BIS Innovation Hub

G20 TechSprint 2024

Technology for the Planet

December 2024

Organised by:

G20 BRASIL 2024

BANCO CENTRAL DO BRASIL

BIS Innovation Hub

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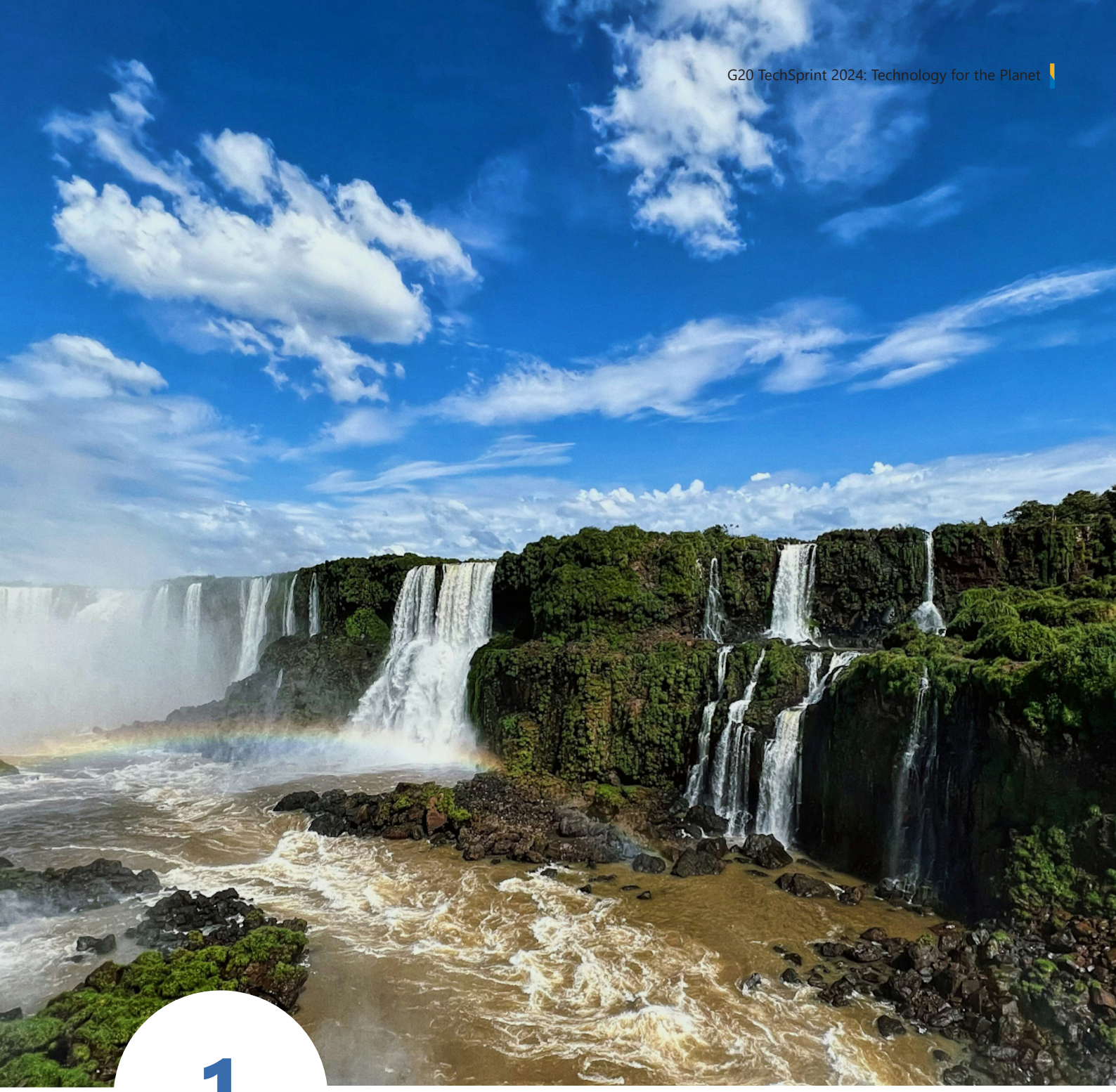


