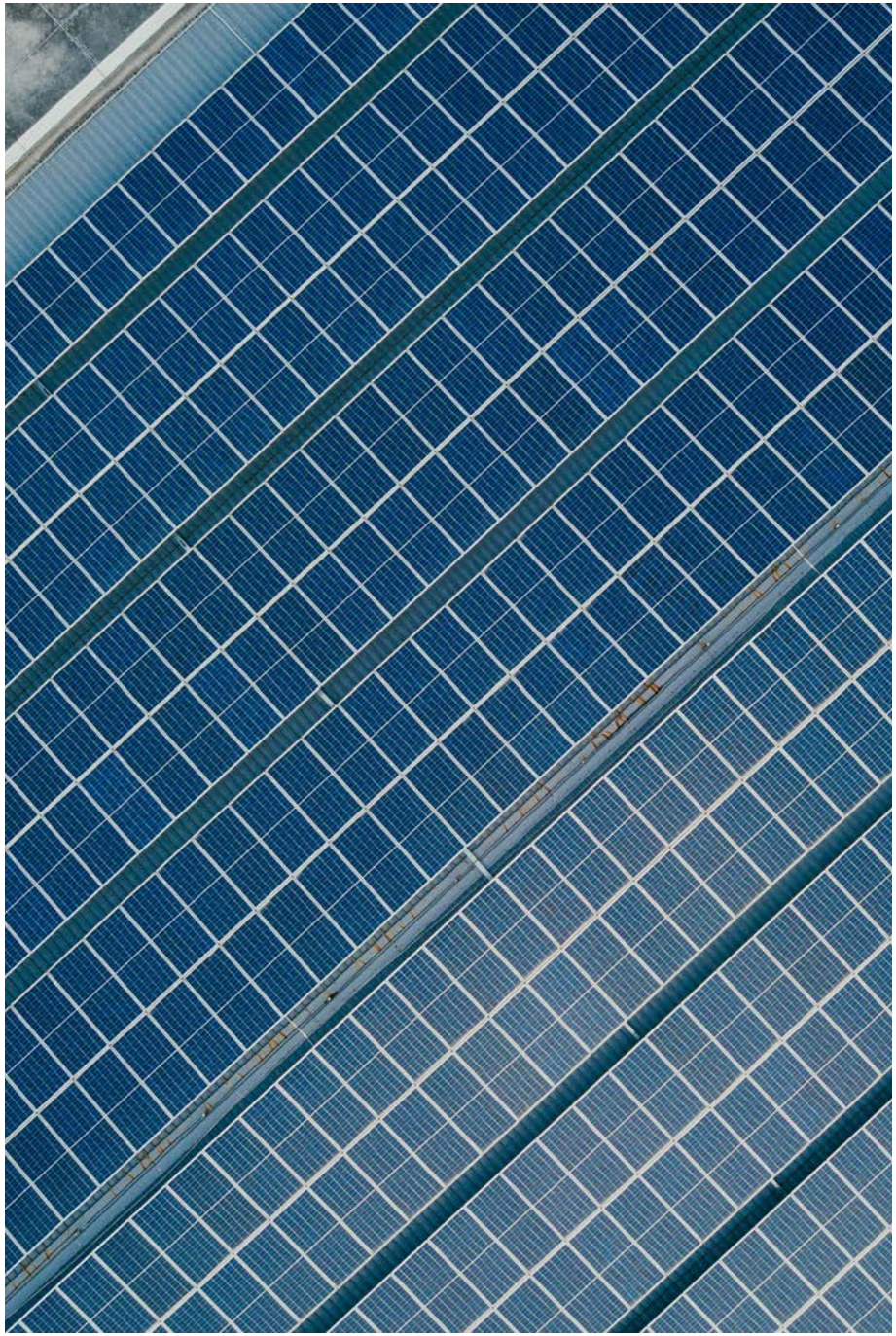
BPAP is a shorter, more focused, and lighter-touch program for Tier 1 facilities to establish an appropriate Action Plan for Decarbonization, with a specific focus on machinery upgrades, renewable energy opportunities, and coal elimination.

KEY ACHIEVEMENTS:

- 68 suppliers started a BPAP program in 2024 with 26 completing it by the end of the year.

KEY LEARNINGS:

- Peer group training sessions of participating facilities provided a valuable cross-pollination of information regarding the suitability and availability of solutions.
- Online interviews with the energy expert and Tier 1-focused group webinar sessions have successfully delivered tailored action plans.



Renewable Energy Transition Initiative (RETI) in Mainland China, South and Southeast Asia

The Renewable Energy Transition Initiative (RETI) plays a crucial role in supporting large-scale traditional printing and dyeing facilities in adopting renewable energy technologies alongside conventional energy sources. These facilities have significant energy demands, and while equipment upgrades can reduce some energy consumption, they fall short of fully meeting the carbon reduction goals set by brands. Aii, in collaboration with Levi Strauss & Co. and Gap, initiated the pilot phase of RETI in 2022, targeting eight key supply chain facilities located in the Yangtze and Pearl River Deltas in Mainland China.

In partnership with Beijing Jingneng Power, RETI seeks to help manufacturers identify and implement renewable energy solutions. The program begins with thorough data collection and evaluates 14 renewable energy technologies based on policy maturity, technology readiness, and factory conditions. From this, the most suitable renewable energy technologies are recommended, focusing on clean electricity generation and clean thermal energy solutions. Throughout the implementation process, RETI conducts on-site assessments to track progress, ensuring that renewable energy technologies, policies, and business models are seamlessly integrated to support the apparel industry's green transformation and carbon reduction efforts.

Moving forward to 2025, Aii will formally launch the RETI program beyond the pilot phase to Mainland China and South and Southeast Asia, and expand its scope to include a broader range of renewable energy technologies beyond solar. A three-part audit mechanism involving the brand, Aii, and the facility itself will be implemented to ensure transparency, consistency, and precise evaluation of carbon reductions across all energy sources. This approach will strengthen the program's value and guide future expansion.

KEY ACHIEVEMENTS:

- 8 pilot phase facilities have achieved a total reduction of 107,730 tonnes of CO_2e with an average saving per facility of 3.28%.

KEY LEARNINGS:

- From a project-wide perspective, the RETI program has highlighted the significant potential of solar PV power generation to reduce carbon emissions for large-scale facilities. However, challenges remain in establishing clear guidelines for the ownership and allocation of carbon reduction rights. Without standardized calculations and explicit agreements, issues such as double counting, restricted carbon reduction benefits, and challenges in achieving sustainability targets may arise.

Program Roadmap

Clean by Design for Tanneries (CbD Tanneries)

CbD for tanneries was kicked off in June 2024, with a group of 11 tanneries engaged by four luxury brands sharing a vision towards decarbonizing the industry through collective action. Product categories covered not just apparel, but also footwear, leather garments, handbags, and accessories.

KEY ACHIEVEMENTS:

- Potential GHG savings have been identified for 11 active Italian tanneries.
- The pilot phase has been successfully completed, and the program will move to scale in mid-2025 with new brands and facilities in Italy, and France.

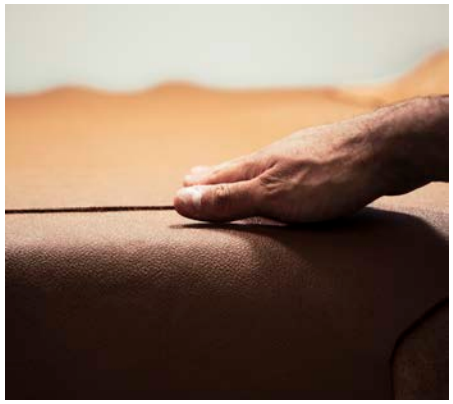
KEY LEARNINGS:

- Despite the high performance of Italian tanneries, additional efficiency measures have been identified — particularly, wider adoption of best practices and a more systematic approach to energy and water efficiency.

"Tre Effe Conceria was invited in early 2024 to take part in the CbD for tanneries program by a group of luxury brands, which joined forces to scale decarbonization solutions along the leather supply chain. The unified and aligned request from the brands towards the same direction has given significant impetus, clarity, and strength to the initiative.

