Apparel Impact Institute (Aii)

Climate Solutions Portfolio (CSP) Application

Version 3.0 | Last Updated: 1/24/2025

Applications are due on or before 17:00 March 31, 2025, US Pacific. Please follow submission instructions on Aii's website.

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1. CSP Program Overview

1.1. Program Context and Purpose

The apparel/textile industry is a major contributor to global CO_2e emissions. Science tells us the industry must make reductions of at least 50% by 2030 and achieve net zero by 2050. Many leading brands and retailers have made reduction commitments in the Science Based Targets initiative (SBTi) consistent with these goals.

The apparel/textile industry is facing three key challenges in achieving its necessary CO_2e reductions:

1. **What solutions exist to reduce emissions?** Stakeholders struggle to locate science-backed initiatives and programs with the potential to support their CO_2e reduction goals.
2. **Which solutions are credible and verifiable?** A limited amount of unstandardized data on the effectiveness of many of these solutions creates uncertainty and confusion about their efficacy.
3. **Which solutions do we prioritize?** Fragmented coordination across the industry around priorities and timelines slows down the scaling of proven programs. Failure to "follow the tonnes of CO_2e" opens the door to spending time and money where it is easiest to start rather than to where it delivers the largest results.

At Apparel Impact Institute, our mission is to identify, fund, and scale science-based, measurable programs within the apparel and footwear industry. In 2022, we proudly introduced the Climate Solutions Portfolio (CSP), an initiative designed to champion and fund a curated collection of solutions set on lowering greenhouse gas reductions in apparel and footwear manufacturing. Our goal is to simplify and accelerate the adoption of proven and promising solutions that tackle emissions and create a positive impact.

We break down solutions into innovations, projects, or programs that deliver measurable CO_2e reductions. Our focus is on identifying those solutions that can help the industry reach its bold target of a 50% emissions reduction by 2030.

With our funding we want to help grant applicants:

- Demonstrate & prove success in reducing emissions
- Reduce the cost per tonne CO_2e saved ($/t$CO_2e$)
- Improve the business case to increase adoption by unlocking barriers to scale

- Accelerate scale
- Become part of our program deployment and blended capital financing pipeline

We are looking for projects that focus on decarbonization in the following areas:

CSP Levers	Funding Allocation
Reduce process demand for energy Reduce energy losses	40%
Reduce/eliminate tCO_2e emitted from generating heat and electricity	45%
Reduce emissions from production of natural and synthetic fibers	15%
Minimize waste in each step of production Maximize circular reuse of fibers, fabrics, or chemicals	
Maturity Level	**Funding Allocation**
Pre-Seed	10%
Pilot	40%
Model	30%
Scale	20%

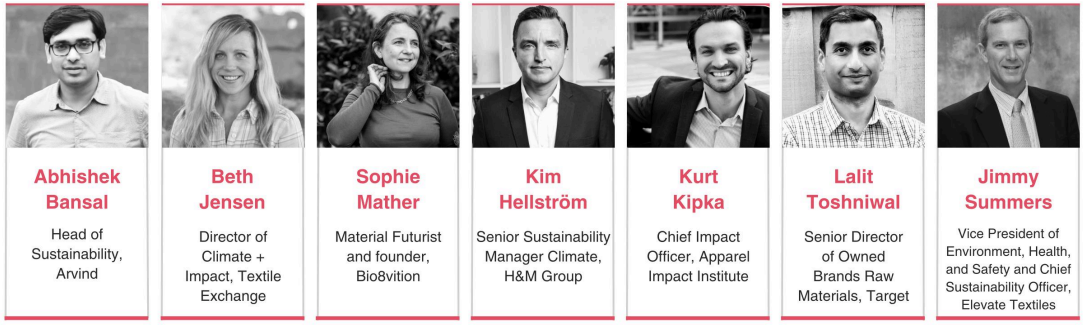
Applications will be assessed for their cumulative tCO_2e reduction potential against baseline scenarios, using a consistent comparison methodology.

For a full overview of our grant funding thesis please review this document to assess whether your application meets our funding priorities.

Applications are due on or before 17:00 March 31, 2025, US Pacific. Please follow submission instructions on Aii's website. We look forward to reviewing your application!

1.2. CSP Advisory Council (CSPAC)

The CSPAC is composed of Aii staff, apparel/textile experts, and industry representatives. When the CSPAC's expertise is limited, it will engage subject matter experts to help evaluate applications.

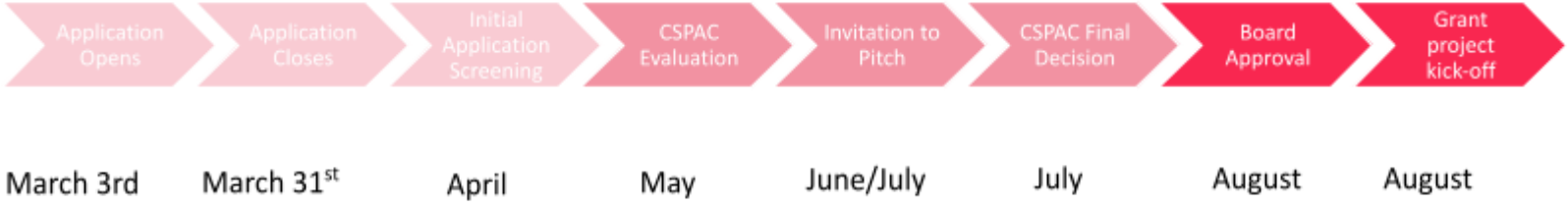


Abhishek Bansal	Beth Jensen	Sophie Mather	Kim Hellström	Kurt Kipka	Lalit Toshniwal	Jimmy Summers
Head of Sustainability, Arvind	Director of Climate + Impact, Textile Exchange	Material Futurist and founder, Bio8vition	Senior Sustainability Manager Climate, H&M Group	Chief Impact Officer, Apparel Impact Institute	Senior Director of Owned Brands Raw Materials, Target	Vice President of Environment, Health, and Safety and Chief Sustainability Officer, Elevate Textiles

1.3. Application Process

Please note that this is the first application submission process using our new software, Submittable. We aim to continually improve our process in response to user experience, stakeholder feedback, and availability of better industry data.

The application process will follow the following timeline. Please note, we will be in touch if we need additional information or if you are invited to pitch. **If you do not hear from us by the first week of June this means, unfortunately, your application has not been successful.**



- **Application Release** – Aii releases CSP application to the public. Applicants review the materials and send any clarifying questions to CSPHelp@apparelimpact.org.
- **Application Submission** – Applicants have four weeks to complete the application. Applications can be submitted through the online form at any time during this stage. If supporting materials cannot be uploaded to the online application, documents should be sent to CSPHelp@apparelimpact.org.
- **Initial Application Screening** – Using the grant funding thesis as a foundation, Aii reviews applications for fit, completeness, and clarity, and follows up with clarifying questions or requests for additional information.
- **Application Evaluation –** Eligible and complete applications are assessed for their CO_2e reduction potential by Aii; the CSP Advisory Council (CSPAC); and subject matter experts, if needed. The annual tCO_2e reduction potential is calculated using a tool developed by the CSPAC: "The Ready Reckoner: Solutions Impact Evaluator" ("Ready Reckoner')
- **CSPAC Evaluation & Invitation to Pitch** – The CSPAC decides which solutions are shortlisted and invited to pitch. These pitches give the solution an opportunity to bring their application to life. Applicants prepare a presentation using Aii's template and provide a detailed cost breakdown for the grant amount requested. Applicants also participate in a Q&A session with the CSPAC.
- **CSPAC Final Evaluation & Board Sign Off** – Based on the pitches, CSPAC decides on the finalists and submits to the Aii Board for approval. Subsequently, the Aii Board will sign off and successful applicants will be notified.