1

G20 TechSprint 2024 Overview

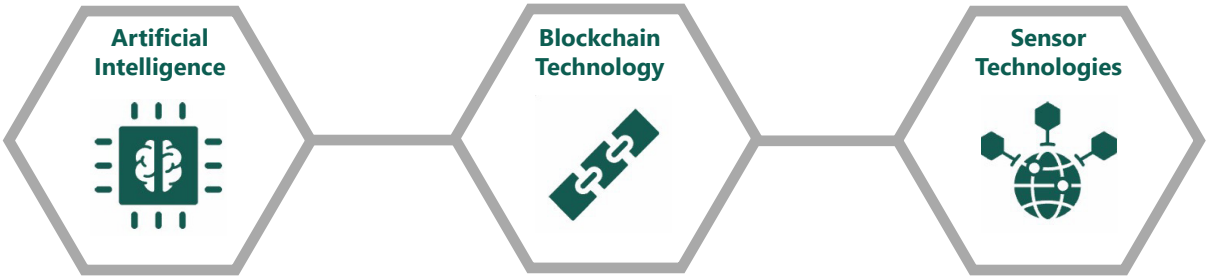
Executive Summary

Under Brazil's G20 Presidency, the Bank for International Settlements (BIS) Innovation Hub and the Banco Central do Brasil (BCB) launched the G20 TechSprint 2024 to foster innovative technological solutions in addressing challenges to scale sustainable finance. The G20 TechSprint 2024 underscored the transformative potential of advanced technologies for **scaling investments in nature-based solutions, performing ESG due diligence, and making SDG-aligned financial decisions and capital allocation.**

G20 TechSprint 2024: Technology for the Planet

This fifth edition of the joint BIS and G20 TechSprint aligns with Brazil's G20 presidency priority theme of **"Building a Just World and a Sustainable Planet"**. Against this backdrop, the chosen theme for the G20 TechSprint 2024 was **"Technology for the Planet"**, calling for technologies to foster Nature-based Solutions (NbS), Environmental, Social and Governance (ESG), and Sustainable Development Goals (SDGs). The G20 TechSprint 2024 built on the learnings from the joint BIS, Central Bank of the UAE and COP28 Presidency TechSprint completed in 2023 which focused on Artificial Intelligence (AI), blockchain and sensor technologies for sustainable finance.[1]

Innovative Technologies for Sustainable Finance[1]



This year's G20 TechSprint drew record interest with 110 submissions from around the world. Participants comprised a diverse array of innovators, including startups and established companies, with different regional, sustainability, and technology backgrounds. The G20 TechSprint 2024 uncovered a rapidly evolving technology landscape, with several solutions utilising a combination of novel technologies, seeking to maximise their potential by using them in tandem.

[1] *An overview of the 2023 COP28 UAE TechSprint can be found in this report. One year on, in 2024, the COP28 UAE TechSprint organisers hosted a series of roundtables to assess progress, opportunities, and enablers for the application of innovative technologies in sustainable finance with key findings outlined in the report Innovative Technologies for Sustainable Finance.*

Message from Organisers

"Digitalization brings opportunities that go hand in hand with a fast-evolving world. In this sense, as it is an already consolidated symbol of collaboration and innovation, we decided to focus the fifth edition of the G20 Techsprint initiative on some of the most relevant challenges on the BCB's strategic agenda, which are sustainability matters and the everlasting search for greater inclusion. Through initiatives like the G20 Techsprint, we can concretely advance the exploration and the future use of technologies that will encourage sustainable finance and a just transition."

Paulo Picchetti
Deputy-governor of Banco Central do Brasil

"The 2024 edition of TechSprint has unleashed genuine potential for new technologies to scale up sustainable finance solutions to address urgent sustainable development goals. From preserving biodiversity to better managing ESG-related risks and aligning capital allocation more closely with sustainability endeavours, these proposals can deliver significant contributions to a more sustainable financial future. The BIS Innovation Hub is proud to have partnered with BCB in this year's G20 TechSprint and we extend our warmest congratulations to all the winners."

Cecilia Skingsley
Head of BIS Innovation Hub

Challenge Overview

The G20 TechSprint 2024 focused on technology solutions for sustainable finance. The major problems identified include the lack of sustainable investments in biodiversity and nature-related projects, challenges with the collection, aggregation and analysis of ESG data to facilitate due diligence, disclosure and management of ESG risks and opportunities, and open-sourced data-driven solutions that can be used to support financial decisions and capital allocation aligned with the Sustainable Development Goals (SDGs).

This TechSprint aimed to address these challenges in sustainable finance and provide significant contributions to the G20 Brazilian presidency's priority of building a just world and a sustainable planet. Three problem statements of the G20 TechSprint 2024 were developed along the theme of technology innovations for the planet. The problem statements of the G20 TechSprint 2024 focused on Nature-based Solutions (NbS), Environmental Social and Governance factors (ESG), and Sustainable Development Goals (SDGs).