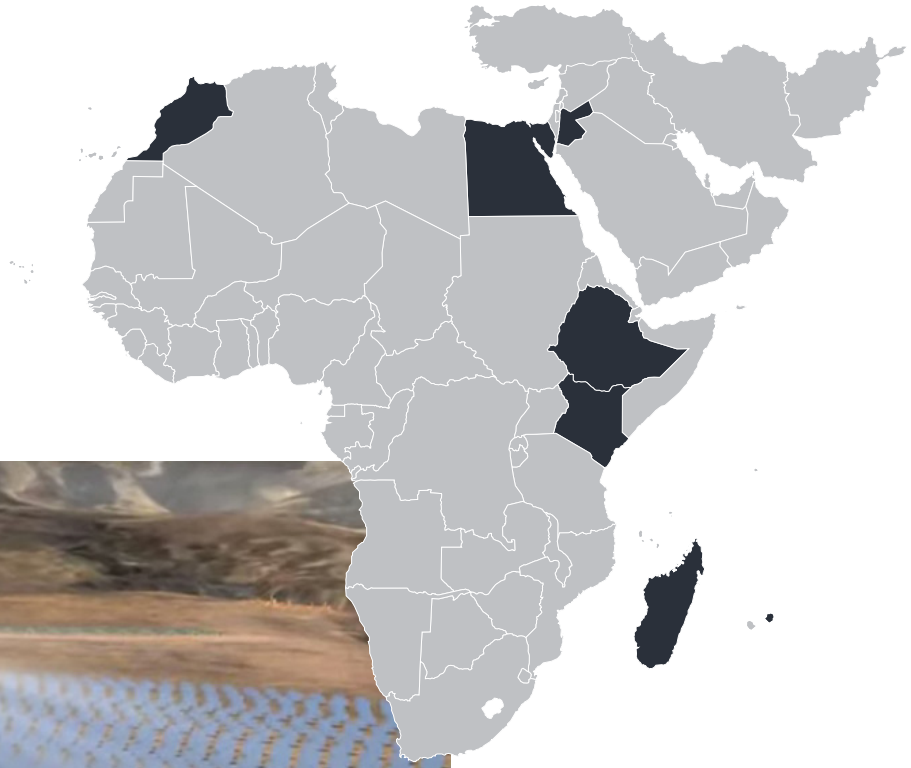
Thanks to the systematic framework of the CbD for tanneries program, we have now identified innovative win-win solutions for energy efficiency and renewable energy, allowing us to save costs and significantly reduce CO_2 emissions. We are excited to continue this path moving to the implementation phase."

DANIELE SESTINI, Executive Manager, Conceria Tre Effe



Expansion to New Regions in Africa/Middle East

In 2025, we are looking to recruit and onboard experts to deploy programs to facilities in newly developing textile regions including Jordan, Egypt, Kenya and Ethiopia and established regions including Morocco, Madagascar and Mauritius. The primary focus will be assessments and target setting through CTA/CTS and evaluating renewable energy opportunities in these regions.



Ouarzazate Solar Power Station, also called Noor Power Station is a solar power complex and auxiliary diesel fuel system located in the Drâa-Tafilalet region in Morocco, 10 kilometres from Ouarzazate town, in Ghessat rural council area. At 510 MW, it is the world's largest concentrated solar power plant.

Photo by MohssinDr, Wikimedia Commons

Climate Solutions Portfolio

Aii's Climate Solutions Portfolio is the apparel and textile industry's registry for vetted climate solutions. It simplifies and accelerates the adoption of proven and promising solutions — innovations, projects, or programs — that create a positive impact and deliver measurable CO_2e reductions.

We achieve this by offering grant funding to less mature solutions, vetting mature solutions, and amplifying both on our Climate Solutions Portfolio registry. Through our programs, network of brands and suppliers, and blended capital strategy we facilitate and support the deployment and scale of these solutions.

Grants

Open Call Application Process Update

Our Grant Funding Thesis, which clarifies what we fund, was published in January 2024 in preparation for our March 1 open call for applications. The thesis proved to be a helpful tool as we received fewer but stronger applications more closely aligned with our strategic priorities. We also made the following amendments to the application process:

- Introduced the Ready Reckoner: Solution Impact Evaluator. This tool enabled all applications to use standardized baselines at the subprocess level to calculate their impact. It also created a uniform approach to estimating scale and impact.
- With the Ready Reckoner, we also began communicating solution impact on a per kg of production approach. Again, this standardized impact figures across not only the same baseline, but also the same unit.
- The application was digitized and streamlined through Submittable, making the application and evaluation process much smoother.

We awarded three grants through the March 2024 open call. **"In this round of grants, we bridged innovation gaps by supporting solution innovators who have leading-edge, impactful, and practical technologies. Collectively, these solutions have the potential to reduce 24,407 tCO_2e within the first 12 months of project implementation,"** said Aii's Chief Impact Officer, Kurt Kipka.

Overview of 2024 Grantees

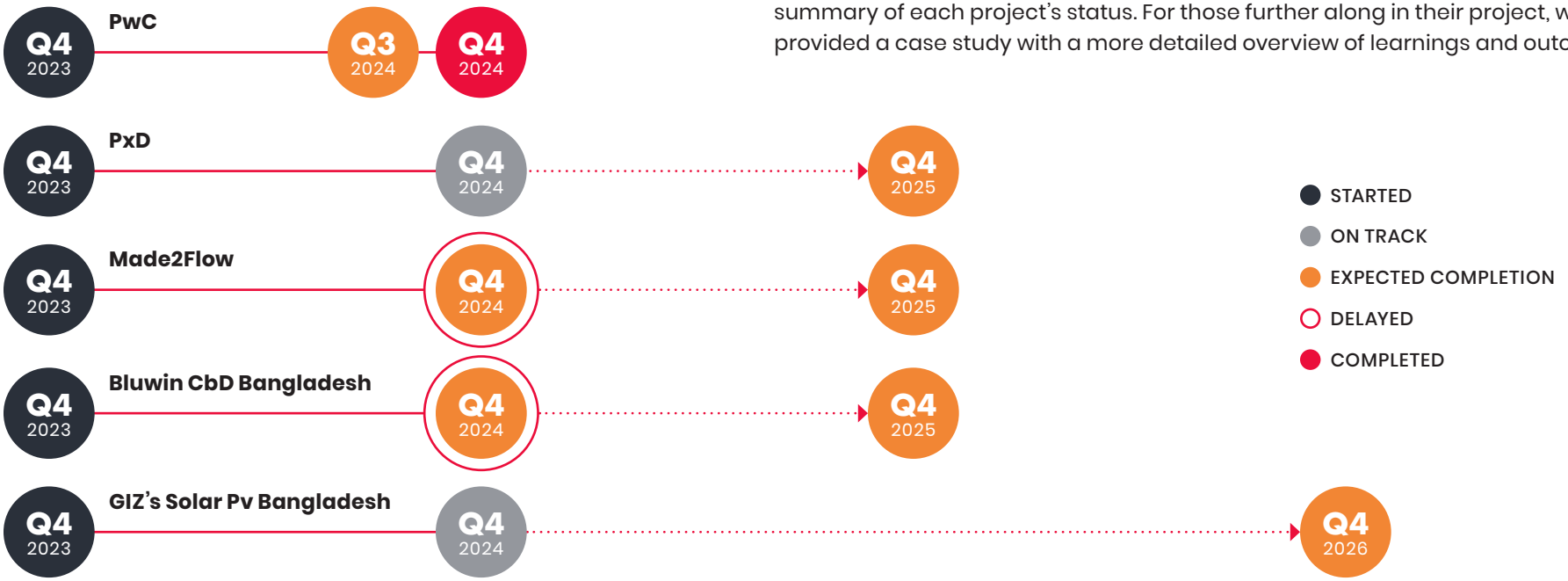
Pozzi, established in 1885, has a long-standing tradition in the manufacturing of machines for the textile industry, with a particular emphasis on the wet processing sector. The company is spearheading a feasibility study across 15 facilities to evaluate, demonstrate, and eventually scale low-carbon alternative solution RHeX+HP, a heat recovery system designed to overcome clogging and efficiency loss with traditional heat exchangers. The aim of this grant is to enhance energy recovery through heat pump integration, with the potential to save 20,546 tCO_2e within the first 12 months of project implementation.

Grant Thornton is a community of almost 10,000 audit & assurance, tax and advisory problem solvers, relationship builders, and industry specialists with extensive experience in developing policies and supporting the implementation of climate change mitigation solutions. The awarded grant will enable the piloting and evaluation of innovative approaches within the lubricant industry, focusing on how mineral oil-based products can enhance energy conservation through reduced friction, improved temperature stability, and resistance to oxidation and contaminants. The project has the potential to save 136 tCO_2e within the first 12 months of implementation. The insights gained will be used to create a Best Practices/Standard Operating Practices guide aimed at promoting these benefits across the industry.

Amphico comprises a combination of experienced scientists and designers who are passionate about making the future a better place, both in creating less impactful materials for the planet and in the improved performance of the products they facilitate. Their solution combines dope-dyed yarns with optical color-mixing during weaving, where >6000 colors as woven fabrics are created from 6-10 primary-colored yarns. In contrast to other waterless textile coloration, their method does not require special & expensive equipment implementation; dope dyeing is possible by adding color-masterbatch during conventional yarn spinning, and optical color-mixing on industrial weaving machines Amphico will use the grant to expand color availability to 10,000 colors at an industrial scale, increasing adoption significantly. This project has the potential to save 3,725 tCO_2e within the first 12 months of implementation.

2023 Grant Projects Update

Our 2023 open-call grantees have made substantial progress. A few of our projects anticipated a 2024 completion, but due to unforeseen circumstances they have incurred delays and will continue into 2025. Below we provide a short summary of each project's status. For those further along in their project, we have provided a case study with a more detailed overview of learnings and outcomes.



PwC worked with 10 companies, five each from India and Bangladesh, to implement cleaner production systems that reduce GHG emissions and water usage. The project covered viscose filament manufacturing, spinning, knitting, and wet processing, and prioritized process re-engineering, machinery upgrades with attachments/controls, digital technology adoption, and workforce training. With its potential for large-scale implementation in major textile manufacturing countries, lower investment requirements, and high-impact GHG emission reductions, this solution is attractive to brands, manufacturers, development agencies, and governments.