1.4. Overview of Evaluation Methodology

The CSP application is designed to identify solutions with data indicating real tCO_2e reductions for textile/apparel manufacture.

We consider three specific criteria when evaluating applications:

- **Reach** – How much of the industry can the solution be applied to? (e.g., All wet processing? Acrylic knitwear manufacture only?)
- **Effectiveness** – What are the % energy/tCO_2e savings the solution is estimated to deliver relative to a typical industrial baseline? (Baselines are provided in the appendix to the Ready Reckoner).

    - The Ready Reckoner combines the Reach and Effectiveness and auto-calculates the Maximum Potential Savings (MPS) of tCO_2e for the solution
- **Scale** – What is a realistic estimate for the roll-out/scale up of the solution in terms of the % MPS that can be achieved over a realistic timescale (e.g. will it be rolled out to 1%, 5%, 10%, or 30% of the MPS by the end of the project funding)?

After assessing each application's alignment to our key criteria, the CSPAC will evaluate the funding ask: What is the funding going to be used for? How is this going to unlock barriers and support the sector in achieving its goals? How is this funding delivering additionality? (i.e., why would the project not take place if it weren't for CSP funding?)

The Ready Reckoner auto-calculates the annual tCO_2e reduction potential of the solution – and calculates this relative to the size of funding.

All applicants must use the Ready Reckoner to calculate the solution's tCO_2e reduction potential. Details from the calculations must be inserted into the relevant sections of the grant application.

The Ready Reckoner uses a database that includes baseline energy use and tCO_2e emissions for the most widely used materials and processes.

The energy use and emission baselines are calculated for supply chain tiers, processes, and even sub-processes using data from the WRI "Roadmap to Net Zero" report, other publicly available data sources, and subject matter experts' professional judgment. We have used typical model processes to create baselines against which all solutions must be compared (these are contained in an appendix to the Ready Reckoner).

By going to this level of detail, we can assess the potential real-world emission reductions of proposed solutions in a given timescale — typically by the end of the project funding and by December 31, 2030.

To complete the grant application and to use the Ready Reckoner, applicants must:

- know exactly where their solution is applied at a sub-process level (to allow Reach to be auto-calculated)
- calculate the effectiveness of their solution compared to Aii baselines

- be able to provide realistic projections of how the solution can be rolled-out/scaled to achieve CO_2e savings

It is important that applicants read the detailed advice on how to calculate effectiveness relative to Aii baselines, which can be found in the Ready Reckoner: Solution Impact Evaluator (guidance on how to do this can be found in Appendix A). Please review the guidance and the demo of the tool (available on the CSP application hub) **before** completing the grant application.

Aii's calculations are intended to be used ONLY for the CSP application process and are not intended for uses outside of this process. **By creating an account on the Submittable platform you are committing to not circulate our calculation tools outside of your organization.**

As you complete your application, please contact us at csphelp@apparelimpact.org if you think we have overlooked something that is necessary to present the benefits of your solution adequately.

We will strive to continuously improve our methodology, incorporating better data as it emerges. We thank you for your patience and invite your feedback and additional data to enhance our understanding of baselines as our evaluation process evolves.

1.5. Other Important Notes

Confidentiality

Aii encourages applicants to be as transparent with their responses as possible, particularly regarding a solution's effectiveness and reach, so that we can be publicly accountable for our decision-making. At the same time, we recognize the need for business confidentiality in some cases. Applicants are requested to explicitly note any confidential data or text. All information marked as such will be kept strictly confidential and proprietary. Aii staff, CSPAC members, and select subject matter experts (if utilized) will be privy to the confidential components of the application materials only while under NDA with Aii. If you have any concerns about submitting data under this policy, please let us know.

Units and Labels

Please clearly label graphs, charts, diagrams, etc. and specify units for any numeric figures in your application or supplementary data. Please use the following units:

- Monetary figures in US Dollars (USD$)
- Energy use figures in kilowatt hours (kWh) – according to baseline processes in the Ready Reckoner
- tCO2e emission figures in metric tons of carbon dioxide equivalent ($mtCO_2e$). Please note where MT (with a capitalized M) is used - this refers to megatonnes

Where applicable, please normalize figures to the appropriate economic or operational variable (e.g., USD$ per unit/per kg CO_2e reduced/per machine/per ton of raw material/per kg production, etc.).

Solution details

Maintaining transparency regarding any barriers to scaling and potential adverse consequences of your solution is crucial. We cannot support projects that have adverse consequences on water impacts, chemical issues, human rights, local environmental pollution, health, or biodiversity. If your solution involves chemicals, we ask that you provide documentation, ensuring a clear understanding of what we are funding. Furthermore, if there are patents associated with your solution, please include them as part of your application.

Data

We require specific data to assess the effectiveness, reach, and scale of the proposed solution. Our preference is to receive impact calculations based on **measured data**; however, we recognize that some solutions may not have primary and measured data at the point of application due to where they are in the commercialization cycle. If your project is at the pre-seed or pilot phase, we will accept projected emissions savings or secondary data. For technology-driven applications, submission of the innovation's performance data is essential.

Where **estimated data is** being used, we will require the underlying assumptions behind the scenario analysis and its associated parameters such that this estimation can be evaluated. Where **secondary sources** are used, we expect that the secondary data and associated studies selected are as closely related to the conditions of the applying solution as possible. It must be made clear where your solution is similar or different to the secondary source being used. Where calculations have been made based on secondary data, we require a methodological explanation to the assumptions used so that the reviewing experts and advisory council members can assess to what extent the calculations are realistic.

2. Application Questions

In this section we list all the questions you will need to respond to in the application along with some guidance on how to respond to them. Please refer to this guidance as you fill out the application form.

2.1. Organizational information

Contact Information	
1. Company / organization submitting application:	
2. Company/organization website:	
3. Country where the organization is based:	
4. Joint applicant/sub-grantee organizations:	If you are applying as part of a consortium, please list the other organizations you are applying with here.
5. Peer reviewers or supporters of the grant project	If you have any peers, brands, or textile manufacturers that support this project or will conduct a peer review of the outcomes but are not official joint applicants, please list them here.
6. Primary contact full name:	
7. Primary contact email:	
8. Primary contact phone number:	
9. Primary contact location (city, country)	
10. Other relevant personnel associated with the Solution (include email contact information if you want them included in follow-up communication from Aii):	Successful organizations will be invited to pitch via email in June. Please make sure all relevant personnel who should be copied in on such an email are listed here. This will be particularly important if the primary contact may be out of the office.