Problem Statement 1

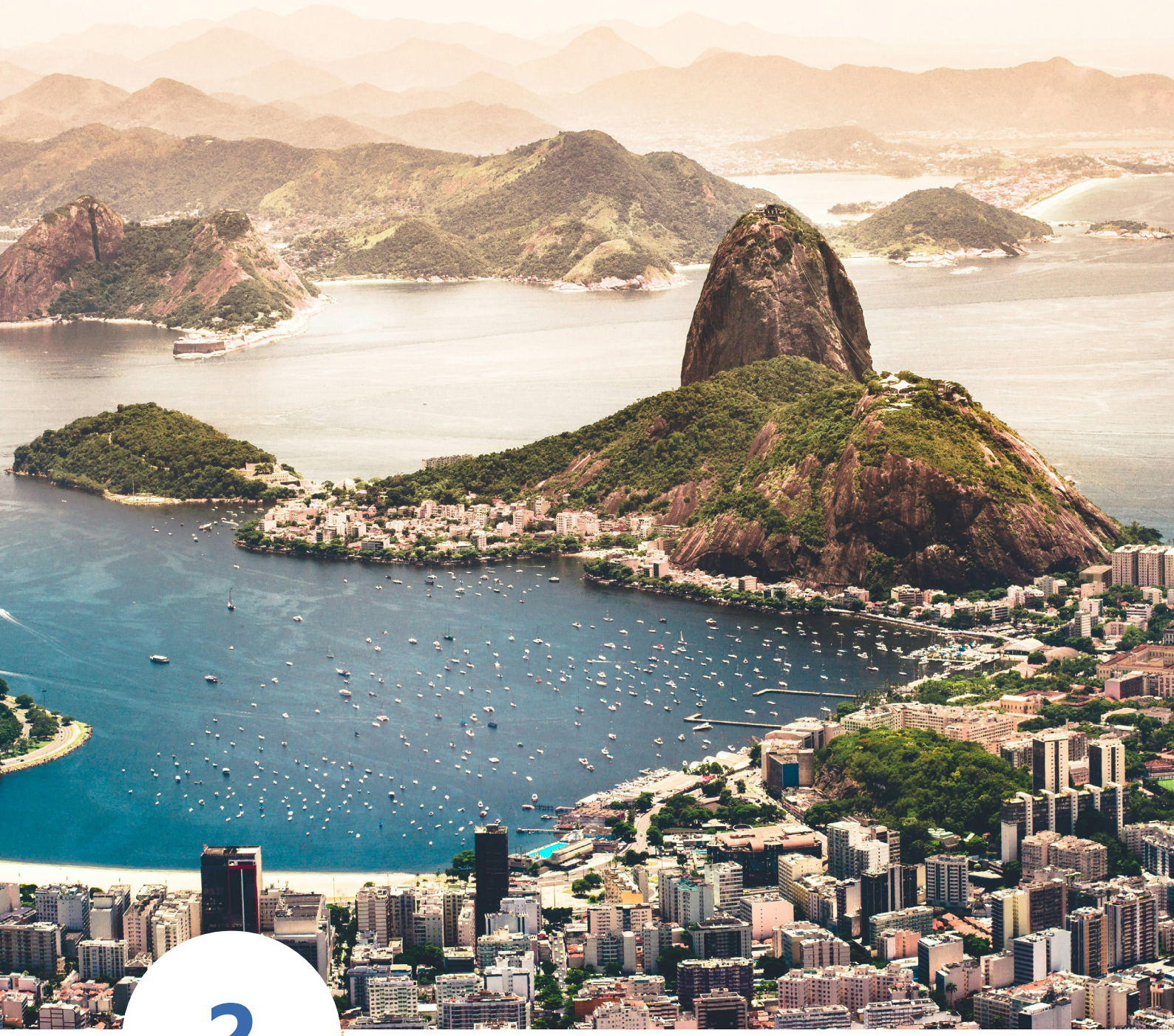
Technology solutions to incentivise and attract sustainable and inclusive investments targeted at biodiversity and nature preservation.

Problem Statement 2

Technology solutions to improve the quality, reliability and granularity of ESG data to facilitate due diligence, disclosure and management of ESG-associated risks and opportunities by (a) large corporates and small and medium enterprises, (b) investors and financial institutions and/or (c) regulators and supervisors.

Problem Statement 3

Open-sourced data-driven technology solutions to support financial decisions and capital allocation aligned with the SDG goals, including preserving biodiversity, climate change, clean energy, financial education and inclusion, and poverty alleviation.



2

Key Trends and Solutions

Focus area 1: Technology Solutions to Foster Investments in Biodiversity and Nature-related Projects

Nature-based Solutions (NbS) address key environmental challenges by restoring ecosystems, promoting biodiversity, and supporting sustainable growth. NbS such as reforestation and wetland restoration, sequester carbon, enhance resilience to extreme weather events, and provide ecosystem services like clean water and soil fertility. NbS can significantly contribute to the climate mitigation efforts towards achieving the targets of the Paris Agreement. However, to amplify their impact, increased investment is essential to foster a more sustainable ecosystem.