PxD is halfway through its project and has distributed leaf color charts to 10,000 farmers. (case study below)

Made2Flow has developed its recommendation engine and begun testing with a handful of facilities. This presents a new tool and opportunity for scaled facility engagement with impressive results. Brands are opting to use this remote tool to engage with smaller or less strategic suppliers, which has led to a more time-consuming enrollment and delays in the tool testing phase of the project. This project was due for completion in Q4 2024 but will roll over into 2025.

Bluwin's Clean By Design Bangladesh has experienced delays due to the political situation in Bangladesh. In-person visits are a core feature of the program, and they have required rescheduling. Additionally, facilities were facing more immediate priorities over the past year. Nonetheless, the action plans look very promising and we look forward to seeing them realized. This project was due for completion in Q4 2024 but will roll over into 2025.

GIZ's Solar Pv Bangladesh is a three-year project that saw an above-expected enrollment in its first year, with over 30 facilities nominated for participation. By the end of Q4 2024, feasibility reports for five facilities were successfully completed, while three facilities utilized fast-track matchmaking services. Looking ahead, five additional feasibility reports are expected to be finalized and shared by the end of January 2025, and another 10 are anticipated to be completed by Q2 2025. This means 23 out of the 30 facilities will likely complete the program by the end of 2025, with seven factories requiring follow-up to ensure their participation. This project is on track and due for completion in Q3 2026.

Case Study
PxD

PxD's leaf color charts project is Aii's first engagement with T4 and it is proving to be a great success. Our colleague, Laxmikant Jawale, regional lead in South Asia and Southeast Asia, conducted a site visit during the training stage of the project. Field agents of Ambuja Foundation, a local organization that has become a key stakeholder in the project, received the trainer training so they could disseminate the leaf color charts before the sowing season started. Ten thousand farmers received access to leaf color charts in June so they could start their cotton growing season with optimal nitrogen application. The project has also gained a lot of traction with the local government agency VANAMATI, which is keen to see this approach to fertilizer management becoming a permanent fixture in the region's farming practices. We are excited to see larger-scale impact after the program reaches an additional 20,000 farmers in 2025.

GHG calculations will begin as the growing season ends in March 2025. Preliminary data collection by the implementing partner, Ambuja Foundation, shows that a total of 26,961 cotton farmers have been able to access LCCs through this program. This includes 9,689 'core' farmers who directly received LCCs from the Ambuja Foundation and 17,272 farmers who borrowed LCCs from the core farmers. On average, each core farmer shared their LCC with approximately 2.3 other farmers. We are excited to see the CO_2e reduction results.

"I cultivate cotton in 3.5 acres of land. I significantly reduced the urea dosage in my 2nd fertilizer application based on the recommendation from LCC. I shared my LCC with five other farmers [in] my learning group, mostly my relatives and neighbors. I find the LCC sharing model to be quite effective. I did not face any issues in organizing training and demo sessions and coordinating with farmers who borrowed LCC from me."

PRIYANKA KAKDE, Lead farmer of an Ambuja Foundation farmer learning group, Panjari village, Hingna block, Nagpur district, Maharashtra

Summary Overview of All Grant Projects

Year	Project	Effectiveness % reduction potential $kgCO_2e/kg$ production of model process	Effectiveness per annum savings at end of grant project	$/tCO_2e$ for the grant project
2024	Electrification from Wastewater Heat Recovery (Pozzi)	19% All wet processing	20,546 tCO_2e per annum	$6.76/$tCO_2e$
	Synthetic Lubricants (Grant Thornton)	0.69% All Tier 2 & 3	136 tCO_2e per annum	$522/$tCO_2e$
	Waterless Textile Coloration (Amphico)	50% Synthetics: batch dye, continuous dye, fiber dye	3,725 tCO_2e per annum	$57.3/$tCO_2e$
2023	Leaf Color Charts (Precision Agriculture)	19% Cotton cultivation - Tier 2	8,817 tCO_2e per annum	$0.73/$tCO_2e$
	Clean by Design Bangladesh (Bluwin)	12% Wet processing - Tier 2	40,325 tCO_2e per annum	$4.76/$tCO_2e$
	Cleaner Systems Production (PwC)	8% All Tier 2 & 3	34,467 tCO_2e per annum	$4-7/$tCO_2e$
	Solar PV Bangladesh	7.78% All Tier 1 & 2	44,411 tCO_2e per annum	$3.6-6/$tCO_2e$
	Facility Impact Measurement Software (Made2Flow)	11-19.22% All Tier 1 & 2	59,136 tCO_2e per annum	$6.5/$tCO_2e$

Calculations are explained in the methodology section

Low Carbon Thermal Energy Roadmap

We are developing a low-carbon thermal roadmap to address the critical questions of **when**, **where**, and **how** to implement this transition. The report, originally due for release in November, will be published in March. An energy storage opportunity review is still ongoing.

In conjunction with the roadmap, Aii prepared a **Low-Carbon Thermal Energy Strategy**, outlined below.

Climate Solutions Focus

- **Thermal Load Reduction:** Aii will double down its programmatic and CSP Registry focus on solutions that reduce thermal energy needs in facilities. By reducing the thermal load, increased OPEX required for electrification decreases as facilities use less energy. Aii will support facilities in implementing solutions by providing brand-funded technical advice where needed and financial support for CAPEX investments. This initiative is under development, will be piloted in 2025, and will be ready for scaled deployment in 2026.
- **Renewable Thermal Energy Transition:** Piloted as the Renewable Energy Transition Initiative (RETI), this program will be formally launched in China and piloted in India and Vietnam in 2025. Starting in 2026, we will aim for scaled deployment across our focus regions to enable energy transition.

  This program provides technical feasibility assessments and implementation support for facilities seeking to transition to low-carbon thermal energy sources. In accordance with the findings from our Low Carbon Thermal Roadmap, the process will consider transitional fuel sources such as biomass only when certified supplies of sustainably-sourced feedstock can be assured. Due to future limitations of sustainable biomass supply, we do not see this as a long-term solution. Therefore the program will emphasize electrification technologies such as heat pumps, energy storage, and transitions to electric boilers.
- **Climate Solutions Portfolio (CSP) Grant Funding:**Aii will be using CSP grant funding to support suppliers, innovators, and OEMs to develop sufficient case studies for electrification and thermal load reduction technologies. The aim of these grants will be to generate learnings, remove obstacles, and reduce the price and risk associated with these technologies. Aii will disseminate learnings across the sector so that all stakeholders have a repository of information to support the low-carbon thermal energy transition.
- **CSP Solutions Recruitment:** In addition to supporting solutions with grants, Aii will also be recruiting solutions that don't need grant funding. Many solutions that will support this sectoral transition are already commercially viable. Aii aims to help the sector prioritize solutions by conducting rigorous vetting — ensuring brands and suppliers can focus on implementation over evaluation. Aii does this through partnerships with organizations like Fashion for Good and its wide array of engineers delivering Aii's work in sourcing regions.

Ecosystem Leadership

- **Brand Market Signal:** Aii will work with its brand ecosystem to develop support for the strategy and direction outlined in the Low Carbon Thermal Energy Roadmap, while also guiding brands on interim steps needed to activate this transition. Brands have a big role to play in policy advocacy, market signaling to OEMs, and long-term assurances of the direction of travel to suppliers.
- **Renewable Electricity:** Noting that the ability to procure renewable electricity is a core enabler of the low-carbon thermal energy transition, Aii will be exploring with its stakeholders to find the appropriate supporting role Aii can play.
- **Financial Ecosystem Leadership:** Using the Brand Finance Playbook, Aii will continue to drive brands to unlock the necessary budgets to support supplier decarbonization. Aii will also continue to facilitate collective financing among brands to increase the volume of textile manufacturers receiving technical and financial support.

Our Approach

In November 2024, we invited suppliers considering innovative electrification projects to apply for grant funding. This approach reflects our commitment to listening to the sector's decarbonization experts: suppliers innovating their way to 2030 and beyond. Grantees will be selected in March 2025.

As part of the Low-Carbon Thermal Energy strategy, we identified the need to align on the definition of sustainable biomass and developed a hierarchy of low-carbon thermal solutions. This builds on existing industry alignment and was created in consultation with energy transition experts to drive the sector forward in a unified way.

Registrants

Beyond offering grant funding to scale promising solutions and projects, the Climate Solutions Portfolio was designed to be a registry of proven solutions that can be immediately implemented. We are seeking solutions ready for scaled deployment to include in the registry. While the Registrant application links thematically to the grant funding thesis (i.e. what we want to register), it is focused solely on solutions at the model and scale maturity level. The Climate Solutions Portfolio registry can be found on the Aii website.

We were very excited to accept our first-ever Registrants to the Climate Solutions Portfolio this year. Our programs team has been working hard to integrate these Registrants into our programs to enable matchmaking through our facility work. We look forward to seeing the results of those efforts in 2025.