2.2. Effectiveness

Definition: The Effectiveness of a solution is the % amount of CO_2e emissions reduced per kg of production relative to Aii baselines

In this section we want to understand how your solution will help the sector overcome obstacles to decarbonization and deliver CO2 reduction impact. We request the projected impact data for this later on in the application.

Solution Description	
11. Is your solution focused on any of the following areas? *By selecting any of these project types, you acknowledge that you may not be eligible for funding as outlined in our grant funding thesis. You may proceed with the application, but please bear this in mind.* ● Downstream consumer focused circularity solutions ● Innovative materials ● Develop/enhance data technology/traceability tools or programs. ● Develop/enhance measurement and verification (M&V) programs or methods. ● Develop/expand training/programs for capacity development. ● Undertake study to improve understanding of baseline emissions of apparel manufacturing such as with LCAs. ● Develop/expand technology to capture, store, repurpose, or reutilize carbon. ● Other No, my solution addresses levers listed in question 15	
12. How does your solution reduce emissions? *Please answer the following questions detailing how your solution reduces emissions, select all that apply.*	

Does your solution reduce emissions from natural fiber growth or synthetic fiber manufacture? *Please select all sub-levers that apply.* ● Reduce the CO_2e emissions intensity from conventional polyester manufacture. ● Replace polyester manufacture with bio-based alternatives. ● Reduce CO_2e emissions of conventional nylon/acrylic/elastane manufacture. ● Replace nylon/acrylic/elastane manufacture with bio-based alternatives. ● Improve pesticide/fertilizer application technologies or practices. ● Improve irrigation efficiency & energy source. ● Reduce energy intensity of fertilizer production. ● Replace/supplement ginning with renewable energy sources. ● Improve efficiency of ginning practices. ● Reduce CO_2e emissions intensity of pulp production.	
Does your solution reduce process demand for energy? *Please select all sub-levers that apply.* ● Undertake/expand overall factory energy efficiency assessment and reduction programs. ● Use less heat/lower temperatures. ● Use less and lower temperature hot water. ● Use less electricity. ● Optimize process engineering and production planning for tCO_2e reduction.	
Does your solution reduce energy losses?	

Please select all sub-levers that apply. • Undertake/expand overall factory energy efficiency assessment and reduction programs. • Insulation. • Improve boiler utilization and efficiency. • Improve generator utilization and efficiency. • Maximize reuse of heat and hot water.	
Does your solution reduce/eliminate tCO_2e emitted from generating head and electricity? *Please select all sub-levers that apply.* • Switch to lower carbon thermal energy sources. • Reduce intensity of generation of thermal energy. • Maximize reliance on renewable sources of energy. • Electrify equipment currently running on fossil fuel.	
Does your solution minimize waste in production? *Please select all sub-levers that apply.* • Plan production to minimize running empty machines, numbers of cleanings, underloading machines etc. • Automate error detection in knitting machines. • Reduce woven waste via wider looms etc. • Improve right-first-time dyeing. • Eliminate/reduce sample manufacture. • Improve pattern layout, including with computer aided design tools. • Advance color visualization/assessment techniques that do not require physically preparing samples.	
Does your solution maximize (circular) reuse of fibers and fabrics? *Please select all sub-levers that apply.*	

• Enhance sorting for fabric type to identify composition and blend. • Enhance technology for separating fiber types. • Accelerate/enhance mechanical recycling of fibers. • Accelerate/enhance chemical recycling of fibers. • Develop methods to reuse fibers, returning into manufacturing process to become fabric. • Develop and expand recycling of chemicals used in manufacture.	
13. Please select the grant project type for which you are seeking funding. • Intervention / program i.e. facility energy efficiency program, smallholder farm improved agricultural practices etc. • Deployment of best available technology (BAT). • Deployment of BAT+ (a technology on its way to BAT that is very promising but only operating at commercial scale in a few locations). • Deployment of new innovation. • Capital Expenditure. • Research / enabler of decarbonization. • Other By selecting "Research / enabler of decarbonization," you acknowledge that you may not be eligible for funding as outlined in our grant funding thesis.	If you chose Other, please define the project type.

Solution Description	
14. Name of Solution:	Solution name or project title.

15a. What sectoral decarbonization obstacle or opportunity does your grant project address?	e.g. eliminating technical obstacles to electrification, piloting opportunities, moving away from GHG- & water-intensive dyeing, reducing production waste, overcoming minimum order quantities for dope dyeing. Please be specific and describe how overcoming this obstacle or leveraging this opportunity could help the sector achieve its 2030 and net zero goals. 150 word limit.
15b. Please describe how your grant project will address this obstacle or opportunity.	With this question, we want to learn about your project concept and how it will help address the sectoral decarbonization obstacle or opportunity identified in the previous question. 150 word limit.
15c. Please explain how the grant's proposed climate solution works to cut down emissions in its area of the supply chain.	Please explain the technical mechanisms by which the grant's proposed climate solution reduces emissions in its area of the supply chain. i.e. this machine reduces emissions as it only needs to be heated at 30C instead of 75C.... We should be able to clearly follow the logic in this response and compare it against the effectiveness calculations submitted in question 33..100-word limit.
15d. Please list the steps and milestones you plan to take in this grant project.	We assume all grant projects have a detailed project plan, which was used to develop this funding request. We will not request that detail at this stage. Instead, please list a step-by-step overview of the activities you will undertake with the grant funding along with key milestones. A detailed project plan will be requested if the applicant reaches the pitching stage. 100-word limit.
16. How will success be evaluated in accordance with the purpose of the grant?	Please state the deliverables and Key Performance Indicators you will be tracking to demonstrate project success. 100-word limit.

2.3. Reach

Definition: The Reach of a solution is the percentage of the tCO_2e emissions of the industry that the solution can potentially affect.

Solutions that address a large percentage of current industry production – for example, those applicable to all processes involving polyester or all weaving processes – will have a larger reach than those that address smaller parts of the industry, such as fiber dyeing of lyocell.

Reach questions	

17. Please select the Tier your solution affects. You will then be prompted to select the process within that Tier your solution affects. Please select all that apply.
● Tier 0 (brand/design)
● Tier 1
  o Laying/cutting
  o Sewing
  o Finishing
● Tier 2
  o All fabric construction
  ▪ Weft knit
  ▪ Warp knit
  ▪ Weaving
  ▪ Knitwear
  o All dyeing
  ▪ Dope dye
  ▪ Fiber dye
  ▪ Batch dye
  ▪ Yarn/fiber dye
  ▪ Continuous dye
● Tier 3
  o Polyester yarn formation
  o Cotton yarn formation
  o Viscose/lyocell yarn formation
  o Nylon yarn formation	

Reach questions	
o Acrylic yarn formation o Other mmcf yarn formation o Elastane yarn formation o Wool yarn formation o Poly propylene formation o Other plant yarn formation ● Tier 4 o Polyester feedstock/precursor production or polymerization o Cotton agriculture & ginning o Viscose/lyocell agriculture & fiber o Nylon feedstock/precursor production or polymerization o Acrylic feedstock/precursor production or polymerization o Other mmcf agriculture & fiber o Elastane feedstock/precursor production or polymerization o Wool agriculture & scouring o Poly propylene feedstock/precursor production or polymerization o Other plant agriculture	
18. Please select the energy type your solution impacts (if applicable) ● Heat ● Electricity	

Reach questions	
• N/A – if your project focuses on reducing inputs that are not energy (e.g. fertilizer application), just select N/A.	

