# PROJECT **FRAME**

# Tool Showcase Synthesis

#### August 2023

Produced by the Project Frame Data & Tools Working Group Convened by Prime Coalition and World Fund



WORLD FUND

## **Contents**

INTRODUCTION	3
ACKNOWLEDGMENTS	6
FINDINGS	7
Climate Point	7
CRANE	11
GHG & Impact Estimator Tool	15
Impact Forecast	19
MoreScope	23
SESAME	27
CONCLUSION	31

## Introduction

#### The investment community is facing a crisis.

A rapidly-growing number of investors are launching climate or ESG funds with commitments to net-zero or carbon reduction thresholds. This forces the questions: How does one prove that an investment has the potential to reduce greenhouse gas emissions (GHG) and who is equipped to execute this work'?

Few investment teams, especially in the Venture Capital space, have the resources or access to the necessary expertise to build an in-house climate impact assessment team. This dilemma has highlighted the critical need for tools and resources to help investors make more informed, methodologically-driven, data-backed decisions at a more affordable cost. As a result, Project Frame followed the call to evaluate the market of available software tools that investors can use to support their need to assess forward-looking GHG impact.

## ABOUT PROJECT FRAME

Project Frame is a nonprofit program, convened by Prime Coalition, purpose-built to organize investors around forward-looking emissions impact methodology and reporting best practices.

Our aim is to improve Impact Measurement and Management (IMM) standards for climate-driven investments and to galvanize a network of leadership around transparency and collaboration.

The Project Frame community is rapidly growing. As of June 2023, we represent:

257 Investment Firms 8.46 Trillion USD total AUM 444 Billion USD AUM in VC/PE

## ABOUT THE DATA & TOOLS WORKING GROUP

The Project Frame Data & Tools Working Group was co-convened by Prime Coalition and World Fund in September 2022 with the mandate to evaluate the landscape of available software tools that ventures and investors could use to assess potential GHG Impact.

This voluntary working group was supported by investment and climate experts from 17 organizations across Europe, the United States, and Canada, many of which invest or support climate solutions globally. This report is the culmination of our collective work

#### What is

## Forward-Looking GHG Impact?

Forward-looking emissions assessments look to the future by developing scenarios to forecast what the potential climate impact of a solution could be if it were to receive capital and penetrate the market within a given period of time. This is separate from carbon footprinting, which retrospectively looks at a company or technology's emissions across the value chain and tries to reconcile previous emissions through improvements and the purchase of offsets.

To learn more about forward-looking GHG impact, we invite you to review Project Frame's recently released methodology guidance, *Pre-Investment Considerations: Diving Deeper into Assessing Future GHG Impact* as well as our glossary for orientation.

#### ABOUT THE TOOL SHOWCASE

Project Frame's first Tool Showcase, led by impact professionals for impact professionals, is meant to provide a general landscape overview of the strengths and opportunities the current market provides.

This is in no way structured or intended to be a competition between the tools or the software developers. Rather, we aim to illuminate the differences between the tools so that potential users can find the resource that is most appropriate for their unique needs.

The purpose of this synthesis is to provide the rapidly growing climate investment community with a resource to evaluate which tool or tools may complement their organization as they strive

to better understand the potential emissions impact of a given venture, sector, or investment. This exercise was equally intended to provide unvarnished feedback to the developers themselves, so they can continue to improve their resources for a rapidly growing market of clients in need of their support. Beyond supporting more efficient and data-driven impact practices, our goal is to encourage tool development towards increased interoperability, meet investor needs, and to facilitate a more heterogeneous and transparent data landscape.

The Data & Tools Working
Group met regularly to first
decide the parameters for
qualification, develop the
expressions of interest
questionnaire, as well as the
evaluation framework for each

tool. We took inspiration from Responsible Innovation Lab's Carbon Accounting Tools Report, but solely focused on tools with the ability to assist with forward-looking emissions analysis.

We want to acknowledge that Prime Coalition, the convener of Project Frame, is a partner in the development of the CRANE tool. To avoid bias, we ensured that all reviewers confirmed no conflicts of interest before participating in the showcase. We also want to acknowledge that we did include some tool developers in the Data & Tools Working Group to provide input on the general review process, but ensured guardrails so that no proprietary information or data was shared between developers.

## **Summary**

## Software is not a 'silver bullet' or one-stop resource for predicting and delivering climate impact.

Behind every impact figure there lies a larger theory of change that includes a number of critical assumptions. However, software tools have the ability to move the investment community forward by supporting better decisionmaking as part of the due diligence process.

After reviewing submissions to the Project Frame Data & Tools Working Group's expression of interest, six tools were identified that fit our criteria for evaluation. We were pleasantly surprised to receive over 30 applicants including several entries for tools that do not evaluate forward-looking impact, but have the potential to be critical in helping companies and investors report realized impact. This inspired us to build a self-reported and continuously maintained GHG Impact Resource Dashboard,

which we will discuss further in the conclusion.