SMARTEX
AI-Enabled, Real-Time Quality Control
POTENTIAL SAVINGS: 0.058 kg CO_2e/kg production

ZYDEX
Textile Printing Solution
POTENTIAL SAVINGS: 1.28 kg CO_2e/kg production

CLEANKORE
Patented Ring Dyeing Technology
POTENTIAL SAVINGS: 0.77–0.87 kg CO_2e/kg production

BLUESIGN
Bluesign System for Manufacturers
POTENTIAL SAVINGS: 0.03–0.24 kg CO_2e/kg production

FOSHAN ASSOCIATION
Guangdong Energy & Water Efficiency
POTENTIAL SAVINGS: 0.05–0.55 kg CO_2e/kg production

TIANFU TECHNOLOGY
Intelligent Facility Technology
POTENTIAL SAVINGS: 0.15–0.74 kg CO_2e/kg production

Outlook 2025

INCREASED SUPPLIER-LED APPROACH

By having a balanced representation of brands and suppliers on our Climate Solutions Portfolio Advisory Council (CSPAC) we intend to increase our ability to select solutions that suppliers really need. This is consistent with Aii's overall strategy of creating a pool of low-carbon suppliers.

We look to hear from suppliers who are at the forefront of innovation, testing technologies that can deliver real impact. We are excited to support their individual projects and act as the catalyst to disseminate learnings and share innovation across the supply chain.

FOCUS ON THERMAL ENERGY

As outlined earlier in this section, Aii's CSP and programmatic offering will increasingly focus on reducing thermal energy consumption and transitioning those energy sources. This is the key area where we can deliver supplier impact. From the grant perspective, we continue to seek projects that will support electrification, whether through an innovative solution or the modification and evolution of existing processes. We will also continue to focus on process-level innovation and mature solutions that dramatically reduce a facility's thermal needs.

"With the release of our roadmap we have a clear direction of travel for the sector's largest supply chain emission source: thermal energy in wet processing facilities. It has been fascinating to develop this with GEI and to work with all our brand and supplier partners to strategize how Aii can most effectively help the sector achieve the vision outlined in this roadmap. In order to achieve this I look forward to continued engagement with suppliers and solutions providers in their great ideas and hope to see increased budgets from brands to support these projects. Without supply chain investment using the plays in our Playbook we cannot achieve the vision that the roadmap and our strategy has set out."

PAULINE OP DE BEECK, Climate Portfolio Director

CSP Registry

In 2023, Aii introduced the CSP platform, an all-in-one tool helping the industry discover emission reduction programs and solutions, manage the implementation of these programs, and report on their efficacy.

As Aii shifts to a more Digital Transformation strategy with technology, the CSP platform is being rebuilt for scale and enhanced on our main website. This process will streamline access to the tool for visitors to Aii's public website.

Sustainable Finance

Aii's sustainable finance strategy connects suppliers to the financial support they need to reduce carbon emissions and help the industry achieve a 45-50% carbon reduction by 2030 and net zero by 2050. This approach is driven by a registry of enhanced financial solutions and matchmaking with financial institutions.

2024 Activities and Achievements

- Jointly launched the Future Supplier Initiative.
- Released the Brand Playbook for Financing Decarbonization.
- Conducted regional research and published country-specific landscape reports (additional information can be found in the Thought Leadership section of this report).
- Developed a registry of attractive financing solutions by region.
- Hosted activation events, including a strategic summit and a convening at New York Climate Week (additional information can be found in the Thought Leadership section of this report).

Future Supplier Initiative

The Future Supplier Initiative (FSI) was jointly launched in 2024 by The Fashion Pact, Apparel Impact Institute, Guidehouse, and DBS Bank, with the ambition to accelerate supply chain decarbonization in the fashion industry. The initiative offers an innovative collective financing model to help apparel suppliers implement decarbonization strategies to achieve near-term science-based targets.

The first FSI program is being explored in Bangladesh with the backing of leading fashion brands such as Bestseller, Gap Inc., H&M Group, and Mango — in collaboration with Asian Development Bank (ADB) and leading commercial banks with local presence — to advance sustainable financing solutions in critical apparel manufacturing regions.

"To achieve this industry's ambitious climate goals, it's imperative that every stakeholder leverages their influence to drive tangible change. A joint effort among brands and retailers is essential to create conditions where suppliers are motivated and capable of making these investments. Financial institutions are poised to offer better finance options provided there's a robust pipeline of suppliers ready to embrace decarbonization efforts. The acceleration of these efforts occurs when the industry aligns its business strategies, resources and investments toward the most impactful solutions."

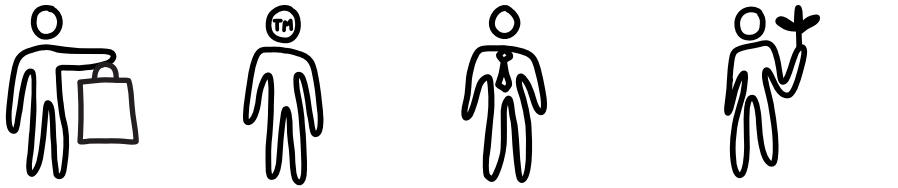
LEWIS PERKINS, CEO, Apparel Impact Institute

The Brand Playbook for Financing Decarbonization

Aii's "Brand Playbook for Financing Decarbonization" outlines 12 financial strategies brands can undertake to encourage suppliers to invest in carbon reduction projects. It provides real-world examples, assessing the risks and benefits of each approach while recognizing the need for tailored strategies across different brands and retailers.

The playbook is intentionally presented using simple financial terminology in order to be accessible to brand sustainability and sourcing professionals and serve as a bridge between those teams and brand finance. These teams must resolve their internal tensions to start the flywheel of change, and being aligned on the available options is a crucial first step.

The playbook was released during a live event at New York Climate Week, which included representatives from brands, suppliers, and financial institutions.



Key Learnings

- **Partnerships:** Multi-stakeholder collaborations — such as partnerships between brands, suppliers, financial institutions, and government bodies — enable the pooling of resources, expertise, and influence, which is essential for scaling sustainable finance solutions.
- **Long-Term Commitment and 'Patient Capital':** Blended finance models benefit from investors willing to commit over the long term. Organizations like family offices, philanthropic funds, and development finance institutions (DFIs) can provide patient capital, facilitate pilot projects, and allow sustainable projects to mature without immediate pressures for high returns.
- **Transparency and Reporting:** Robust monitoring and reporting frameworks are crucial for tracking blended finance's impact on Scope 3 emissions. Transparent reporting not only helps build trust among stakeholders but also demonstrates the feasibility and success of financing sustainable initiatives, encouraging further investment.
- **Risk Mitigation:** Blended finance solutions that diversify funding sources, such as integrating grants with commercial loans and impact investments, can help mitigate financial risks. It enables SME suppliers to access lower-than market-rate capital while reducing the financial burden on individual investors.

Outlook 2025

Industry experts agree that financing apparel manufacturing decarbonization will require innovative financial structures; collective industry action; and stronger engagement from brands, financial institutions, and government bodies to reach ambitious 2030 and 2050 climate targets.[20] Aii will support the industry by expanding our regional research and publishing country-specific landscape reports for Bangladesh and China.

The Fashion Climate Fund will play a critical role by deploying $250 million in catalytic capital to attract an additional $2 billion for industry-wide decarbonization. Efforts like FSI and the Fashion Climate Fund, highlight a growing trend toward integrated, sector-wide financial solutions to make sustainable practices accessible for manufacturers, bridging the gap between climate goals and actionable financing models.

20 Source: How CEOs Can Turn Decarbonization Setbacks into Progress | Bain & Company

Thought Leadership

Aii Events

Second Annual Strategy Summit

In March 2024, Aii gathered 80 stakeholders — including Aii board members, Fashion Climate Fund and brand partners, suppliers, financial institutions, and strategic collaborators — for three days of meetings, workshops, and focused conversations.

The event activated our strategy and made the kind of meaningful progress on initiatives that can only happen when stakeholders are in the same room. The foundation of the summit was breakout sessions on the topics of Brand Commitment, Supplier Engagement, Decarbonization Solutions, Sustainable Finance, and Technology. Attendees reported that the event felt grounded in action and the right size to support focused collaboration.

Global Impact Forum on Low-Carbon and Sustainable Transition of the Textile Industry

On October 18, 2024, the Shengze Town Government, Suzhou Financial Association, Suzhou Rural Commercial Bank, Apparel Impact Institute, and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) jointly hosted the Global Impact Forum on Low-Carbon and Sustainable Transition of the Textile Industry in Shengze. This event coincided with the 13th Jiangsu (Shengze) Textile Expo and the 2024 Suzhou Bay Fashion Week, attracting approximately 90 guests from government, financial institutions, non-profit organizations, and the business sector to discuss pathways and challenges of low-carbon transformation in the textile industry.

At the forum, Kurt Kipka, our chief impact officer, highlighted global trends in sustainable development and identified three key factors driving industry transformation: collective action, policy guidance, and technological innovation.

Additionally, Anthony Wei, sustainability director of Decathlon, provided an overview of brand-level transformation experiences, and Jian Sun from the Shengze government elaborated on the regional initiatives and practices in green development. The diverse perspectives shared along the textile industry chain provided the attendees with valuable insights into the low-carbon transition.

A key moment at the forum was the collaborative launch of the initiative titled “Capacity Building on Low Carbon Transformation and International Influence of the Shengze Textile Industry.” This initiative, led by the Shengze Town Government, Suzhou Rural Commercial Bank, Aii, and GIZ, aims to enhance international influence in low-carbon transformation while exploring successful case studies within regional textile clusters.