Overcoming Barriers to Investments in Nature-based Solutions with Emerging Technologies

Key challenges deterring capital flow to biodiversity and nature-related projects include uncertainty about project impacts, transparency and traceability, which makes it difficult for investors to verify progress, potentially leading to investment risks. High intermediation costs and the sparse liquid, transparent secondary markets further limit flexibility and investment opportunities. Additionally, financing for projects, especially in the Global South, is constrained by funding barriers and long project horizons, among others.

Leveraging innovative technologies facilitates effective tracking and verification of NbS outcomes. Blockchain offers secure, traceable, and immutable transaction records in NbS projects and supports NbS asset tokenisation, which broadens investment opportunities. Geospatial Information System (GIS) and sensor technologies facilitate the monitoring, reporting and validation of NbS projects. Meanwhile, AI enables the processing of remote sensing data and data-driven analytics to perform risk and impact assessments of NbS projects.

The G20 TechSprint 2024 solutions aim to empower local communities by leveraging tokenisation for ecological restoration, enabling fractional ownership and encouraging investment flows. They also aim to enhance financial inclusion for small-scale farmers through blockchain-enabled micro-investments. Further, they envisage digital forward contracts, to enhance liquidity, ensuring traceability, which aims to reduce investment risk. Additionally, the solutions focus on the lifecycle management of NbS through accurate monitoring and verification of NbS projects.

G20 TechSprint 2024 Innovative Approaches to Scale Investments in Nature-based Solutions[2]

Ekonavi

Ekonavi platform focuses on mapping and supporting ecological regeneration in Brazil, with an emphasis on agroforestry. It uses blockchain to tokenise field data from land restoration projects, ensuring transparency. The solution integrates satellite imagery for monitoring, reporting, and verification, according to global standards and its on-chain ID system can connect to BCB's CBDC, DREX, encouraging investments in regenerative actions. It provides open-source codes, enabling local communities to manage and demonstrate impact of NbS, encouraging funding.

Netto

Netto utilises blockchain technology to create digital forward contracts, ensuring liquidity, transparency, and traceability for investments in projects like reforestation through tokenised

[2] *5 shortlisted participants for Problem Statement 1 in alphabetical order.*

assets. AI and data analytics are deployed to perform risk assessments to fund viable and impactful projects, which could reduce investment risks. Further, the integration of GIS combined with satellite imagery data enables monitoring, validating project progress and ensuring transparency.

O.N.E. Amazon

O.N.E. Amazon integrates real-time ecological monitoring through the Internet of Forests, a cellular sensor network to provide transparent and verifiable information. It utilises a tokenised platform for rainforest conservation with One Amazon Coin, aiming to ensure transparency and immutability to encourage investment flows. A Decentralized Autonomous Organization (DAO) governance model enables token holders to vote on projects, enhancing community engagement and influence over conservation investments.

Stellerus Technology

StellerusTech provides a platform that manages NbS projects with a focus on accurate monitoring and transparent verification. The platform uses multimodal data from satellite, air and ground sensing networks, and AI-driven analytics to monitor, report, and verify project progress. Additionally, it utilises AI for remote sensing data processing and extraction, and Large Language Model (LLM) and Visual Language Model based AI assistant to enhance the platforms' ease of use.

Violet, VERT and Produzindo Certo

The solution offers a blockchain solution platform for small farmers to access capital through crop promissory notes, enabling micro-investments and blended finance structures. The solution integrates on-the-ground data collection and satellite imagery data with GIS for monitoring, to provide environmental impact assessments and support ongoing project validation while ensuring investments deliver promised benefits.

Focus area 2: Technology Solutions to Improve Environmental, Social and Governance Data

Improving the quality, reliability, and granularity of ESG data is essential for informed decision-making, enabling companies, investors, and regulators to manage ESG risks, scale sustainable investments, and comply with evolving disclosure standards. As demand for ESG analytics grows, high-quality ESG data is crucial to foster trust, innovation, and ensure measurable sustainability outcomes. Meeting these demands requires vast ESG data resources, including aggregation, processing, analysis, and management across diverse economic sectors and ESG factors.

Overcoming ESG Data Challenges with Innovative Technologies

Enhancing ESG data quality presents several challenges. Companies often rely on inconsistent data sources, making aggregation and analysis difficult. Limited standardisation across industries, combined with fragmented reporting practices, and diverse regulatory requirements complicate efforts to ensure data reliability and comparability. Advanced technologies and innovative solutions play a pivotal role in streamlining ESG data management by facilitating the integration of ESG data from various sectors across the key ESG factors.

Innovative technologies improve the accuracy, consistency and transparency of ESG analytics. AI automates the processing of emissions and unstructured supply chain data to provide insights and enhance reporting accuracy. Machine learning and deep learning are used to identify patterns in large data sets, as well as automated training and decision support. Blockchain enables tokenisation and smart contracts to facilitate data storage, ensuring transparency and accountability. Meanwhile, IoT devices enable the monitoring of ESG metrics to track sustainability performance.