Each tool received at least six reviews (49 reviews were submitted from 20 reviewers). however, some received more than others based on perceived accessibility by the reviewers themselves. A table is included below with a synthesis of the reviewers feedback, complemented by answers to several of questions by the tool developers themselves. Below each table we have included a subset of quotes from the reviewers. After this information was received, we shared the raw, anonymized, data with the tool developers to assist future iterations of development. Lastly, each developer was given the opportunity to include a 250 word summary response about their future plans and next steps.

#### **KEY FINDINGS**

- Overall excitement and optimism from the investment community.
- Need for consistent terminology, such as how scopes and/or methodological terms are defined.
- All tools were wellreceived, however some
  tools sacrificed depth
  for simplicity, while
  others required higher
  consultative involvement
  for outputs.
- Access to auditable data is critical for transparency and building trust.
- Tools require additional expertise to be fully effective, which can be cost prohibitive

#### **ACKNOWLEDGEMENTS**

We would like to take this time to thank our tool developers, tool reviewers, and the Data & Tools Working Group for their participation and commitment for their role in supporting the transition to more transparent and accountable climate investing. Please note that this list is not comprehensive and only includes those who provided their permission to be named.

#### **Tools**

ClimatePoint Connect CRANE GHG & Impact Estimator Tool Impact Forecast MoreScope Sesame

#### **Tool Reviewers**

Autodesk
Azolla Ventures
Clean Energy Ventures
Climate Investments
Innovation, Science and
Economic Development Canada
MaRS Discovery District

MUUS Climate Partners
Nysnø Climate Investments
One Point Five

OnePointFive Prime Coalition SET Ventures Tideline

Vernal Ventures
Vidia Equity
World Fund

#### **Data & Tools Working Group**

Alberta Ecotrust

Autodesk

Azolla Ventures Blackhorn Ventures Clean Energy Ventures

Climatescape

Climate Investments Innovation, Science and

**Economic Development Canada** 

Kara

Nysnø Climate Investments

Persefoni Prime Coalition Rho Impact

Scope Four Capital Third Derivative

Tideline
Triple Point
True Ventures
World Fund

We also want to provide special thanks to the Prime Coalition and World Fund teams for their leadership and support to make this report a reality.

Project Frame is not a regulatory body, nor should its content be considered financial advice. Methodology guidance produced by Project Frame represents our contributors' consensus and no one singular entity. Our work is intended for readers to review and use their best judgment to accelerate GHG mitigation with transparency and accountability.

Project Frame is a nonprofit program convened by Prime Coalition, a nonprofit 501(c)(3), catalytic investor, and co-creator of the CRANE tool.

Project Frame does not accept direct funding from its members. Rather, it operates through grants provided to Prime. We thank those who wish to make <u>a donation</u> to support Prime Coalition's work and join our shared mission to advance impact accountability in climate investing. Donations by Frame community members will be anonymized to program staff.

## ClimatePoint Connect



QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Primary Users or Customers	Venture Capital Private Equity LCA Impact Specialist Government Philanthropy LP Consultant Academica Corporations Startups	Venture Capital Private Equity LCA Impact Specialist Philanthropy LP
Level of Analysis	Unit Company Fund, Portfolio Market	Unit Company Fund, Portfolio
Sector Focus	General (economy-wide) Sector-specific	General
Geographic Focus	not specified Europe Global Depends on the unit - case by case	Global
Cost/Affordability	appears relatively costly due to paid service offering free (for startups in germany) 100 000 USD/yr 6,000-12,000 EUR unknown custom pricing for other tiers	N/A
Revenue Model	Fee per-assessment Open access or open source (free) Subscription license Free initial use, fee for additional services	Subscription license; Fee per- assessment
Emissions Scopes Covered	Scope 1, Scope 2, Scope 3, Scope 4 (avoided emissions)	Scope 1, Scope 2, Scope 3, Scope 4

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Unit Impact: Is the tool able to calculate the GHG impact of a single unit?	Yes	Yes
Does the tool have the ability to calculate GHG impact of technology or solution that facilitates or enables GHG reduction?	Mostly Yes	Yes
Does the output show forward-looking projections? (potential impact, planned impact, or both?)	Planned Impact Both	Both
Does the output clearly state the time horizon of the projections?	Yes	Yes
Can the user distinguish Global Warming Potential?	Mixed Results	Yes
Is the output supported by any known frameworks/standards (for example; SDGs, IRIS+, etc.)?	Mostly Yes	Yes
If yes, which known framework/ standard do you follow?	ISO 14040 , GHG Protocol, SDGs, SFDR, PRI, EU Taxonomy, IRIS+, TCFD0, Project Frame	ISO 1440; Project Frame Methodology; UN Global Compact; PRI; UN SDGs
Does the output aid in regulatory compliance? (SFDR, UNPRI, SBTi, etc.)	Mostly Yes	Yes
If yes, which regulatory compliance agency?	SFDR, SBTI, TCFD, CDP, PRI, PAIs, ISO 14040	SFDR; EU Taxonomy; TCFD
Do you feel the output will aid in your pre-investment screening? (If applicable)	In part, under certain circumstances (6) Yes, significantly (2) No N/A	N/A
Do you feel the outputs will aid in your impact reporting? (If applicable)	In part, under certain circumstances (3) Yes, significantly (5) N/A (2)	N/a
Would a third-party be able to verify or audit the report outputs?	Yes	No response provided
Can the tool save or store your work to access and revise later?	Mostly Yes	Yes
Are data sources and assumptions clear/listed?	Mostly Yes	Yes