The forum also included two dialogue sessions. Anzhou, our vice president of technology, led the industry session, focusing on “Impact and Paths to Achieve Low Carbon Sustainable Transformation in the Textile Industry from the Supply Chain Perspective.” This discussion brought together representatives from various sectors of the industry value chain — including brands, manufacturing companies, and international organizations — to explore the challenges and opportunities related to the industry’s transformation.

The forum showcased the active participation of stakeholders across the entire industry value chain and served as a valuable platform for communication and collaboration within the textile sector. The initiative fostered a positive environment for green development and encouraged new pathways for sustainable growth.

Engagement Days

In 2024 we conducted three "engagement days" events to better serve our global stakeholders. These events took place over 2-3 days, with multiple webinar options available live and on-demand. The theme for our 2024 engagement days was "Evolving for Impact Towards 2030," with subthemes for each quarter:

Q1 : "Setting the Stage for Impact"

Q2: "Collaboration for Action"

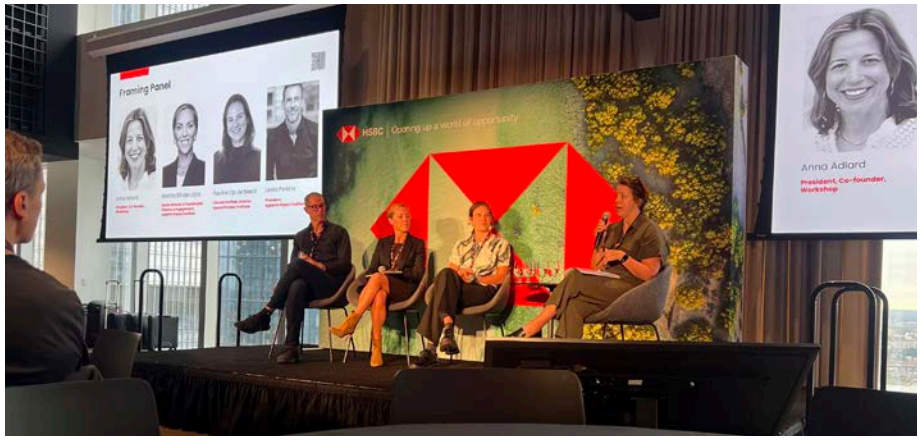
Q3: "Innovation, Implementation and Tracking."

New York Climate Week

During New York Climate Week in September 2024, Aii hosted two gatherings for more than 80 participants at HSBC's New York office. Our first activation provided orientation and framing around the cost of decarbonization and the role of catalytic capital. We hosted a perspectives panel with representatives from the supply chain, brands, banks, and philanthropy. Then, we spent the afternoon introducing the audience to the Brand Playbook for Financing Decarbonization and explored the report's concepts in a unique game format. On the second day, we broke into three sessions, diving deep into existing initiatives in Sustainable Finance, Decarbonization Solutions, and Brand Commitment.

Both Aii president, Lewis Perkins, and senior director of sustainable finance and engagement, Kristina Elinder Liljas, participated in several speaking engagements, joining panels at events hosted by Pakistan Environmental Trust, The Fashion Pact, and Cascale.

Aii was also featured this year as a Clinton Global Initiative commitment-maker and pledged $2M from the Fashion Climate Fund as first-loss funding to unlock other asset classes and provide affordable financing to suppliers.



External Events & Stakeholder Engagement

Bangladesh Climate Forum

"Participating in the first panel discussion of the day, joined by delegates from The World Bank, BGMEA (Bangladesh Garment Manufacturers and Exporters Association), Target Sourcing, and The Sustainable & Renewable Energy Authority, our lively discussion around "Unblocking Decarbonisation Roadblocks" really drilled down on actionable solutions to reduce the technological, financial, infrastructure, and policy gaps that are slowing the transition to a low-carbon apparel industry in Bangladesh.

In addition to the presentations and panel discussions, this event was an exciting opportunity to connect with brands, manufacturers, government and non-government agencies, technology suppliers, and other stakeholders with a vested interest in reducing the carbon impact of the apparel industry in Bangladesh"

LISA FROST, Climate Programs Director

COP29

Lewis Perkins, Aii president, and Kristina Elinder Liljas, senior director of sustainable finance and engagement, attended COP29 this year. Lewis and Kristina both participated in speaking engagements, including a conversation hosted by TrustTrace about data-driven decarbonization; a fireside chat at the World Climate Summit on building responsible supply chains; and a panel at Financial Times' FT Sessions to discuss safeguarding water, communities, and biodiversity.

Lewis also appeared onstage at the Climate Action Innovation Zone's Sustainable Investment Forum to share insights on best practices for energy transition in hard-to-abate sectors.

Cascale Annual Meeting

Chief Impact Officer, Kurt Kipka, spoke at Cascale's Annual Meeting alongside Liam Salter (CEO, RESET Carbon) and Andrew Martin (executive vice president, Cascale) to introduce the Industry Decarbonization Roadmap — a joint effort to expedite the industry's decarbonization efforts by addressing the most strategic suppliers with an opportunity for significant reductions and a standardized process.

Global Fashion Summit

The Global Fashion Summit consistently draws influential industry leaders, providing unique opportunities for direct, one-on-one engagement with top brands, suppliers, and ecosystem innovators.

"This year, I found particular value in the Summit's side sessions which are recognized for their hands-on, practical approach. I represented Aii at the Future Supplier Initiative roundtable, followed by a panel, where we reviewed and discussed fashion's emissions data, challenges, and the roadmap to net zero."

ANDRES BRAGAGNINI, Manager of Strategic Engagement

UNFCCC Fashion Charter Annual Meeting

"During the UNFCCC Annual Fashion Charter meeting, we focused on refining the 2030 strategy to better align with industry needs and reaffirm brand signatory commitments. Key outcomes included recalibrating the Charter's purpose to support signatories more effectively and recognizing its untapped potential for policy influence. We also introduced new workstreams, particularly around financing decarbonization and increasing engagement with finance sector stakeholders. Governance updates, including a shift to a project-based approach, will be shared soon, and at Aii, we reaffirm our position as a key supporting organization to the Charter."

ANDRES BRAGAGNINI, Manager of Strategic Engagement

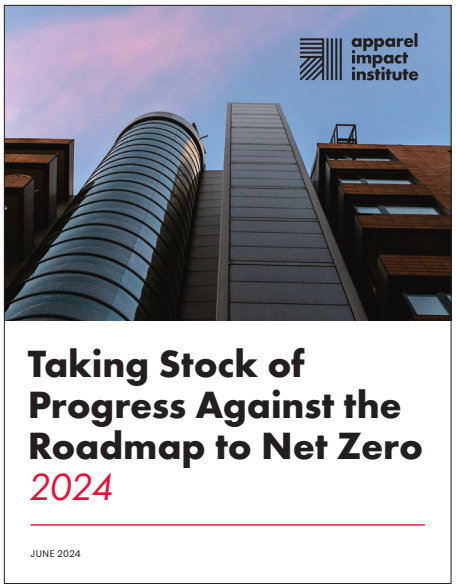
Media Highlights

Eight major press announcements/ pitches
(in comparison to six in 2023)

- **March 8:** Aii Appoints Hasitha Premaratne to Board of Directors (media advisory)
- **March 15:** Aii Releases 2023 Impact Report, Showcasing Progress In Its Sustainability Goals (media advisory)
- **May 7:** Apparel Impact Institute Provides Platform for Impactful Carbon-Reducing Solutions, Invites Innovations to Register for CSP (media advisory)
- **May 16:** Road to Net Zero: Apparel Impact Institute Shares Annual Report on Industry Progress (press release)
- **August 13:** Can the fashion industry help vulnerable countries meet their NDCs? (pitch)
- **September 10:** Apparel Impact Institute Announces Additional $1M in Catalytic Grants to Decarbonize Fashion Supply Chains (press release)
- **September 17:** Apparel Impact Institute Launches New Roadmap to Accelerate Supply Chain Decarbonization (press release)
- **November:** $2.5 Billion Available to Fund Sustainable Practices in India, According to New Report (press release)

207 **TOTAL STORIES**

Data & Reporting



Taking Stock of Progress Against the Roadmap to Net Zero 2024

In 2021, Aii and the World Resources Institute published "Roadmap to Net Zero," a report evaluating the apparel industry's emissions and calling for system-wide, collective action to reduce emissions by 45 percent by 2030 and to net zero by 2050.

We have promised to refresh this analysis annually using the best available data, and have therefore published the 2024 sequel, Taking Stock of Progress Against the Roadmap to Net Zero 2024. As with the original report, Aii used data from Cascale, Worldly, and Textile Exchange – with revised assumptions – to refresh the GHG estimate for the apparel sector.

Low-Carbon Thermal Energy Technologies for the Textile Industry

With production rates increasing in many countries, there is a need to adopt cleaner, more efficient, and low-carbon technologies to mitigate climate impacts.

Low-Carbon Thermal Energy Technologies for the Textile Industry, commissioned by Aii and authored by Global Efficiency Intelligence, examines the readiness of major textile-producing countries to adopt low-carbon heating technologies, assessing solar thermal; electrification (including electric boilers, heat pumps, and thermal energy storage); sustainable biomass; and natural gas. It provides a detailed evaluation of each technology, focusing on capital and operational costs, technological maturity, market growth outlook, and climate and environmental risks. This is the first of a two-report series.