The G20 Techsprint 2024 solutions focus on improving ESG analytics and providing reliable data by automating emissions tracking across global supply chains and shipping fleets. They aim to optimise ESG risk assessments, enabling more efficient financing decisions, by automating ESG due diligence, performance monitoring, and underwriting. Additionally, the solutions aim to provide SMEs with a sustainability management ecosystem to facilitate financing access. They also envisage enhanced transparency and accountability by integrating impact ratings into tokenised green bonds.

G20 TechSprint 2024 Innovative Approaches to Enhancing ESG Data Reporting and Compliance[3]

Clara ESG

Clara ESG leverages blockchain technology to offer tokenised green bonds with integrated impact ratings based on international ESG sustainability reporting standards. This allows investors to assess the environmental effectiveness of the bonds while promoting transparency and accountability through embedded Monitoring, Reporting and Verification (MRV) processes. Additionally, the use of smart contracts supports efficient data storage and facilitates access to relevant impact and allocation information for stakeholders.

[3] *5 shortlisted participants for Problem Statement 2 in alphabetical order.*

Composite.ai

Composite.ai uses AI and data analytics to automate emission factor data and emissions reporting, helping businesses track and mitigate Scope 1, 2, and 3 emissions across global supply chains. By processing unstructured supply chain data (such as manufacturing bills of materials, financial statements, and spreadsheets) to structured information, it provides insights and enhances ESG reporting accuracy, improving sustainability practices.

GreenFi AI

GreenFi provides a platform for ESG risk assessments for sustainable financing by automating ESG due diligence, performance monitoring, and underwriting. It utilises machine learning to identify patterns in large datasets and deep learning for automated training and decision support. The solution leverages open-source data to create sustainability profiles for SMEs, helping financial institutions manage climate risks and support their transition to more sustainable practices.

Satva Trust

Satva Trust offers financial institutions, corporates, and SMEs reliable, verifiable emissions and fuel use data from the global commercial shipping fleet. Using a proprietary machine learning model, it processes satellite and terrestrial data to provide accurate, journey-level fuel use and emissions data, independent of self-reported ship data. The solution offers granular Scope 3 emissions, helping financial institutions and companies better manage financed emissions and supply chain impact.

Tese

Tese offers a sustainability management platform for SMEs, combining IoT for real-time ESG metrics monitoring with AI-powered actionable recommendations. The platform automates ESG data entry, leverages LLMs for sustainability research, and includes a recommendation engine to connect SMEs with marketplace solutions. Additionally, Tese provides digital educational content, and uses proprietary algorithms to streamline loan applications, simplifying SME's access to financing.

Focus area 3: Technology Solutions to Accelerate Progress Towards Sustainable Development Goals

The Sustainable Development Goals (SDGs) adopted in 2015 represent a global framework to address critical challenges such as poverty, inequality, climate change, and environmental degradation. With 17 goals and 169 targets, the SDGs aim to create a more sustainable and equitable future by 2030. Innovative technologies serve as catalysts to accelerate progress towards achieving SDGs and transform business models to improve the overall sustainability of environmental, social and economic activities while protecting the planet.

Unlocking SDG-Aligned Financial Decisions through Emerging Technologies

Key challenges in supporting SDG-aligned financial decisions and capital allocation include inconsistent data, lack of transparency, and difficulties in impact measurement and tracking. Financial inclusion barriers persist, especially for marginalised communities, while financial institutions often face elevated risk and uncertainty in funding SDG-aligned projects. These obstacles are compounded by inadequate access to sustainable investment opportunities and the challenge of assessing long-term environmental and social outcomes accurately.

The application of innovative technologies can advance SDG-aligned capital allocation. AI supports predictive analytics to assess and forecast the creditworthiness of microentrepreneurs by analysing credit histories and demographic data. NLP and LLM automate the extraction of structured insights from large volumes of text data and retrieve information from articles on climate finance, to monitor trends and generate reports. Meanwhile, IoT facilitates collection of environmental impact data, and blockchain records environmental information ensuring transparency and traceability.

The G20 TechSprint 2024 solutions aim to enhance financial inclusion by improving access to credit and financial services for underserved communities. They also focus on increasing funding access for sustainable projects through transparent and traceable reporting of environmental impacts. Additionally, the solutions envisage providing real-time insights and reporting in climate finance to support informed decision-making. Furthermore, they aim to facilitate renewable energy adoption, investment, and climate policy analysis.