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Can this tool's data outputs be integrated with other software platforms/tools?	Mostly No	Yes
Can the tool pull data (as an input) from a variety of other sources and/ or formats?	Mixed Results	Yes
Can the tool self-calibrate data sources to ensure reasonable assumptions (i.e. are there guardrails to ensure the outputs are reasonable?)	Somewhat, the tool provides a rationale or impact education at every step of its calculation (7) Yes, the tool provides a rationale or detailed impact education at every step of its calculation and includes plausibility checks (2) No	Yes
How easy is the tool to use?	Relatively easy; you need some orientation, but require little support (4) Somewhat challenging; requires some support from the developer (3) Expert Required; Outputs can only be achieved in collaboration with the developer (3)	
Quality of Customer Service (if applicable)	Satisfactory (8) N/A (2)	N/A

I find that it's a bit rough around the edges - hard to understand exactly what things mean due to inconsistent nomenclature and strange presentation choices. That being said, it is clearly one of the most mature and usable tools on the market today.

Super detailed. I love the breakdown of impact by scope, the climate point showing where avoided emissions > emissions, and emission impact factor with priority levels. The latter specifically will help companies know which levers are most important to improve overall emissions profile.

#### FINAL THOUGHTS & WHAT'S NEXT FROM CLIMATEPOINT CONNECT

ClimatePoint Methodology is very proud to have served on Project Frame's Data & Tools Working Group, and we are extremely excited to realize this methodology with companies and investors through our LCA platform solution. This unique solution continues to bridge the academic and business worlds with seamless workflows that maximize the integration of impact and corporate strategies across all scopes.

The dynamic nature of our platform enables investment professionals to guide these critical conversations from very early stages as well as future-fit companies for anticipated regulatory reporting requirements and verified modeling forecasts. We have proven that the EU's Article 9 investment criteria can be achieved in effective time frames and our US fund clients praise this

format as a meaningful guide for the most serious impact investors.

ClimatePoint is already global as our assessments extend across sectors, continents and cultures. While today our software outputs highlight climate change mitigation (GWP), we are now releasing our complete suite of quantified planetary boundaries to drive innovation to the next frontier of environmental impacts.

We see a promising future for impact quantification and forecasting, inclusive of Scope 4 avoidance, and we look forward to introducing a complete fund solution to investors throughout the world. When will your fund align with the 1.5 degree pathway and Reach The ClimatePoint?

## **Findings** CRANE



QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Primary Users or Customers	Venture Capital Private Equity LCA Academica Startups Impact Specialist Consultant Government Philanthropy LP	Venture Capital Private Equity LP LCA Impact Specialist Consultant Academia Government Philanthropy
Level of Analysis	Unit Market Company	Unit Market Company
Sector Focus	General (economy-wide) Sector-specific	General
Geographic Focus	Global U.S.	A user can select their geography from a long list, including those listed above. The majority of the verified solutions are global or U.S.
Cost/Affordability	Doesn't specify Free	N/A
Revenue Model	Open access or open source (free) Free initial use, fee for additional services	Open access or open source (free)
Emissions Scopes Covered	Scope 1 Scope 2 Scope 3 Scope 4 (avoided emissions)	Scope 1; Scope 2; Scope 3; Scope 4 (avoided emissions) Note: The user or verified model defines the boundaries for the emissions scope considered, but most consider scopes 1-3. The output covers scope 4 emissions.
Unit Impact: Is the tool able to calculate the GHG impact of a single unit?	Mostly Yes	No. Note: There is pre-built calculation for Unit Impact currently, but users can derive it. This is going to be a part of CRANE v2.