Landscape and Opportunities to Finance the Decarbonization of India's Apparel Manufacturing Sector

India's industrial sector accounts for about 25% of the nation's carbon footprint, and the textile and apparel industry ranks among the highest carbon-emitting industries in the world.

This presents both a challenge and an opportunity. With the right financing, manufacturing — specifically in the textile and apparel sector — can play a key role in meeting India's climate targets. Landscape and Opportunities to Finance the Decarbonization of India's Apparel Manufacturing Sector — created in partnership with Development Finance International (DFI) and with support from HSBC — explores how to mobilize sustainable financing and support the decarbonization of India's textile and apparel industry.

The Brand Playbook for Financing Decarbonization

Read more about this publication in the Sustainable Finance section of this report.

GFA Monitor 2024 Update

This GFA Monitor 2024 edition serves as a concise update gauging industry progress towards a net-positive fashion industry. Building on the Fashion CEO Agenda's holistic framework, it highlights the critical need for social and environmental sustainability.

Aii contributed to the Monitor as an impact partner.

The Industry We Want

TIWW has partnered with Aii to estimate the garment sector's annual greenhouse gas (GHG) emissions. The GHG metric is calculated using the most widely and representative data available: fiber volume data from Textile Exchange and GHG impact data from Cascale and Worldly.

Brand Commitment Working Group

Aii convened a motivated group of our brand partners to participate in a 90-day "sprint" effort to explore and align on action-oriented market signals to drive more rapid industry decarbonization. The group agreed on foundational elements of a commitment framework which Aii will integrate into our near and long-term strategies, particularly Sustainable Finance.

Carbon and Energy Performance Benchmarking

An essential part of the Industry Decarbonization Roadmap, which we will deploy with our partners at Cascale, is carbon and energy performance benchmarking. The initial focus will be wet processing facilities as the highest emitters.

Therefore, Aii has initiated an open and inclusive process to develop energy and carbon performance benchmarks for the apparel sector. The aim is to launch the benchmark in September 2025.

Our intention is that the suppliers participating in this effort will not only receive credit for their achievements, but also provide a clear business case for decarbonization as Aii and our partners seek to position industry sourcing strategies.

Multi-Stakeholder Initiatives

VCI Apparel and Footwear Working Group

The **Value Change Initiative (VCI)** develops technical guidance for Scope 3 emissions accounting and reporting, addressing key challenges companies face in demonstrating progress toward science-based targets. The Apparel and Footwear Working Group supports ambitious corporate Scope 3 climate commitments by providing guidance on credible greenhouse gas (GHG) accounting for value chain interventions related to Category 1: Purchased Goods & Services.

In 2024, VCI hosted the third edition of the Apparel & Footwear Working Group, and the outcomes of the discussions are captured in the publication Advancing Scope 3 Accounting in the Apparel and Footwear Sector. In addition to this, the VCI work dedicated to the sector led to the release two key publications: the Apparel & Footwear Value Chain Intervention Guidance, and Integrating the Circular Economy and Scope 3 in the Apparel & Footwear Sector. Additionally, the group published a letter to COP, titled "Urgent need for value chain emission reductions and removals at COP29, Baku", stressing the urgency of addressing Scope 3 emissions.

apparel alliance Data Working Group

The apparel alliance Working Group convenes data leads and experts from Cascale, ZDHC, Textile Exchange, and Aii with the objective of aligning he minimum 45% GHG reduction goals by 2030, solutions, tools, and reporting, as well as events and training to create a connected, end-to-end path to action for the entire apparel and footwear industry.

In 2024, the Tools & Data Working Group met regularly to explore opportunities to standardize terms and definitions, including how to assign unique identifiers to facilities. With the upcoming Ecodesign for Sustainable Products Regulation (ESPR) legislation, brands will need tier-specific data to create Digital Product Passports (DPPs).Unique facility identifiers will be essential for this data collection.

"The Apparel Alliance Data Working Group made substantial progress in 2024. Aii, Cascale, ZDHC, and Textile Exchange successfully completed the first comprehensive supply chain taxonomy mapping and analysis across all production tiers, achieving alignment. Building on this foundation, the Alliance is now developing an integrated factory journey for the industry. This initiative aims to streamline tools and programs, reducing data fatigue and redundancies while establishing standardized performance indicators across our programs and tools."

ANDRES BRAGAGNINI,
Manager of Strategic Engagement

V.
How We Report

Glossary

Blended Capital
A mix of funding sources including public, private, or non-profit grants, equity, and debt.

Capital Expenditure/Expense (CAPEX)
The money an organization or corporate entity invests to buy or improve its fixed assets, such as buildings, vehicles, machinery, or land.

Impact Programs
Aii programs track actual emissions savings at the factory level, focusing on what is truly achieved rather than savings potential. These programs are applied in the implementation phase of the Supplier Journey Map.

Operational Expenditures (OPEX)
An ongoing cost of running a product, business, or system, such as rent, salaries, or repairs.

Savings - Impact Programs
A supplier's savings type depends on program status. Aii therefore divides savings into four categories:

1. Potential savings are based on the full list of potential actions identified when the supplier starts an Aii program.

This is the highest possible value; the other data points represent a subset of these actions.

2. Forecasted savings are based on a roadmap of interventions Aii expects the supplier to begin implementing over a multi-year period.

3. Projected savings are based on the subset of actions the supplier has agreed to and is actively implementing.

4. Actual savings are based on actions that have been implemented and achieved results. This is measured upon completion of the Aii program.

Savings - CSP Solutions

Forecasted savings are based on the interventions the grantee intends to deliver over the course of the project.

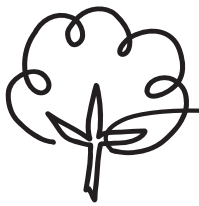
Actual savings are based on actions that have been implemented and achieved. Results are measured at the end of the solution's implementation.

Supplier
Aii defines "supplier" as all stakeholders along the value chain that produce or convert products, including farms, manufacturers, and mills.

Tiers
We classify our facilities in line with the Supply Chain Taxonomy, published in November 2024, which was created in collaboration with apparel alliance members.

If a facility is vertical, we classify it under Tier 2.

Tier 4
RAW MATERIAL PRODUCTION & PRIMARY PROCESSING

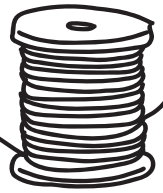


188 Mt Co_2e

21%

The extraction and farming of primary raw materials from the earth (e.g. fossil fiels), plants, (e.g. cotton), or animals (e.g. wool), and the collection of secondary raw materials into a commodity state.

Tier 3
INTERMEDIATE MATERIAL PROCESSING

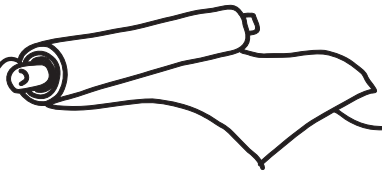


134 Mt Co_2e

15%

Processing of raw materials into yarn and equivalent state.

Tier 2
MATERIAL MANUFACTURING



482 Mt Co_2e

55%

Production and finishing of materials (e.g. fabrics, trims) that go directly into the finished product.

Tier 1
FINISHED PRODUCT MANUFACTURING

75 Mt Co_2e

9%

Assembly and manufacturing of final products.

Acronyms & Abbreviations

Aii: Apparel Impact Institute

BPAP: Best Practices Action Plan

CAPEX: Capital Expenditure

CbD: Clean by Design

CbD+: Clean by Design +

CO_2e: Carbon dioxide equivalent

CSP: Climate Solutions Portfolio

CTA: Carbon Target Assessment

CTS: Carbon Target Setting

GHG: Greenhouse Gas

GJ: Gigajoule

Gt: Gigatonnes

FCF: Fashion Climate Fund

Mt: Megatonnes = 1 million tonnes

OPEX: Operational expenditures

RETI: Renewable Energy Transition Initiative

SCAP: Supplier Climate Action Programme

VCI: Value Change Initiative

Methodology / Calculations

Actual cost per tCO_2e

We calculate the actual cost per tCO_2e as follows:

- **Aii programs:** Total Capital Unlocked / Overall Impact Achieved over useful life
- **CSP grant-funded solutions:** Total funding / (Total actual GHG reductions in 2024 over useful life)

Average Percentage Reduction

The percentage reduction is calculated by dividing the reduction value by the baseline value for each metric. Therefore, the average percentage reduction is the average of the percentage reduction value from all the suppliers.

However, in some cases, it is not possible to calculate this value for a specific supplier, (e.g., if no baseline is available due to being out of the project scope or because the first assessment was not possible). In other cases, some programs only generate certain types of savings but not others (e.g. there are no GHG savings in CbD chemicals).

In those cases, the supplier is excluded from the average calculation. Therefore, if out of 50 suppliers, two lack baseline values and two did not generate GHG savings through impact programs, the average GHG % reduction will be calculated based on the remaining 46 suppliers.

Carbon Emission Unit

Aii's carbon emissions data is measured in tonnes/metric tons (1000 kg).

Conversion Factors

Conversion factors are used to convert the original energy source units to a common unit. For programs that achieve reductions across multiple sources (e.g., natural gas, electricity, biomass), we apply conversion factors to standardize measurements into a single unit (megajoule or gigajoule), allowing for a total reduction calculation The same principle applies to the baseline.