2.4. Scale Estimate, Including Cost of the Solution

Definition**:** Scale is a credible, realistic projection of how quickly a solution can be implemented to achieve its maximum potential savings, considering factors that either enhance or inhibit its growth.

Many promising solutions may face hurdles that will limit achieving their maximum potential reach. In the scale section, we are seeking credible, realistic projections of how quickly and extensively the proposed solution can be implemented and scaled, bearing in mind the practicalities, pinch points, and market forces that the applicant sees on the road ahead. Applicants are requested to estimate the percentage of the incumbent typical process that can realistically be replaced or improved by the solution in the coming six years (i.e., by 2030) and to provide the factors considered in their projection.

The most important scale barrier will often be the "business case" (e.g., costs, potential savings, and the corresponding payback/return on investment), which is why we request detailed information on this topic. Other barriers, for example, may include raw material supply issues; technical limitations; or legislative/regulatory policies that would impede adoption, number of machines, or amount of chemical that can be manufactured.

Applicants should be very clear with information regarding their existing market share, production volumes, competition, patents, and so forth when presenting projections.

Scale	
19. What is the current state of commercialization of the solution?	

Scale	
• 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 in order to demonstrate 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.	
20. Please describe the current scale of your solution using the most relevant metric (e.g. production volume, number of facilities using solution, % market penetration)	
21. How do you plan to increase the scale level once the grant project has concluded?	Please consider how the implementation of your solution will continue once the grant project ends. It is important to explain how the grant funding and the project activities it supports will enable post-project scaling of the solution. 75-word limit.
22. What previous experience do you have that will enable the successful delivery of this grant project as well as its scale post project?	75-word limit
23. If you have a business plan outlining your 2030 plan to scale, please submit this here.	
24. If you are already working with brands or textile manufacturers, please list them here.	
25. Please list the countries in which the solution is being deployed.	
26. Has this solution been applied in other sectors?	

Solution Costs and Barriers	
27. What is the cost of implementing this solution (post-grant) for implementing sites?	One-time implementation & recurring annual costs. Please state this on a per site basis. This should be the regular cost of a site implementing the solution (i.e., when not part of a grant-funded program). USD ● One-time implementation cost ● Recurring annual costs
28. Please provide the anticipated recurring annual financial savings of the solution in USD (e.g., using less purchased electricity), if applicable.	USD

Solution Costs and Barriers	
29. Please select the barriers your solution has to scale and provide a description It is required to select at least one barrier; there are no solutions that do not have barriers to implementation. These may be standard barriers; we still wish to know what they are. ● Licensing and sharing of intellectual property (IP). ● Implementation requires loan/credit worthiness/ good financial standing. ● Complexity of implementation, need for technical assistance. ● Limited knowledge/understanding of business case, vendors. ● Contracting/need for legal counsel. ● Inadequate space/building/infrastructure. ● Raw material/input supply limitations or uncertainty. ● Lack of supporting policy frameworks. ● Controversy of effectiveness. ● Perception of risk by facilities/farmers/brands. ● Lack of supporting market infrastructure. ● Other	Provide an explanation for each barrier selected. (30-word limit per explanation)
30. Are there any adverse impacts associated with this solution?	If yes, please describe.

2.5. Ready Reckoner & Effectiveness Calculations

Using the guidance in Appendix A and B please complete the calculations for your solution in the Ready Reckoner: Solution Impact Evaluator and submit the results and the file in this section.

Effectiveness

Please note that it is a requirement for your CO_2e % reductions to be made relative to our baselines, which are provided in the appendix to the Ready Reckoner. This helps us to objectively compare the Effectiveness of solutions. Calculations done in the provided documents should be uploaded into the application. Should you wish to include your own calculations relative to your baselines, please do; however, we will be focusing on the reduction potential relative to the standard baselines for consistency.

Please read the instructions on how to calculate effectiveness and how to use the Ready Reckoner in APPENDIX A

Reach

The data file used by the Ready Reckoner contains the emissions per process and the volumes processed which essentially maps the CO_2e emissions across the whole supply chain. The Ready Reckoner uses simple drop downs that enable auto-calculation of Reach, but please provide answers below to enable cross-checking.

Scale

Unlike the calculations for effectiveness and reach, it will be impossible for applicants to determine with certainty the speed and extent of scale for many solutions. We will assess the information provided in the application and may request further details where we believe scale projections to be overly optimistic. A willingness to work collaboratively, share knowledge, and even license/share intellectual property (IP) to maximize the scale potential of the solution will be viewed favorably.

Quantifying scale: Process summary

- Applicant to estimate the percentage of the incumbent typical process that can realistically be replaced or improved by the solution.
- Applicant to consider a timeframe of a) the end of project funding and b) the next six years (i.e., by 2030).
- Applicant to provide the factors considered in their projection.
- Aii to assess the information provided; further details may be requested if we believe scale projections to be overly optimistic.

Please see APPENDIX A for advice on how to estimate projected scale of a solution

31. Please insert the following figures from your Ready Reckoner Calculation	
Reach (in MT CO_2)	Please take these figures from your Ready Reckoner: Solution Impact Evaluator calculations. It is important to note that the results from this portion of the tool are in mega tonnes. If your MPS or projected annual savings come out as less than 1 MT, please express them in tCO_2e. This includes not only the Aii grant funding request but any other sources of funding contributing to this project.
% Effectiveness (electricity)	
% Effectiveness (heat/direct fuel)	
MPS (MT CO_2)	
Geographically Restricted MPS (If different from above) (MT CO_2)	
Projected Annual Savings by end of funded project (MT CO_2)	
Projected Annual Savings by 2030 (MT CO_2)	
% of MPS will be achieved by the end of the project funding	
% of MPS will be achieved by 2030?	
$/$tCO_2e$ for the grant project?	
32. Please upload your completed Ready Reckoner: Solutions Impact Evaluator.	

Percentage Reduction vs baseline model process	
33. Please upload the spreadsheet you have used to do the Effectiveness calculations. Please make sure you have consulted the application guidance in your calculations and provided all necessary underlying data.	Here we want to see how the solution arrives at its % reduction vs Aii's baselines. The qualitative description of how the solution reduces emissions (question 17) should match the quantitative submission to this question. Reviewers need to see how you come to the CO2e/kg production %.
34. Did you use measurement data or estimates for the effectiveness calculations?	If secondary/estimates is selected an explanation of methodology, sources and assumptions must be provided.

• Measurement • Secondary/estimates	
35. If our baseline data was in conflict with the figures you use in your impact projections, please provide an overview here.	We will take these conflicts into consideration when evaluating the effectiveness calculations.
36. Has a third party audited any previously calculated tCO_2e emissions savings studies?	Please upload the associated documents.
37. Grantees are required to externally report on tCO2e reductions upon project completion. They are also required to provide Aii with quarterly progress updates, submit deliverables, and achieve project milestones. Are you able to meet this requirement?	Grant projects must provide evidence of emissions reductions resulting from the grant. Impact reporting is a core condition of grant funding, and this impact will be communicated externally once the project has concluded. Please see Appendix C for an overview of what we require from grantees.