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Does the tool have the ability to calculate GHG impact of technology or solution that facilitates or enables GHG reduction?	Mostly Yes	Yes. Note: The Related Market functionality in the Custom Technology tab allows for a "Secondary ERP" which splits out anticipated enabling effects.
Does the output show forward- looking projections? (potential impact, planned impact, or both?)	Potential Impact Both	Both. Note: CRANE sees the difference here as primarily one of possible market penetration.
Does the output clearly state the time horizon of the projections?	Mostly Yes	Yes
Can the user distinguish Global Warming Potential?	Mostly No	Yes. Note: This depends on how well documented the direct and indirect emissions data are in the template, so a more precise answer would be "it depends on the template."
Is the output supported by any known frameworks/standards (for example; SDGs, IRIS+, etc.)?	No	Yes.
If yes, which known framework/ standard do you follow?		Prime/NYSERDA 2017 ERP framework. CRANE 2.0 ISO definition of avoided emissions; WBSCD initial guidance on avoided emissions reporting; ECT Framework (partially as input)
Does the output aid in regulatory compliance? (SFDR, UNPRI, SBTi, etc.)	No	Yes
If yes, which regulatory compliance agency?		Users can see if their technology's emissions reduction is in line with sector-specific targets such as SBTi. Users can also use output as supporting evidence for SFDR, TCFD, and UNPRI focused reporting

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Do you feel the output will aid in your pre-investment screening? (If applicable)	Yes, significantly (4) In part, under certain circumstances (4)	N/A
Would a third-party be able to verify or audit the report outputs?	Yes, significantly (1) In part, under certain circumstances (5) No (2)	N/A
Can the tool save or store your work to access and revise later?	Yes	Yes
Are data sources and assumptions clear/listed?	Yes	Yes
Can this tool's data outputs be integrated with other software platforms/tools?	Mostly Yes	Yes
Can the tool pull data (as an input) from a variety of other sources and/or formats?	Mostly No	Yes. Note: Not directly via an API at this time.
Can the tool self-calibrate data sources to ensure reasonable assumptions (i.e. are there guardrails to ensure the outputs are reasonable?)	Mixed Results	No
How easy is the tool to use?	Somewhat, the tool provides a rationale or impact education at every step of its calculation (4) Yes, the tool provides a rationale or detailed impact education at every step of its calculation and includes plausibility checks (2) No (2)	N/A
Quality of Customer Service (if applicable)	Satisfactory (3) N/A (2)	N/A

The technology templates with pre-set inputs help for consistency and standardization, and the consortium behind CRANE gives the tool a lot of credibility.

...One of the few free tools which means it is great in terms of accessibility. Some training tips / tools might be useful for investors that are not familiar with the tool.

#### FINAL THOUGHTS & WHAT'S NEXT FROM CRANE

The CRANE teams at Rho Impact and Prime Coalition are so grateful for the opportunity to participate in Project Frame's Data & Tools Working Group Showcase.

This year, we will be incorporating the thoughtful feedback we've received from the Showcase's anonymous reviewers, as well as the input we've gotten from the wider CRANE community since the tool's launch in 2020. People come to CRANE with a lot of different needs, and we're constantly looking for ways to help users run their analyses and find data more efficiently. We are now developing the next version (v2.0) and are particularly focused on revamping the user experience (a stumbling block for many), so that the prompts and questions are easier to follow

while providing critical contextual information, guidance and data at the right moments during each analysis. We are also working to provide users with the ability to further customize each analysis in ways that are less daunting overall.

Two other focus areas for us are updating CRANE to be consistent with the latest guidance and terminology from Project Frame's Content Working Group, and improving data querying through the expansion of the set of verified technology templates and enhanced access to CRANE's standardized market and emissions forecast data. CRANE is truly a community resource that we're honored to continue developing with everyone's support!

# **Findings**GHG & Impact Estimator Tool



QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Primary Users or Customers	Venture Capital Impact Specialist Government Startups Impact Specialist LP Private Equity LCA	SME
Level of Analysis	Company Portfolio Unit	Unit; Company
Sector Focus	Sector-specific General (economy-wide)	General
Geographic Focus	Global Europe Germany	Global
Cost/Affordability	n/a Free Free for german start ups Not sure of the cost Unspecified	N/A
Revenue Model	Open access or open source (free) Free initial use, fee for additional services Fee per-assessment	Open access or open source (free)
Emissions Scopes Covered	Emissions scopes covered Scope 1 Scope 2 Scope 3 Scope 4 (avoided emissions)	Scope 4 (avoided emissions)
Unit Impact: Is the tool able to calculate the GHG impact of a single unit?	Mostly Yes	Yes
Does the tool have the ability to calculate GHG impact of technology or solution that facilitates or enables GHG reduction?	Mostly Yes	Yes

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Does the output show forward-looking projections? (potential impact, planned impact, or both?)	Planned Impact Potential Impact	Planned Impact
Does the output clearly state the time horizon of the projections?	Mostly Yes	Yes
Can the user distinguish Global Warming Potential?	Mostly No	No
Is the output supported by any known frameworks/standards (for example; SDGs, IRIS+, etc.)?	Mostly Yes	Yes
If yes, which known framework/ standard do you follow?	SDGs, IRIS+	SDGs; IRIS+
Does the output aid in regulatory compliance? (SFDR, UNPRI, SBTi, etc.)	No	Yes
If yes, which regulatory compliance agency?	-	SFDR check available on the same platform with premium access
Do you feel the output will aid in your pre-investment screening? (If applicable)	In part, under certain circumstances (6) No (1)	N/A
Do you feel the outputs will aid in your impact reporting? (If applicable)	Yes, significantly (2) In part, under certain circumstances (5) No (2)	N/A
Would a third-party be able to verify or audit the report outputs?	Mostly Yes	Yes
Can the tool save or store your work to access and revise later?	Mostly Yes	Yes
Are data sources and assumptions clear/listed?	Mostly Yes	Yes
Can this tool's data outputs be integrated with other software platforms/tools?	Mostly No	No
Can the tool pull data (as an input) from a variety of other sources and/or formats?	Mostly No	Yes