Aii is currently adopting the Conversion Factors provided by Higg FEM.

Effectiveness Percentage Reduction Potential $kgCO_2e$ / kg Production of Model Process

We have aligned the solution evaluation and communication methodology for CSP solutions. All applicants calculate their effectiveness according to the CO_2e/kg production baselines outlined in the Ready Reckoner. This makes it easier to compare effectiveness across solutions.

Emission Factors

Emission factors represent the greenhouse gas emissions associated with a specific activity or process. In our programs, it is emissions associated with energy consumed or reduced from a particular energy source.

Aii currently uses a mix of emission factors, including Higg FEM, country-level grid electricity emission factors, and country-level adjustments for certain energy sources.

We source electricity emission factors from a combination of governmental and non-governmental entities. This mix depends on the reporting timelines of each country's government and the credibility of non-governmental sources. Since a country's energy grid composition can change every year, we update our emission factors accordingly. For example, if a facility completed a program in 2022 and we have the emission factor for 2022, we will use that factor for our calculations. If we do not have the 2022 emission factor, we apply the most recent factor available before the program completion year.

Emissions factors for other energy sources depend on the country's biofuel policies, thus aligning with local emission regulations (e.g., China). This stems from the absence of both grid emission factors provided by Higg FEM and industry consensus around biofuels. Our technical team recognizes steam used within China should have a different emission factor due to the characteristics of its primary energy source.

These emission factors, unlike grid emission factors, come from aggregated industry studies and are applicable to all countries. Since the most recent studies reflect the most accurate methodology, we update all historic emissions factors accordingly.

GRID ELECTRICITY SOURCES

Vietnam:

Emission Factor 2022 until today: Official Document No. 327/BĐKH-PTCBT, dated May 19, 2024, Department of Climate Change - MONRE

Emission Factor 2021: Official Document No. 1278/BĐKH-TTBVTOD, dated December 12, 2022, Department of Climate Change - MONRE

Emission Factor 2020: Official Document No. 1316/BĐKH-TTBVTOD, dated December 12, 2021, Department of Climate Change - MONRE

Emission Factor 2019: Official Document No. 116/BĐKH-TTBVTOD, dated December 26, 2021, Department of Climate Change - MONRE

USA:

Emission Factor 2022 until today

Pakistan:

Emission Factor 2021 until today

Bangladesh:

Emission Factor 2020 until today

Italy:

Emission Factor 2022 until today

Emission Factor 2021

Emission Factor 2020

Emission Factor 2019

South Korea:

Emission Factor 2022 until today

Emission Factor 2021

Emission Factor 2020

Emission Factor 2019

Indonesia:

Emission Factor 2022 until today

Emission Factor 2021

Emission Factor 2020

Emission Factor 2019

India:

Emission Factor 2022 - today

Emission Factor 2021

Emission Factor 2020

Emission Factor 2019

China:

Emission Factor 2023 until today (revised)

Emission Factor 2023

Emission Factor 2022

Emission Factor 2018-2021

STEAM SOURCES

China:
Source

Other Countries:

EPA, Emission Factors for Greenhouse Gas Inventories, 2022: epa.gov/climateleadership/ghg-emission-factors-hub

IPCC Guideline for GHG Inventories 2006 revised in 2019

BIOMASS SOURCES

China:
ipcc-nggip.iges.or.jp/public/2006gl

Other Countries:
Resources Library – FEM 4.0 Resources & Archive – User Resources: How To Higg

BIODIESEL SOURCES

China:
N/A

Other Countries:
Resources Library – FEM 4.0 Resources & Archive – User Resources: How To Higg

WOOD SOURCES

China:
N/A

Other Countries:
Resources Library – FEM 4.0 Resources & Archive – User Resources: How To Higg

GHG Reductions

We report GHG reduction at the base year production level rather than using the GHG Intensity value. In the textile sector, comparing the specific GHG emission, or the GHG emission per unit of production, is nearly impossible due to the diverse types and qualities of products.

Annual actual GHG reduction is calculated as follows:

Before a supplier begins the program, an expert conducts a baseline investigation of all energy uses from equipment or processes within the project's scope.

There are two methods to calculate energy savings:

1. Post-implementation energy use is measured after program completion. The difference between the baseline and the post-implementation measurements is annualized to determine the yearly energy reduction.

2. Energy savings can also be calculated directly based on the differences in key energy parameters, such as temperature.

Our methodology for measuring savings projects them linearly from project data, which typically aligns with real-world outcomes. Therefore, we only need the basic parameters to calculate and establish the 12-month savings projection. We estimate this approach to be approximately 95% accurate. (While measuring the full 12 months of savings would be ideal, it would extend the project duration to 1.5 to 2 years. This would not only increase resource costs and usage but also prevent us from meeting client brands' timelines.)

GHG reductions are then calculated by multiplying the energy savings by the corresponding emission factor.

The factory's total actual GHG reductions are the sum of all individual GHG reductions from each retrofit project.

GHG emissions reduction over the project's lifespan is calculated by forecasting annual emissions over the project's useful life, assuming no changes to GHG emission factors, stable production volume, and annual degradation of the equipment efficiency in line with equipment specifications.

Metering

About 90% of facilities currently have only one or two meters for each energy source, mainly for billing purposes. The facilities lack the meters needed for energy performance management, which would involve installing meters along the process lines and on critical machines. Proper energy management typically requires between 30 to 300 meters per factory to provide a comprehensive view of energy usage and efficiency.

Aii typically recommends installing additional meters to enhance performance management and allow direct energy savings comparisons. However, this often entails a significant investment, and as a result, only about 10%-20% of factories proceed with installing these meters.

Additionally, many savings from retrofitting cannot be directly measured by meters due to the complexity of the energy systems involved. To address this, we use an engineering approach that combines meter readings and parameter analysis to obtain a comprehensive understanding of energy savings.

CASE STUDY:
A factory had 50 uninsulated steam pipes, each 1 meter long and 50 cm in diameter, which resulted in a surface temperature of approximately 130 degrees Celsius. We assisted the factory in insulating these pipes, reducing the surface temperature to 40 degrees Celsius. This intervention significantly improved the steam distribution system's energy efficiency by minimizing heat loss.

Directly measuring savings from meters can be challenging for three main reasons:

- **The Proportionality of Savings:** Energy savings from insulating steam pipes or similar efficiency measures often represent a relatively small proportion of the total energy consumed by the machines. Since these savings are minimal compared to overall use, they may not be easily detected or quantified using standard meter readings, making it difficult to measure their impact using meters alone.

- **Operational Variability:** Changes in production levels, operational schedules, and equipment usage can all influence the readings from meters, making it difficult to isolate the impact of energy-saving measures from these variables.

- **Energy System Complexity:** Factory energy systems are often complex, with multiple interconnected components influencing each other's performance. This makes it difficult to directly attribute changes in energy consumption to specific interventions without a detailed analysis that considers system interactions.

We employ a specialized formula to quantify the heat loss from the surface of the pipe and accurately calculate the energy savings from insulating steam pipes. This calculation considers various factors such as the thermal conductivity of the insulation material, the surface area of the pipe, the external and internal temperatures, and the overall thermal resistance. Comparing the heat loss before and after insulation allows us to effectively determine the reduction in energy consumption and the corresponding savings.

Our formula:

1. **Determine the Surface Area:** Calculate the total surface area (in square meters) of the uninsulated pipes using their length and diameter.
2. **Energy Loss at 130 Degrees:** Calculate energy loss per square meter when the pipe's surface temperature is 130 degrees Celsius. This requires data on the ambient temperature, the heat transfer coefficient, and the exposed surface area.
3. **Energy Loss at 40 Degrees:** Similarly, calculate the energy loss per square meter when the pipe's surface temperature is reduced to 40 degrees Celsius after insulation.
4. **Determine the Differential Heat Loss:** Calculate the difference in heat loss per square meter between the 130-degree and 40-degree conditions. This difference represents the heat loss reduction per square meter due to insulation.
5. **Total Energy Savings:** Multiply the savings per square meter (from Step 4) by the total insulated surface area (from Step 1) to obtain the total energy savings. This final value indicates the overall reduction in energy consumption due to the insulation of the steam pipes.

Pre-seed, Pilot, Model, Scale

Commercialization stage	Definition
Pre-seed	Solutions that are at a concept level and in the process of evaluating and establishing their impact potential.
Pilot	Solutions that are in the process of testing their solution to demonstrate a proof of concept.
Model	Solutions that are working towards de-risking and reducing known barriers to scale
Scale	Solutions that are commercially viable with a proven go-to-market strategy

Useful Life

Typically, a standard efficiency project remains effective for 10 years (based on the experience of our experts). In the case of renewable energy projects like solar and wind, we factor in a longer lifetime of 20 years (based on studies, e.g. Solar PV & e.g. Wind Power). However, the exact lifetime can always vary, even for the same technology, depending on factors like each supplier's choice of equipment brand, good maintenance and use of workers, conditions in the facility, and weather conditions.

Based on the experience and practice of Aii experts, we assume an average estimated degradation of 3% for all programs, which we incorporate into our useful lifetime calculation.