2.6. Funding Request

Below, applicants must specify details on the requested grant funding. Please provide a summary of the funding request (in USD), duration, and added value it may generate (e.g., match funding from other sources). Proposals with anticipated or existing matched funding may receive preferential consideration. Please include any exchange rate, tax, and travel needs in your pricing – decisions can only be made based on the full funding amount. If invited to pitch, the applicant will be asked to provide line-item costing for detailed auditing of the funding request.

Funding request	
38. What is the total funding request from Aii?	• USD amount • Number of years
39. What is the funding request per year?	Fill in table with USD amount per year of the grant. This should be based on the activities taking place each year, not the total divided by the number of years. This implies a detailed project costing has taken place.

Funding request	
40. Please split funding request into the following categories:	A table will be provided to split the funding request into: • Personnel costs • External personnel costs • Hard expenses (i.e., any physical goods needed to deliver the project that must be procured) • Travel expenses, implementation costs. (Please note that if invited to pitch, the applicant will have to share personnel day rates and break the funding down against the activities of the grant project).
41. Please list any other funding sources secured for this project:	Fill in the table with any additional funding you may have already secured for this project.
42. Do you have any request for support from Aii for this project in addition to grant funding?	• None • Textile manufacturer recruitment for program enrollment • Other Aii can support matchmaking, but, where applicable, it is ultimately the applicant's responsibility to make sure there are sufficient participants in the project. Therefore, recruitment must be priced into the grant funding request. This would be a joint effort for enrollment.
43. If your solution has any other benefits such as reducing water consumption, chemistry or social please describe these here.	

3.Invitation to Pitch

Applicants invited to pitch will receive an email notifying them they have successfully progressed to the next stage of the process. If applicants do not receive an email by the June, the applicant has not been successful. Please make sure primary and secondary contact

details are provided in the application. **If we do not hear back from an applicant within five working days, they will not be able to participate in the pitching stage. Pitch invitation emails will go out in the last week of May.**

The purpose of the pitch is to bring the application to life and to give the CSPAC the chance to ask questions about the project, data, funding ask, scale plans etc. A pitch template will be sent to the applicant ahead of the pitch. The applicant must restrict their pitch to the provided format and slide numbers to allow for fair comparison between pitches. Each presentation should be 35 minutes and will be followed by at least 10 minutes of Q&A. The total pitch session will be 45 minutes.

Ahead of the pitch, there will be an in-depth data review of the calculations submitted by the applicant. Please be prepared to respond to clarifying questions on calculation methods and data in that period. Further questions may also be asked during the pitch.

In addition to the presentation, the applicant will be asked to provide a Gannt chart to demonstrate the details and timelines associated with the grant project. Building on this, we will request a more detailed view of the funding request, which we expect to be broken down into specific line items that match the project plan. Please be prepared to defend the costs associated with the grant project as part of the pitch Q&A.

4. Application Feedback

Applicants who do not make it to the pitching stage will receive an automated email letting them know they were, unfortunately, unsuccessful. Due to the volume of applications, we will not provide tailored feedback to applicants that are not invited to the pitching stage. We will publish general insights from the applications once the grants have been awarded.

Only applicants who have been invited to pitch will receive specific feedback.

5. Appendices

5.1. Appendix A – Effectiveness Calculation & Ready Reckoner: Solutions Impact Evaluator

The Ready Reckoner is created using data from the WRI "Roadmap to Net Zero" report, other publicly available data sources, and subject matter experts' professional judgment. It uses data from a master file that holds information on:

- volumes processed at each stage of production
- the typical energy use of individual processes and sub-processes (provided in the Ready Reckoner appendix)
- the typical split between electrical and heat energy (provided in the Ready Reckoner appendix)
- calculations for CO_2 emissions based on our default emission factor of 279.82 g CO_2 per kWh

This master file is created using typical industrial processes to allow comparisons of varied solutions, but if applicants believe the baseline data does not fairly represent their specific solution, we welcome feedback.

We strive to continuously improve the master data file and will revise it via expert input on an ongoing basis. Please note that the level of detail in the benchmark values in the tool varies by tier, reflecting the current state of available data. This will be updated annually as we expect industry data to improve.

In order to use the Ready Reckoner, applicants must have the following information at hand:

- **Detailed information on where the solution is applied in the textile manufacturing process (or, for circularity or quality improvement solutions, where the benefits are delivered)**
- **A calculation for the effectiveness of a solution in terms of % reduction of tCO_2e emissions for both electricity and heat energy, in relation to typical baseline processes detailed in the appendix of the Ready Reckoner.**
- For solutions that are geographically restricted and will remain geographically restricted (e.g., a factory project in a specific country), applicants must be able to estimate the % of relevant global industry that is conducted in that region (e.g., a project working with cotton spinners in Brazil would estimate that Brazilian spinning factories represent X% of all cotton spinning capacity).
- For solutions that are geographically restricted, applicants must decide if they will use the Aii default CO_2 emissions factor. If they wish to use a local emissions factor, they must have details of local factory fuel use and details of the fuel use for the local electrical grid.
- For solutions that are geographically restricted in a pilot phase with a view to global roll-out, there is no requirement to consider geographical restrictions.
- **A realistic projection of the speed of scale and roll-out of the solution**

    - **By the end of the funding period**
    - **By 2023**
- **The total funding request in USD.**

All applicants must input this key information into the Ready Reckoner. he applicants and Aii will be provided with information on the following to enable objective comparison of different solutions:

- The Reach of the solution
- The Maximum Potential Savings (MPS) of CO_2 (a combination of the Reach and the Effectiveness of the solution)
- Where relevant, any effect of geographical restrictions on MPS and any effect of local emission factors
- A projection of the CO_2 savings per annum based on projected scale and roll-out
- An estimate of the annual CO_2 savings per $ of funding

The applicant can download the Ready Reckoner: Solutions Impact Evaluator from within the application.

5.2. How to Calculate the Effectiveness of the Solution

The appendix to the Ready Reckoner has a table containing the typical energy use for a tier, process, or sub-process n kWh / kg.

This figure is typical gross energy use (i.e., including inefficiency of boilers/gensets, underloading of machines, errors, etc.), and within the Ready Reckoner is a default conversion factor of 279.82 g CO_2 / kWh.

This kWh / kg figure is also supplemented with an estimate for the split between electrical energy and heat (or direct fuel use) energy.

The table also contains details of the model process that is used as the baseline. These must be used when providing figures for the effectiveness of solutions to allow a fair and objective comparison of solutions.

For example:

If a solution enables a medium-shade reactive jet dyeing of cotton to be washed off in three baths @ 7:1 liquor ratio, the baseline model process of a 6-bath wash-off process must be used for calculation purposes, even if previously the applicant has compared their solution to a notional 8-bath wash-off process.

If a solution saves energy in spinning of nylon yarns, the energy saving must be calculated against spinning of a 170 dtex yarn.