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Can the tool self-calibrate data sources to ensure reasonable assumptions (i.e. are there guardrails to ensure the outputs are reasonable?)	No (4) Somewhat, the tool provides a rationale or impact education at every step of its calculation (4) No (1)	Yes, the tool provides a rationale or detailed impact education at every step of its calculation and includes plausibility checks
How easy is the tool to use?	Expert Required; Outputs can only be achieved in collaboration with the developer (1) Somewhat challenging; requires some support from the developer (3) Relatively easy; you need some orientation, but require little support (5)	N/A
Quality of Customer Service (if applicable)	Satisfactory (6) N/A (3)	N/A

This tool is helpful for startups who are interested in quantifying their impact and will help them communicate it in an easily digestible format.

There is a comprehensive (Scope 1- 4) approach to collecting data and helping startups present an output which could be valuable. This is free for German startups (at least initially) but unclear how the pricing will work for startups outside Germany, if made available.

#### FINAL THOUGHTS & WHAT'S NEXT FROM IMPACTNEXUS

The Climate Impact Model (CIM) was developed by Borderstep Institute, ImpactNexus and SDG INVESTMENTS as part of the GHG & Impact Estimator project to help companies obtain a reliable estimate of their projected future GHG reductions in a time- and cost-effective manner. The aim of the CIM is to estimate the GHG reduction potential of a company's product or service, the 'climate solution'. The result is an order of magnitude of planned GHG reductions, rather than the result of an exact and detailed calculation as achieved by a full Life Cycle Assessment (LCA).

The CIM follows a simple, structured fivestep assessment that provides the user with comprehensive guidance at each step, tailored to the specific use case. Together with the integration of the climatiq database of emission factors, the CIM makes it easy to start calculating a company's planned GHG reductions. All data is entered or selected by users as self-reported information and is not verified by third parties. CIM is free for companies to register and use. CIM is part of the ImpactNexus platform of sustainability solutions, alongside tools for ESG and SFDR reporting or further impact assessment.

Additional features will be added in the coming months, such as peer-to-peer benchmarking, Al-powered improvement roadmaps and the integration of more use cases (e.g. carbon removal).

You can register and find more information.

Note that this tool was referred to by its previous name, Score4Impact, in an old version of this synthesis.

## Impact Forecast



QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Primary Users or Customers	Venture Capital Private Equity LP Impact Specialist Consultant LCA Government Philanthropy Startups	No response provided
Level of Analysis	Unit Company Market Portfolio	No response provided
Sector Focus	General (economy-wide) Sector-specific	No response provided
Geographic Focus	Global Europe	No response provided
Cost/Affordability	Cost/affordability n/a €10-€34.000 Monthly subscription of 9.95 Euros Unclear	N/A
Revenue Model	Subscription license Fee per-assessment Open access or open source (free) Free initial use, fee for additional services	No response provided
Emissions Scopes Covered	Scope 1 Scope 2 Scope 3 Scope 4 (avoided emissions)	No response provided
Unit Impact: Is the tool able to calculate the GHG impact of a single unit?	Yes	Yes - the CIF tool is able to calculate the GHG impact of a single product or service

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Does the tool have the ability to calculate GHG impact of technology or solution that facilitates or enables GHG reduction?	Yes	Yes - the Enabler mode facilitates this by adding variables for the rate of adoption of the enabled technology
Does the output show forward-looking projections? (potential impact, planned impact, or both?)	Planned Impact Both	Both - If the product exists, the output is the real impact. If the product is in design, it is potential. If the impact is projected, it is planned impact.
Does the output clearly state the time horizon of the projections?	Mostly Yes	Yes - the options are month, year, 5 years and 10 years
Can the user distinguish Global Warming Potential?	Mostly Yes	Yes - all calculations are done in C02eq, which integrate the GWP of all GHGs
Is the output supported by any known frameworks/standards (for example; SDGs, IRIS+, etc.)?	Mostly No	Yes
If yes, which known framework/ standard do you follow?	SDG, EU taxonomy	The CIF is based on LCA, and this is the only scientific framework for environmental impact assessment (standardised in iso 14000), e.g. the GHG protocol is also based on this framework. LCA deserves more recognition as a framework even if it has no branding like IRIS+ and SDGs. It is still the standard that does the heavy lifting in impact assessment.
Does the output aid in regulatory compliance? (SFDR, UNPRI, SBTi, etc.)	Mostly No	Yes
If yes, which regulatory compliance agency?	SBTi	EU Taxonomy
Do you feel the output will aid in your pre-investment screening? (If applicable)	Yes, significantly (3) In part, under certain circumstances (2)	N/A
Do you feel the outputs will aid in your impact reporting? (If applicable)	Yes, significantly (3) In part, under certain circumstances (2)	N/A