G20 TechSprint 2024 Innovative Approaches to Accelerating Sustainable Development Goals[4]

Climate Finance AI

The Climate Finance AI Assistant offers a tool designed to deliver timely insights and uncover key trends in climate finance. It streamlines the process of gathering, analysing, and reporting on critical topics, by providing actionable insights, monitoring trends, and generating customised reports. Leveraging Retrieval-Augmented Generation (RAG), the assistant retrieves the most relevant articles, summarises key information, and tracks changes in climate finance topics over time.

Datavaran

Datavaran focuses on accelerating renewable energy adoption by connecting clean tech providers with investors and analysing state-level renewable energy readiness. The solution

[4] *5 shortlisted participants for Problem Statement 3 in alphabetical order.*

utilises AI-powered NLP to automate the extraction of structured insight from vast volumes of text found in subnational government policies and corporate sustainability reporting. It integrates GIS to provide data on operational and pipeline renewable energy projects on an interactive map.

EnergyLab

EnergyLab's solution leverages IoT to collect real-time data and blockchain to record environmental impact data like emissions reductions, water savings, and recycling. It integrates globally recognised Monitoring, Reporting and Verification (MRV) methodologies to ensure credibility and improve funding access for sustainable projects. The solution aims for a transparent, traceable, and trustworthy system for reporting impacts across diverse sustainability initiatives.

Kaleidofin

Kaleidofin utilises AI and machine learning to assess the creditworthiness of microentrepreneurs, drawing on credit histories and demographics to expand credit access for underserved communities. Financial institutions gain faster, data-driven loan approvals with bulk scoring and pre-approvals, ensuring rapid disbursement and risk management. The platform also incorporates an impact-monitoring dashboard that enables users to efficiently track credit outcomes and social impact, while empowering inclusion through open-sourced solutions.

Pérola

The Pérola App aims to advance financial inclusion by providing accessible solutions and financial inclusion for micro and small entrepreneurs. It connects microentrepreneurs to the capital market through a digital platform that provides credit analysis, connecting them with investors and banks. It aims to improve the platform by integrating AI for predictive credit analytics and blockchain for smart contracts and digital identity.

3

G20 TechSprint 2024 Participation

G20 TechSprint 2024: Advancing Global Innovations

The G20 TechSprint 2024 received exceptional participation, with 110 teams from around the world committed to addressing critical global challenges. The event attracted a diverse array of innovators, including startups and established technology companies, with cutting-edge solutions. With technology solutions hailing from 21 countries, the initiative underscored the global nature of sustainability efforts. Participants from across the world brought valuable insights from their respective backgrounds, further enhancing the overall collective contribution.

The diverse and global participation fosters a dynamic environment for collaboration and innovation and underscores the growing importance of cross-border initiatives in tackling pressing global climate issues, particularly climate, and driving digital transformation toward a more sustainable future.

G20 TechSprint 2024: Organisers

Organised by:

- G20 Brazil Presidency
- Banco Central do Brasil
- Bank for International Settlements

Supported by:

- Inter-American Development Bank
- Innovation and Venture Capital
- Fenasbac Innovation
- Comissão de Valores Mobiliários

G20 TechSprint 2024: Judges Problem Statement 1

Dr. Ben Caldecott

Director, Oxford Sustainable Finance Group and the Lombard Odier Associate Professor, University of Oxford

Brad Punu

Deputy Chief Financial Officer, Green Climate Fund

Maria Netto

Chief Executive Officer, Institute for Climate and Society

Dr. Samuel Tiriongo

Director, Research and Policy, Kenya Bankers Association

G20 TechSprint 2024: Judges Problem Statement 2

Alvin Li

Head of Supervisory Technology Division, Banking Supervision Department, Hong Kong Monetary Authority

Caitlin Nash

Global Africa: Commercialising Ambitious Innovation

Dr. Eva Szalkai Csaky

Chief Executive Officer, Global Inclusive Economy Society

Dr. Jakob Thomä

Co-founder & Chief Executive Officer, Theia Finance Labs

Research Director, Inevitable Policy Response

Marianne Haahr

Nature-related Finance Director, Global Canopy

Lead, Support on Specific Guidance at Taskforce on Nature-related Financial Disclosures