- Calculate the % reductions in emissions due to electricity (this can be reducing electricity use, improving efficiency of generation, and delivery or introduction of renewable energy) relative to the baselines provided in the Ready Reckoner appendix.
- Calculate the % reductions in emissions due to heat or direct fuel use (this can be reducing heat or fuel demand, improving efficiency of generation, and delivery of steam or electrification with introduction of renewable energy) relative to the baselines provided in the Ready Reckoner appendix.

How to Estimate Scale
When estimating the realistic scale of a solution the following should be considered:

- The MPS (maximum potential savings of CO_2) is calculated by combining the Reach of the solution and the % savings of the solution relative to baseline process figures
    - The MPS assumes the solution is rolled out to every single relevant process in every single relevant facility and is therefore a notional figure.
    - We need a realistic estimate for the % of MPS to which the solution will be applied a) by the end of project funding and b) by 2030.

Estimating scale is not straightforward, but we expect applicants to demonstrate how they have arrived at their figures and to apply the following type of logic:

- If it is reasonably anticipated that the solution will be applied to a certain tonnage of production, the figures should be compared to the volume figures in the Ready Reckoner appendix (e.g., if a solution for reducing the impact of polyester fiber manufacture is anticipated to be applied to 2 MT per year by 2030, it would represent ($2 \div 45.4 \times 100 = 4.41\%$) of MPS).

- If the solution is to be rolled out on a facility-by-facility basis, we would expect a reasonable estimate of the facility's production capacity to be used. For example, it would be reasonable to assume that an average dyehouse has a daily capacity of around 15 tonnes or ~4320 tonnes per year. If a wet processing facility improvement program were to be rolled out to 200 facilities by 2030, it would represent ~864,000 tonnes (0.864 MT). From the Ready Reckoner appendix, it can be estimated that dyeing accounts for around 87.6 MT, so the scale would be ~1% of MPS.

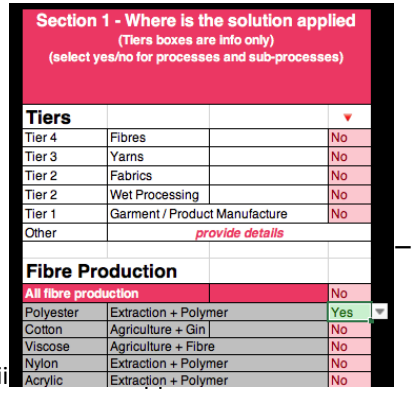
- If a solution is an easy, low cost, drop-in solution for part of the supply chain where there are limited numbers of a facility type (e.g., rope and slasher dyeing of indigo), it is conceivable that the scale could be much higher.

- Drop-in solutions to existing processes, such as new chemicals, that require no capital investment are seemingly very easy to scale in terms of *adoption,* but we also need to know about the scaling of production as this may be the limiting factor. If sufficient chemicals to service only 5% of potential industry can be produced by 2030, the scale will be capped at 5%.

- Similarly, if new machines need to be produced to deploy a solution, the numbers of machines that can actually be manufactured and their production capacity must be factored into the scale figure.

The CSPAC will make a judgement on whether the cost of a solution or any drawbacks compared to incumbent technology will negatively affect the scale.

5.3. How to use the Ready Reckoner

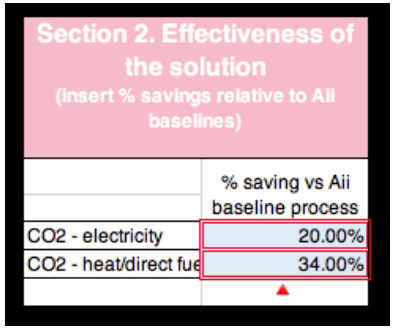


Section 1 - Where is the solution applied (Tiers boxes are info only) (select yes/no for processes and sub-processes)			
Tiers			
Tier 4	Fibres		No
Tier 3	Yarns		No
Tier 2	Fabrics		No
Tier 2	Wet Processing		No
Tier 1	Garment / Product Manufacture		No
Other	*provide details*		
Fibre Production			
All fibre production			No
Polyester	Extraction + Polymer		Yes
Cotton	Agriculture + Gin		No
Viscose	Agriculture + Fibre		No
Nylon	Extraction + Polymer		No
Acrylic	Extraction + Polymer		No

1. Select the exact parts in the supply chain where the solution is applied.
    a. If the solution applies to a sub-process only (e.g., only the dye application sub-process of a dyeing process), then the sub-process alone should be selected.
    b. If the solution applies all sub-processes within a process, please only select the whole process

       do not select the process AND the sub-processes.

Note: The tiers drop-down selection is for informational purposes only.



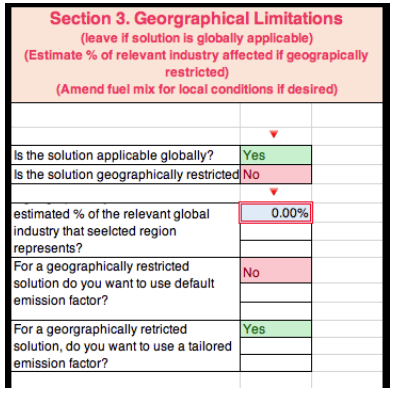
Section 2. Effectiveness of the solution
(Insert % savings relative to Aii baselines)

	% saving vs Aii baseline process
CO2 - electricity	20.00%
CO2 - heat/direct fue	34.00%

2. The Reach (i.e., % of the total industry CO_2 emissions) will be automatically calculated.

3. Effectiveness - Input the % reductions for emissions due to electricity and heat.

4. The MPS (Maximum Potential Savings of CO_2) is automatically calculated.

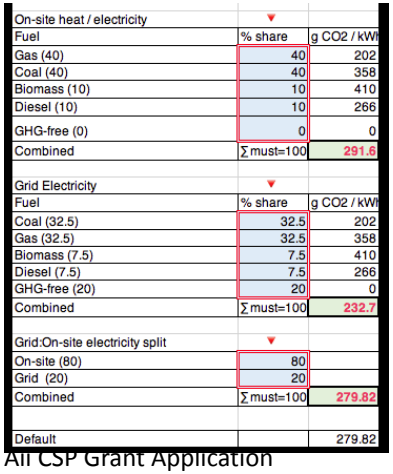


Section 3. Georgraphical Limitations
(leave if solution is globally applicable)
(Estimate % of relevant industry affected if geograpically restricted)
(Amend fuel mix for local conditions if desired)

Is the solution applicable globally?	Yes
Is the solution geographically restricted	No
estimated % of the relevant global industry that seelcted region represents?	0.00%
For a geographically restricted solution do you want to use default emission factor?	No
For a georgraphically retricted solution, do you want to use a tailored emission factor?	Yes

5. Select whether the project is global or geographically restricted (the default is set as global).
   a. If the project is geographically restricted, estimate the % of relevant global industry that is carried out in that region.
   b. If the project is geographically restricted during the funding stage but will then be global, please use the default global option.