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Would a third-party be able to verify or audit the report outputs?	Yes	Yes
Can the tool save or store your work to access and revise later?	Yes	Yes
Are data sources and assumptions clear/listed?	Yes	Yes
Can this tool's data outputs be integrated with other software platforms/tools?	Mostly No	Yes
Can the tool pull data (as an input) from a variety of other sources and/or formats?	Mostly Yes	Yes
Can the tool self-calibrate data sources to ensure reasonable assumptions (i.e. are there guardrails to ensure the outputs are reasonable?)	Yes, the tool provides a rationale or detailed impact education at every step of its calculation and includes plausibility checks (1) Somewhat, the tool provides a rationale or impact education at every step of its calculation (3) No (1)	No response provided
How easy is the tool to use?	Expert Required; Outputs can only be achieved in collaboration with the developer (1) Relatively easy; you need some orientation, but require little support (2) Somewhat challenging; requires some support from the developer (2)	N/A
Quality of Customer Service (if applicable)	Satisfactory (3) N/A (2)	N/A

I think Impact Forecast has great potential, and the team has worked to simplify and scale the early LCA evaluations for funds & portfolio companies, whilst keeping it affordable.

The tool will require some understanding of how the LCA process works. The company does offer one day of training as well as coaching.

#### FINAL THOUGHTS & WHAT'S NEXT FROM IMPACT FORECAST

Impact Forecast is expanding! In fall of 2023 we will launch the upgraded version of our platform with more impact tools, improved sharing options and new Impact Insights features.

Alongside the Climate Impact Forecast, entrepreneurs can create an SDG profile, EU Taxonomy alignment and Sector Slice. These tools show entrepreneurs an easy way to navigate these standards, and enables a more comprehensive Impact Profile. This impact profile can be shared more easily and securely with investors and the public domain, creating a new level of drill-down transparency in impact information.

For funds and investors, we created a new feature in the client account to reveal 'Impact

Insights'; instantly report the additionality of the fund, compare companies on impact, monitor progress in real-time, and identify Impact Unicorns.

About the list of LCA data sources, this is a knowledge base that we have been building the last years and are about to convert into a resources integrator. This data access is an advantage we have invested in, and this is not a good time for us to share the fruits of that work. When this data is released to our users we can discuss sharing arrangements between us; we know we can all benefit from better impact data availability!

## MoreScope



QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Primary Users or Customers	Venture Capital Private Equity Impact Specialist Consultant Philanthropy LCA Investee company (start up or established company)	Venture Capital; Private Equity; LP; LCA; Impact Specialist; Consultant
Level of Analysis	Unit Portfolio Fund Company	Unit; Company; Fund; Portfolio; Market
Sector Focus	General (economy-wide) Sector-specific	General
Geographic Focus	Global mainly US & Europe, but have several factors loaded. Factor coverage for some sectors (grid) are better than others Depends on user input	U.S.; Europe; Global
Cost/Affordability	Not clear Not sure about the cost NA They are in pilot programs where cost is 30K EUR/yr but 50% discount for pilot customers so 15K EUR. They may change to a fee per portfolio company but its TBD Not sure, there is a cost but I tried it for free. ? no info about costs? 6-12keuros 30,000 EUR/year (pilot program - still under development)	N/A
Revenue Model	Subscription license Fee per-assessment	Subscription license
Emissions Scopes Covered	Scope 1, Scope 2, Scope 3, Scope 4 (avoided emissions)	Scope 1; Scope 2; Scope 3; Scope 4

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Unit Impact: Is the tool able to calculate the GHG impact of a single unit?	Yes	Yes
Does the tool have the ability to calculate GHG impact of technology or solution that facilitates or enables GHG reduction?	Yes	Yes
Does the output show forward-looking projections? (potential impact, planned impact, or both?)	Planned Impact Both	Planned Impact
Does the output clearly state the time horizon of the projections?	Yes	Yes
Can the user distinguish Global Warming Potential?	Mostly Yes	Yes
Is the output supported by any known frameworks/standards (for example; SDGs, IRIS+, etc.)?	Mostly Yes	Yes
If yes, which known framework/ standard do you follow?	GHG Protocol,, ISO, Net Zero Initiative, SDGs, Iris+, LCA framework, WBCSD, WR	GHG Protocol, GRI, CDP, Soon SBTi
Does the output aid in regulatory compliance? (SFDR, UNPRI, SBTi, etc.)	Mostly Yes	Yes
If yes, which regulatory compliance agency?	GHG avoidance, SFDR, EU Taxonomy, PRI	Parts of CSRD and SFDR; Soon SBTi
Do you feel the output will aid in your pre-investment screening? (If applicable)	In part, under certain circumstances (4) Yes, significantly (4) N/A (1)	N/A
Do you feel the outputs will aid in your impact reporting? (If applicable)	Yes, significantly (7) In part, under certain circumstances (1) N/A (1)	N/A
Would a third-party be able to verify or audit the report outputs?	Yes	Yes
Can the tool save or store your work to access and revise later?	Yes	Yes