Morgan Doyle

General Manager of Southern Cone Department, Inter-American Development Bank

G20 TechSprint 2024: Judges Problem Statement 3

Caitlin Nash

Global Africa: Commercialising Ambitious Innovation

Daniela Baccas

Head of the Sustainable Planning Department, Brazilian Development Bank

Irene Heemskerk

Head of the Climate Change Centre, European Central Bank

Patrick Slovik

Director of Financial System Surveillance and Policy, Central Bank of the UAE

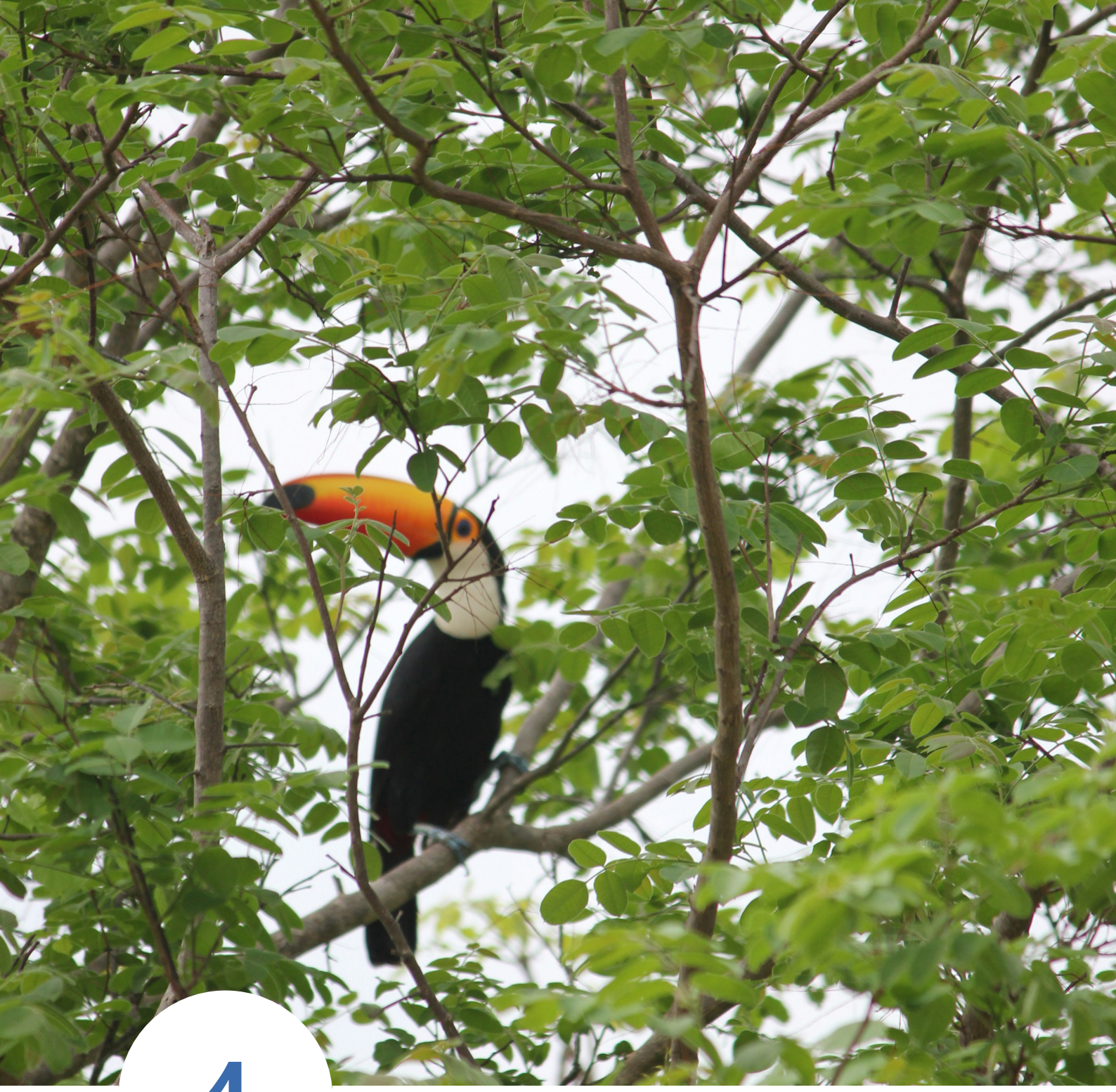
Sue Llyod

Vice Chair, International Sustainability Standards Board

Xiaochen Zhang

Chief Responsible AI Officer and Executive Director at AI 2030

Chief Executive Officer, Fintech4Good



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G20 TechSprint 2024 Finalists

Ekonavi

"Ekonavi uses EVM blockchain technology to build data indicators and track progress of regeneration data from field reports, opening new sources of income for field projects, and building a framework for minting and trading impact assets."

The Ekonavi EVM platform is a nature-based reporting and cross-border investments and distribution solution which aims to incentivise behavior favorable for improving agro-ecosystem sustainability and climate resilience, helping to meet Brazil's strategic global and domestic ESG development goals.

Company Description

Ekonavi is a nature-based solution platform mapping and supporting agroforestry and bio-economy activities. Registered field projects report impact data, validate impact claims, and subsequently earn financial rewards. Ekonavi uses blockchain tools to track progress in field reports, open new sources of income for field projects, and build a framework for minting and trading impact assets.