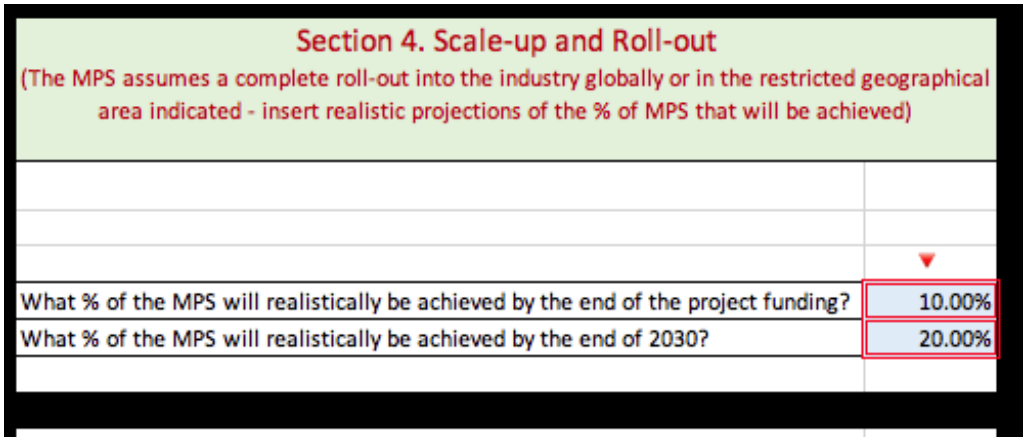
6. For globally restricted solutions, select whether you will use our default emissions factors or whether you want to create a local emission factor.
   a. To create a local emission factor, please fill in data for the % split of factory fuel type, fuel types for the local grid, and the split between grid and on-site electricity for the specific location.



On-site heat / electricity		
Fuel	% share	g CO2 / kW
Gas (40)	40	202
Coal (40)	40	358
Biomass (10)	10	410
Diesel (10)	10	266
GHG-free (0)	0	0
Combined	∑must=100	291.6
Grid Electricity		
Fuel	% share	g CO2 / kW
Coal (32.5)	32.5	202
Gas (32.5)	32.5	358
Biomass (7.5)	7.5	410
Diesel (7.5)	7.5	266
GHG-free (20)	20	0
Combined	∑must=100	232.7
Grid:On-site electricity split		
On-site (80)	80	
Grid (20)	20	
Combined	∑must=100	279.82
Default		279.82

7. The MPS after any geographical restrictions will be automatically calculated.

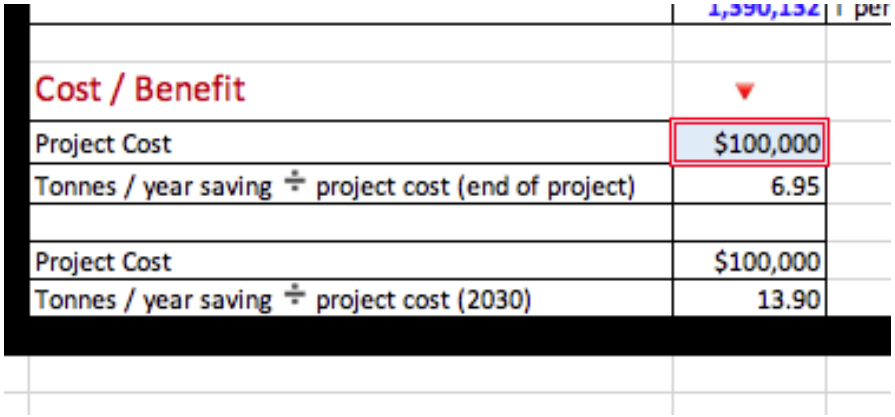
8. Scale / Roll-out - Enter the % of MPS that can be realistically achieved during the project funding cycle and by 2030.
    - The MPS (maximum potential saving of CO_2) represent the saving if there was a complete roll-out of the solution, which will be impossible to achieve in almost every case.
    - rojected roll-out is subjective, but figures will be sense-checked. For example, Aii will use typical facility daily or yearly capacities.



Section 4. Scale-up and Roll-out (The MPS assumes a complete roll-out into the industry globally or in the restricted geographical area indicated - insert realistic projections of the % of MPS that will be achieved)	
What % of the MPS will realistically be achieved by the end of the project funding?	10.00%
What % of the MPS will realistically be achieved by the end of 2030?	20.00%

9. The projected annual savings of CO_2 will be automatically calculated.

10. Enter the total amount of funding requested.



Cost / Benefit	
Project Cost	$100,000
Tonnes / year saving ÷ project cost (end of project)	6.95
Project Cost	$100,000
Tonnes / year saving ÷ project cost (2030)	13.90

11. The cost benefit figure will be automatically calculated.

5.4. Appendix B – Example Calculations Ready Reckoner: Solutions Impact Evaluator

There are an incredibly diverse range of potential solutions to reduce tCO_2e emissions in the supply chain, and the Ready Reckoner covers most scenarios in a relatively straightforward way.

However, others may be a little more complex.

Example 1: A wet processing mill improvement program, with a verified history of saving 10% of heat energy and 5% of electrical energy, ready for global rollout

Section 1: Select "All wet processing" from the drop-down box.
Section 2: Input 5% in the electricity and 10% in the heat box for effectiveness.
Section 3: Confirm that the solution is applicable globally.
Section 4: Provide a realistic figure for the % of MPS that can be achieved a) by the end of project funding cycle and b) by 2030.

Example 2: A solar PV project restricted to cotton weavers in India that can save 25% of electrical energy.

Section 1: Select “Cotton Weaving” from the drop-down box.
Section 2: Input 25% in the electricity and 0% in the heat box for effectiveness.
Section 3: Select “No” for applicable globally and ‘Yes” for geographically restricted.
Enter a figure for the % of global cotton weaving that you believe is carried out in India.
Choose if you wish to use emission factor defaults.
If you wish to use tailored emission factors, choose this option and enter regional factory fuel data, regional grid fuel data, and the regional split between grid and on-site electricity generation.
Section 4: Provide a realistic figure for the % of MPS that can be achieved a) by the end of project funding cycle and b) by 2030.

Example 3: A new dye that enables batch-dyed polyester to be washed off in a single bath, halving the electricity and heat energy use in the wash-off process (preparation and dyeing remain unaffected).

Section 1: Select the “wash-off” sub-process box for polyester fiber/yarn dye and polyester fabric batch dye.
Section 2: Input the % electricity and % heat savings FOR THE SUB-PROCESS in the effectiveness box (i.e., 50% for each).
Section 3: Confirm that the solution is applicable globally.
Section 4: Provide a realistic figure for the % of MPS that can be achieved a) by the end of project funding cycle and b) by 2030.

Example 4: A recycling project that takes end-of-life dyed polyester garments, shreds them and re-uses the dyed yarns to make dyed yarns that require no dyeing, which can be made into weft-knitted fabrics with no wet processing. Project aims to process 2000 tonnes per annum by end of project funding.

This not a simple situation and requires a nuanced approach.

They key to calculating the projected annual savings is:

- Focus on where in the supply chain the benefits are *delivered.*

- Give credit to the innovator for potential reductions (e.g., the reduced use of virgin materials. Unless a project is shared with a major fiber producer, it may well be out of the hands of the solution as to whether their re-use of material actually results in less virgin fiber being produced, but we will assume that is the case).

In this example, the re-use of dyed fibers will reduce the need for virgin fibers. It will not reduce the need for spinning or fabric production; it will reduce the need for dyeing, and garment-making will remain unchanged.