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Are data sources and assumptions clear/listed?	Yes	Yes
Can this tool's data outputs be integrated with other software platforms/tools?	Mostly Yes	Yes
Can the tool pull data (as an input) from a variety of other sources and/or formats?	Mostly Yes	Yes
Can the tool self-calibrate data sources to ensure reasonable assumptions (i.e. are there guardrails to ensure the outputs are reasonable?)	No (1) Somewhat, the tool provides a rationale or impact education at every step of its calculation (8)	Somewhat
How easy is the tool to use?	Somewhat challenging; requires some support from the developer (3) Relatively easy; you need some orientation, but require little support (6)	N/A
Quality of Customer Service (if applicable)	Satisfactory (7) N/A (2)	N/A

Tool has great functionality that helps create a more standardized mechanism for stating assumptions and running calculations. Would recommend the ability to more easily identify how to identify relevant data and establish proper guardrails for analysis.

Detailed, adaptable tool that is great for aggregating existing information about a company's emissions to create estimates for an entire portfolio. They are still in a pilot phase, so additional building out, especially in regards to potential impact on top of planned impact, is important.

#### FINAL THOUGHTS & WHAT'S NEXT FROM MORESCOPE

MoreScope's mission is to make climate change an integral part of how companies make decisions. We develop solutions that provide companies and investors with quantified and verifiable insight that supports them in directing their strategic and financial planning in a sustainable direction. This means providing powerful tools for decarbonization (Scope 1-3, science-based targets, emission budgets, and low-carbon transition plans) and impact investing (planned, potential, and realized impact).

We have achieved this by developing a powerful climate quantification solution that allows companies to both understand their current footprint and understand the positive climate impact of a future decision or investment.

We are continuously building out our offering to help funds and organizations understand their impact over time. To understand one's avoided emissions over time, companies can use our vast parameter library and dynamically forecast the impact into the future, taking into account rebound-, fleet-, and enabling effects. The impact can be aggregated up to portfolio or parent level.

With a powerful and flexible tool as a foundation, we are now adding layers of user friendliness and guidance. Here are some features to come:

- Further automating data input
  - Adding Al GPT agents & general increased smartness
  - Broadening collection of templates and baselines
- Expanding library of parameters and forecasts
  - Integrating emission pathways scenarios
  - Implementing potential emissions guardrails and market share forecasts for more automated dynamic baselining
- Making reports shareable for LPs and other stakeholders

## Sesame

## **SESAME**

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Primary Users or Customers	LCA, Academica, Consultant, Government, Impact Specialist, Venture Capital, Private Equity, LP, Philanthropy	LCA; Impact Specialist; Consultant; Academia; Government
Level of Analysis	Unit Company Market	Unit; Company; Portfolio; Market
Sector Focus	General (economy-wide) Sector-specific	Sector-specific; General
Geographic Focus	U.S. Global	U.S.; Europe: Global (partial under development)
Cost/Affordability	Free Free but is working on a commercial version Cost structure was unclear	N/A
Revenue Model	Free initial use, fee for additional services Fee per-assessment Open access or open source (free) Subscription license	Subscription license; Fee perassessment
Emissions Scopes Covered	Scope 1 Scope 2 Scope 3 Scope 4 (avoided emissions)	Scope 1; Scope 2; Scope 3; Scope 4
Unit Impact: Is the tool able to calculate the GHG impact of a single unit?	Mostly Yes	Yes
Does the tool have the ability to calculate GHG impact of technology or solution that facilitates or enables GHG reduction?	Mostly No	Yes