Therefore, to estimate the carbon reduction over the useful life of the investment, we assume a 3% annual decrease in savings to account for the reduced efficiency of equipment over time. For equipment with a 10-year useful life, the annual decrease in savings results in an effective useful life of 8.75 years, and for equipment with a 20-year useful life, in an effective useful life of 15.2 respectively.

Auditor's Report for the Sustainability Report

Independent Assurance Statement
Provided by ISOS Group, Inc.

To the Management Team of Apparel Impact Institute:

ISOS Group, Inc. ["ISOS" or "we"] were engaged by Apparel Impact Institute ["Client" or "Aii"] to conduct moderate level type 2 assurance of environmental data ["Reported Information"] to be included in its 2024 Annual Impact Report.

We have performed our moderate assurance engagement in accordance with the AccountAbility 1000 Assurance Standard v3 ("AA1000AS").
Our review was limited to the Reported Information comprising the percent (against baseline) and absolute reductions of:

- Energy consumption
- GHG emissions
- Water use

We have not performed any procedures with respect to other sustainability-related information and, therefore, no conclusion on information outside of this scope of work is expressed.

Aii's responsibilities
The Company's management are responsible for:

- Preparing the data in accordance with generally accepted reporting practices,
- The accuracy and completeness of the information reported,
- The design, implementation and maintenance of internal controls relevant to the preparation of the report to provide reasonable assurance that the report is free from material misstatement, whether due to fraud or error,
- Ensuring the data performance is fairly stated in accordance with the applicable criteria and for the content and statements contained therein.

Criteria
The assessment process was intended to provide an independent opinion confirming that the Client has complied with procedures for data management at the company and minimized degrees of error by adequately:

1. Sourcing utility and internal data to populate relevant data management systems,
2. Enforcing management and quality controls across the reporting period,
3. Aggregating and converting metrics into the correct unit of measure, and
4. Calculating greenhouse gas emissions.

Boundary

Organizational Boundary	Apparel Impact Institute is a 501(c)(3) nonprofit collective that identifies, funds, and scales proven quality solutions to accelerate positive impact in the apparel and footwear industry.
Assurance Boundary	The boundary of this assessment included the 72 CbD facilities that are reporting 2024 reductions within the 2024 Impact Report.

Limitations and Exclusions
Greenhouse gas quantification is unavoidably subject to inherent uncertainty because of both scientific and estimation uncertainty and for other non-financial performance information the precision of different measurement techniques may also vary. Furthermore, the nature and methods used to determine such information, as well as the measurement criteria and the precision thereof, may change over time.

Reviews pertaining to the completeness and capture of all energy consumption at facilities is limited to what is disclosed in data management systems. No visit to the Client's headquarters or facilities was conducted throughout this engagement. It was determined that these limitations and exclusions do not materially impact the performance criteria or assessment.

Methodology

The assessment procedures undertaken were to determine the strength of the systems in place. ISOS Group:

- Engaged a sample of individuals responsible for performance measurement,
- Evaluated current management systems for performance data collection, compilation, calculation, reporting, and validation,
- Validated alignment to standard reporting protocols to ensure accurate claims to the quantitative methodology and approach,
- To assess quantitative claims, both at the aggregate level and on a sample basis, and test accuracy, consistency, completeness, and reliability, ISOS Group:
  1. Conducted a portfolio assessment analyzing performance results to uncover any errors, misstatements, gaps, or performance anomalies,
  2. Brought all findings to the Client's attention to address and confirmed resolution,
  3. Selected the following facilities for testing and analysis, including cross-reference to source data to uncover variances and address any exclusions and other limitations:
     a. PT Lucky Textile Semarang (Plant 2), Indonesia
     b. Guangzhou Kam Hing Textile Dyeing Co., Ltd, China
     c. Yixing Lucy Textiles Group CO.,LTD, China
     d. Best Pacific Viet Nam Co., Ltd, Vietnam
     e. Guang Dong East Mountain Textiles CO.,LTD, China
     f. Vietnam Delicacy, Vietnam
     g. De Licacy Industrial CO., LTD. - cbd +, China
     h. Hangzhou Xinsheng Printing &Dyeing Co Ltd (CbD+), China
     i. Achille Pinto, Italy

Findings

Based on the process and procedures conducted, there is no evidence that the Reported is not materially correct and provide a fair representation of the Client's environmental impacts to stakeholders for the stated period and reporting boundary.

Application of the AA1000AP

Findings and conclusions concerning adherence to the AA1000 AccountAbility Principles:

Inclusivity	Aii has identified the following key stakeholder groups: suppliers, funders, solution providers, employees, board, and other NGOs / Ecosystem Leaders. These stakeholders are identified through Aii's Voice & Value framework and regular performance reports to stakeholders include quarterly brand reports and monthly newsletters.
Materiality	Aii conducted a materiality assessment in 2024 to inform strategy and priorities regarding their decarbonization path to 2030.
Responsiveness	Aii publicly reports GHG emission reductions, water savings, and energy savings as impact metrics via their annual Impact Report. For CY2025 reporting, Aii is considering reporting referencing the GRI Standards.
Impact	Aii has 2030 goals set across two key metrics, GHG emission savings and capital unlocked, and measures and reports on water and energy savings.

Observations and Recommendations
Observations and recommendations include:

- Aii monitors 4-6 months of post-program facility performance and then extrapolates this data to determine energy and emission reductions. Aii's methodology to determine reductions is based on estimation, proprietary calculations and assumptions that actions (including behavorial changes) continue after the monitoring phase. It is recommended that Aii institute future processes for program impact review based on the reductions documented from actual performance.
- Improve the documentation of factors and constants in both summary and facility-level workbooks. Specifically, maintain the vintage, location and native unit of measure (i.e. include unaltered figures in workbooks) for factors and constants applied for each reporting year and show how utilized factors and constants were derived (i.e. calculation steps).
- Current GHG emissions baseline and reduction calculations are complex and opaque behind Excel formulas. For traceability and auditability, it is recommended to separate out the GHG calculation by energy source prior to reporting total emission reductions.
- Consider the implementation of a formal data management system to improve organization, reduce the opportunity for data errors and improve traceability.
- Reported baseline figures may rely on unaudited facility-reported data. Baseline facility data may be reported using annualized figures collecting from the local expert teams, reducing the opportunity for data analysis to uncover data errors, gaps, or anomalies.

Restriction of use
This assurance report is provided exclusively to the Client under the terms of our engagement, including agreed disclosure arrangements. Our work is intended solely to address the matters outlined in this moderate assurance report and is not intended for any other purpose.

This report is not suitable for use or reliance by any party other than the Client. Any third party, accessing or relying on this report does so at its own risk. To the fullest extent permitted by law, we disclaim any responsibility or liability to any party other than the Client for our work, this report, or the conclusions stated herein.

Statement of Competency and Independence
ISOS Group is an independent professional services firm that specializes in sustainability reporting and is a provider of external assurance services. ISOS Group is a Global Reporting Initiative Certified Training Partner and a CDP Silver Solutions Partner. Our team of experts have the technical expertise and competency to conduct assurance to the AA1000 assurance standard, which meets the criteria for assurance of sustainability information.

No member of the assurance team has any business relationship with the Client, its directors or managers beyond the scope of this assignment. We conducted this assurance independently and, to our knowledge, without any conflicts of interest. ISOS Group upholds a strong code of ethics, ensuring high professional standards in all business activities. The assurance team has extensive experience in conducting assurance engagements over sustainability-related information, systems and processes.

Further information, including a statement of competencies, can be found at www.isosgroup.com.

Signed on behalf of ISOS Group: San Diego, California – USA, March 19, 2025.

Brian Noveck
CSAP Practitioner

Lauren Anderson
ACSAP, Sustainability Manager

Hannah Emery
Sustainability Consultant

ISOS Group
a division of environ

AA1000
Licensed Assurance Provider
000-284

Auditor's Report for the Financial Information

Schedule For Impact Report
FOR THE YEAR ENDED DECEMBER 31, 2024

with Independent Auditors' Report Thereon

Independent Auditors' Report on Supplementary Information

To the Board of Directors
Apparel Impact Institute

We have audited in accordance with auditing standards generally accepted in the United States of America, the financial statements of Apparel Impact Institute ("the Organization), which comprise the statement of financial position as of December 31, 2024, and the related statements of activities, functional expenses, and cash flows for the year then ended, and the related notes to the financial statements and have issued our report thereon dated March 28, 2025.

Our audit was conducted for the purpose of forming an opinion on the financial statements as a whole. The Organization's Schedule of Allocation of Funds ("Supplemental Schedule") is presented for purposes of additional analysis and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the financial statements as a whole.

PDM, LLP

Torrance, California
March 28, 2025

Schedule of Allocation of Funds
Year Ended December 31, 2024

	Amount	Unit	%
Program related expenses			
Program development	$264,540	USD	2.8%
Sustainable finance	$237,047	USD	2.5%
Stakeholder engagement & thought leadership	$1,903,772	USD	19.9%
Program & solutions	$ 3,541,337	USD	37.0%
Program operations, data & reporting	$1,305,654	USD	13.7%
Total Program related expenses	**$7,252,350**	**USD**	**75.9%**
General & administrative	$2,307,382	USD	24.1%
Total spending in 2024	**$9,559,732**	**USD**	**100.0%**

Allocation of Funds