The key to getting sensible figures is to be completely open and honest with the scale.

Section 1: Select "polyester fiber – extraction and polymerization" and all processes relating to polyester dyeing from the drop downs.
Section 2: Since the processes are eliminated, input 100% in the electricity and 100% in the heat box for effectiveness NOTE: This will generate a huge figure for MPS
Section 3: Select globally-applicable or regionally restricted and emissions factors, as appropriate. Bear in mind this applies to the original processing of virgin materials and will not be possible unless the provenance of the original fiber and dyeing was known.
Section 4: Input a realistic scale for the solution. The tonnage of virgin fibers is very large (for polyester it is 45.4 megatonnes) so the % of MPS achievable may be a fraction of 1%. If your value shows as 0%, please check the Excel input field at the top of the sheet to ensure the entered figure is correct. In this case, with a globally applicable solution, the % = 2000 / 45,400,000 * 100 = 0.0044%

Finally, you must generate a figure for the projected annual savings via the Ready Reckoner and then subtract the impacts of the recycling process.

Example 5: A quality improvement device that eliminates nylon weaving faults, reducing fabric wastage from 1% o 0%

Note: Volume of woven nylon = 2.1 megatonnes

They key to calculating the projected annual savings is:

- Focus on where in the supply chain the benefits are *delivered.*
- Give credit to the innovator for potential reductions – even if it is out of their hands and cannot be proved that they will be delivered.

On the face of it, this is a simple solution that delivers savings in weaving, but it is actually complex and may require more than one Ready Reckoner calculation.

Eliminating weaving faults would also mean that you can save 1% of the nylon fibers and 1% of the nylon yarns that are used in woven fabrics.

Additionally, weaving faults are not always easy to detect before dyeing, so it is reasonable to assume that at least half of the faults would go undetected, be dyed, and then rejected after dyeing. It is fair to say that 0.5% of the impacts of woven nylon dyeing could be save.

Calculation 1 – 1% savings in weaving

Section 1: Select "Nylon Weaving" from the drop-down box.
Section 2: Input 100% in the electricity and 100% in the heat box for effectiveness (since the processes are eliminated).
Section 3: Confirm that the solution is applicable globally .
Section 4: Input the scale: 2.10 MT of nylon is woven out of a total of 3.5 MT. The scale is (2.1/3.5)x1% = 0.6%.

Calculation 2 – 1% savings in virgin nylon used for woven fabric

Section 1: Select "Extraction and Polymer" from the dropdown box.
Section 2: Input 100% in the electricity and 100% in the heat box for effectiveness (since the processes are eliminated).
Section 3: Confirm that the solution is applicable globally.
Section 4: Input the scale: 2.10 MT of nylon is woven out of a total of 3.5 MT. The scale is (2.1/3.5)x1% = 0.6%.

Calculation 3 – 1% savings in nylon yarns used for woven fabric

Section 1: Select "Nylon Filament Spinning" from the dropdown box.
Section 2: Input 100% in the electricity and 100% in the heat box for effectiveness (since the processes are eliminated).

Section 3: Confirm that the solution is applicable globally.
Section 4: Input the scale: 2.10 MT of nylon is woven out of a total of 3.5 MT. The scale is (2.1/3.5)x1% = 0.6%.

Calculation 4 – 0.5% savings in dyeing of woven nylon fabric

Section 1: Select "Nylon Fabric Dye" from the dropdown box.
Section 2: Input 100% in the electricity and 100% in the heat box for effectiveness (since the processes are eliminated).
Section 3: Confirm that the solution is applicable globally.
Section 4: Input the scale: 2.10 MT of nylon is woven out of a total of 3.5 MT. The scale is (2.1/3.5)x0.5% = 0.3%.

In this example, the solution provider would be required to complete separate calculations, add the totals, and then subtract the impacts of the solution itself.

5.5. Appendix C – Grant Reporting Requirements

Grant impact reporting requirements

Aii expects the Grantee to submit impact data monitoring and project milestone & progress monitoring for quarterly reporting. his is summarized in one spreadsheet that we work with the Grantee to develop according to the requirements of their grant project. An Aii program manager will be assigned to monitor this grant. Any major obstacles that risk project success, on-time, and / or in-budget implementation, shall be reported to the program manager immediately, at latest during the monthly call and documented by a follow-up email.

In each quarterly progress call, there must be an update on the status of project implementation, review of deliverables associated with that quarter, as well as an update on the status of data and evidence reporting. The purpose is twofold: 1. to demonstrate the completion of milestones to receive scheduled payments and 2. to ensure impact reporting demonstrates the projected emissions reductions and meets quality standards for the final report and, ultimately, the Climate Solutions Portfolio page. Reporting will also be shared with brand facilities that are part of the project and have a relationship with Aii.

Please note that Aii is transitioning towards a third-party verified impact report, meaning projects' impact data should be of a verifiable quality. Aii therefore reserves the right to conduct third-party verification of the data reported by grantees at any point in time. Aii will cover the costs of this verification and will be the liaison between the Grantee and the verifying body.

A template will be provided at the kick-off that clearly states what the quarterly progress reporting requirements are. If the Grantee has any questions or concerns associated with the reporting requirements and associated evidence, these quarterly calls are a good place to discuss those. The Aii team has extensive expertise in program data collection and emissions reporting, and can provide suggestions and support in this area.

As deemed appropriate, Aii reserves the right to conduct a site visit. This would be conducted by local Aii staff to review the project. These visits are scheduled in agreement with the grantee with the purpose of learning and vetting the funded solution.

Aii will provide the template to be used for the final report. This will include a summary of how the funding was used (with supporting evidence), a final description of the project, and the outcomes from an impact perspective. The report should include learnings that will support future implementation and scaling. This report is intended to not only serve the reporting obligations to the Lead Funders and other Aii stakeholders but also support the Grantee in taking next steps to scale. This will also contribute to final communications that will be published externally upon Grantee approval.

Solutions Page

Grantees listed on the Climate Solutions Portfolio must display their projected project impact once they have been awarded the grant. After project completion, the grantee will become a Registrant and their page will be updated to show actual impact. The purpose of being a Registrant, and of having an up-to-date solutions page, is to demonstrate impact to date and impact potential to brands, facilities, and the financial community. These interested parties may then contact the Registrant to inquire about further deployment and scaling of the solution. By featuring this information transparently, the Registrant is supporting the industry's ability to measure contributions to 2030 goals.

The grantee agrees to transparently feature its solution and the solution's impact on Aii's Climate Solutions Portfolio platform and update the information, at minimum, on an annual basis following the grant project. These requirements will be covered in detail in the Grant Agreement.

The text below is an example of monitoring and reporting activity required for the solutions page.

The information published on the platform will include, where applicable:

- Number of brands using solution
- Number & country of facilities using solution
- Tier in which the solution takes place
- Average project/implementation duration
- Average investment per project (brand & facility)
- tCO_2e, energy, & any other KPI savings
    - Total historical
    - Average savings per facility on an annual basis
    - Total solution savings per year
- Financial savings associated with the solution
- Payback period
- Investment cost per tCO_2e reduced