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Does the output show forward-looking projections? (potential impact, planned impact, or both?)	Planned Impact Both	Both
Does the output clearly state the time horizon of the projections?	Yes	Yes
Can the user distinguish Global Warming Potential?	Mostly Yes	Yes
Is the output supported by any known frameworks/standards (for example; SDGs, IRIS+, etc.)?	Mostly No	No
If yes, which known framework/ standard do you follow?	<ul> <li>LCA framework</li> <li>A Framework for Multi-level</li> <li>Life Cycle Analysis of the</li> <li>Energy System</li> </ul>	
Does the output aid in regulatory compliance? (SFDR, UNPRI, SBTi, etc.)	Mostly No	No response provided
If yes, which regulatory compliance agency?	Not specified	
Do you feel the output will aid in your pre-investment screening? (If applicable)	Yes, significantly (1) In part, under certain circumstances (6) N/A (2)	N/A
Do you feel the outputs will aid in your impact reporting? (If applicable)	Yes, significantly (1) No (4) In part, under certain circumstances (3) N/A (1)	N/A
Would a third-party be able to verify or audit the report outputs?	Mostly Yes	Yes
Can the tool save or store your work to access and revise later?	Mostly Yes	Yes
Are data sources and assumptions clear/listed?	Mostly Yes	Yes
Can this tool's data outputs be integrated with other software platforms/tools?	Mostly Yes	Yes

QUESTION/PROMPT	REVIEWER RESPONSE	DEVELOPER RESPONSE
Can the tool pull data (as an input) from a variety of other sources and/or formats?	Mostly Yes	Yes
Can the tool self-calibrate data sources to ensure reasonable assumptions (i.e. are there guardrails to ensure the outputs are reasonable?)	No (3) Somewhat, the tool provides a rationale or impact education at every step of its calculation (6)	Yes
How easy is the tool to use?	Expert Required; (2) Outputs can only be achieved in collaboration with the developer (2) Somewhat challenging; requires some support from the developer (6) Relatively easy; you need some orientation, but require little support (1)	N/A
Quality of Customer Service (if applicable)	N/A (8) Unsatisfactory (1)	N/A

Comprehensive tool. Any tool that aims to generate results based on a cradle-to-grave LCA is quite bold. Tools like this are important for measuring the full environment and climate impacts, and should be the standard especially when considering what solutions should be scaled.

I find this to be a very interesting tool that I could potentially integrate into GHG impact workflow. It doesn't directly evaluate company impact, but does present some interesting tools to look at emissions factor.

#### FINAL THOUGHTS & WHAT'S NEXT FROM SESAME

SESAME is a software platform developed at MIT to enable the accurate estimation of lifecycle greenhouse gas (GHG) emissions and economic assessment of emerging energy technologies, production pathways, and system choices. Users can explore the effects of all relevant technological, operational, temporal, and regulatory (e.g. the Inflation Reduction Act) sensitivities.

The SESAME platform has an intuitive webbased user interface backed by an analytical engine suitable for advanced technical users, non-technical users and decision makers performing scenario analyses. Its integrated technology assessment structure includes analytical features that enable the accurate technical and economic evaluation of a wide range of technologies and decarbonization strategies. SESAME includes more than 2,000 individual energy pathways that combine

fossil resources (coal, natural gas, crude oil from different sources and with different compositions), renewable energy sources (solar, wind, hydropower, biomass), major processes (power plant, refinery, chemical processing, etc.), and major end uses (transportation, electricity, industrial products). Its architecture is designed for the easy integration of new tools and data sets. An important and unique feature of its scenario and analysis framework is the ability to assess the interactions and couplings between important energy and economic systems. This allows transition pathway options to be compared holistically on the same basis, so that users can make accurate assessments of the full life-cycle effects of complex system-level restructuring.

SESAME will soon offer a commercial platform for heavy industry portfolio planning and asset optimization. Learn more at <u>sesamesustainability</u>. com.

### **Conclusion**

We are currently losing the race against time to transform the way we produce and consume our world's finite resources.

We must accelerate the flow of capital to the best possible climate solutions to mitigate climate change. Software tools, like those reviewed in this synthesis, assist investors and ventures alike in articulating and evaluating potential GHG impact to meet this need. They help to ensure that we are holding ourselves and those who deploy our capital accountable to climate commitments, while continuously collaborating to improve an imperfect process.

As demonstrated in this synthesis, no tool is perfect. However, each is a valuable step forward when it comes to evaluating the plausible impact of investments. We look forward to seeing how the tools and market for this industry evolves and improves over the next few years. We encourage you to reach out to the tools you find compelling to see how they can complement your investment strategy.

The importance of access to data cannot be overstated. When modeling for GHG impact, there are very little guidelines on what data to use for baseline scenario setting and reporting,

and software does not replace the need to upskill investment teams with GHG impact analysis capacity. Improved data hygiene and access will continue to be a priority topic for Frame's 2023-24 Content Working Group, with the intent of providing best practices for data consideration, and building a database for tool developers and investors alike.

GHG impact expertise is widely sought after in the investment community as well as other sectors looking to pivot towards more climate-friendly practices. Project Frame will continue to accelerate its efforts to meet this demand by convening investors and experts to discuss best practices, and develop common terminology and methodology, including providing regular updates to our *Pre-Investment* Considerations methodology quidance. In addition, we welcome readers to access Project Frame's GHG Impact Resource Dashboard. This evolving platform captures the broad variety of tools submitted through Frame's initial expression of interest, which will be reviewed and updated on a rolling basis.

View the GHG Impact Resource Dashboard