Solution Description

A comprehensive tech solution for impact investment integrates a Web3 payment interface for trading impact assets. Utilises an on-chain ID system linked to citizens' CPF and Brazil's CBDC, DREX, seamlessly interacting with the Ekonavi platform, designed with a user-friendly, low-bandwidth interface to facilitate the uploading and assessment of impact reports, ensuring accessibility even in rural areas.

Technology

A gamified social regeneration network highlights project progress, fosters collaboration and data exchange. Tokenisation of real-world assets creates investment opportunities in Brazil's agro-ecosystems.
A Web3 payment interface supports trading impact assets with secure cross-border transactions via MPC wallet authorisation. The on-chain ID system, linked to citizens' CPF and Brazil's CBDC DREX, integrates with Ekonavi. A low-bandwidth, UI-friendly system uploads and assesses reports, including from rural areas.

Location

Brazil

Year of Incorporation

2020

Website

www.ekonavi.com

Number of Staff

10

% of Gender Diversity in Workforce

30% female, 70% male

Funding Received

Yes

Ownership

Private

Notable Investors

Startupbootcamp - Accelerator

Key People

- Breno Veiga, CEO, Agroforester
- Ishmael Angelo Hall, CTO, Web3 Solutions Architect
- Simon Luling, COO, International Representative
- Renato Ximenes, Finance & Legal

Netto

"Our platform streamlines cross-border climate finance by leveraging technology to ensure secure, transparent, and efficient payments that directly empower carbon capture projects worldwide, aligning global efforts toward sustainability."

Driving the transition to a net-zero economy with innovative financial solutions, advanced technology, and guaranteed high-quality, high-integrity carbon credits rooted in Nature-Based Solutions.

Company Description

Netto simplifies cross-border climate finance with blockchain and AI, enabling efficient, transparent funding for NbS carbon capture projects. Costs are reduced, delivery of high-quality carbon credits is guaranteed, and trust and liquidity in the market are fostered, aligning with G20 goals for sustainable finance and impactful environmental action.

Solution Description

Netto leverages blockchain and satellite imagery to enable transparent, traceable cross-border payments for NbS carbon capture projects. Smart contracts ensure compliance, real-time monitoring, and guaranteed delivery, reducing costs and risks. Aligned with G20 goals, it scales sustainable finance and drives impactful climate action.

Technology

Netto uses blockchain to digitise carbon credits, ensuring transparent and secure cross-border transactions. Smart contracts automate compliance, while satellite imagery and AI enable real-time monitoring of NbS carbon capture projects. This technology fosters trust, reduces risks, and streamlines climate finance.

Location

Spain

Year of Incorporation

2023

Website

www.netto.finance

Number of Staff

3

% of Gender Diversity in Workforce

33% female, 67% male

Funding Received

No

Ownership

Private

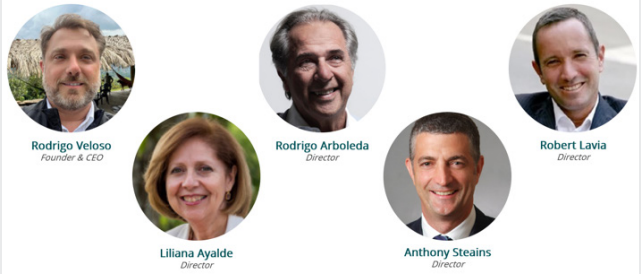
Notable Investors

N/A

Key People

- Francisco Rico, CEO & Co-founder
- Leonardo Lower, CTO & Co-founder
- Veronica Cipolatti, CSO & Co-founder

O.N.E. Amazon



Integrating next generation technology to bring innovation to conservation.

"ONE Amazon is more than a conservation project; it is a living system that preserves the Amazon for future generations. Through our ONE Amazon Coin (OAC), the world's first Financial Regulated Nature Asset (fRNA), we create cross-border economic opportunities that incentivise the protection of the Amazon."

Company Description

The Amazon rainforest, a vital organ of our planet, is being deforested at an alarming rate. ONE Amazon addresses this critical issue by transforming the Amazon biome into a digital asset security called OAC, using financial innovation to preserve this crucial ecosystem.

Solution Description

Ribonucleic acid (RNA) is a molecular messenger that translates genetic code from Deoxyribonucleic Acid (DNA) into essential proteins. Similarly, OAC acts as fRNA, translating ecological value into financial assets and driving sustainable investment. fRNA ensures compliance, stability and transparency in the market, much like RNA maintains cellular integrity.

Technology

OAC is built on a blockchain framework, leveraging smart contracts and DAO. It is backed by Internet of Forests (IoF), the cellular sensory network, that continuously monitors real-time data on the rainforest's health through micro-cloud solution using sensors, satellites and drones.

Location

United States

Year of Incorporation

2021

Website

www.oneamazon.com

Number of Staff

10

% of Gender Diversity in Workforce

50% female, 50% male

Funding Received

Yes

Ownership

Private

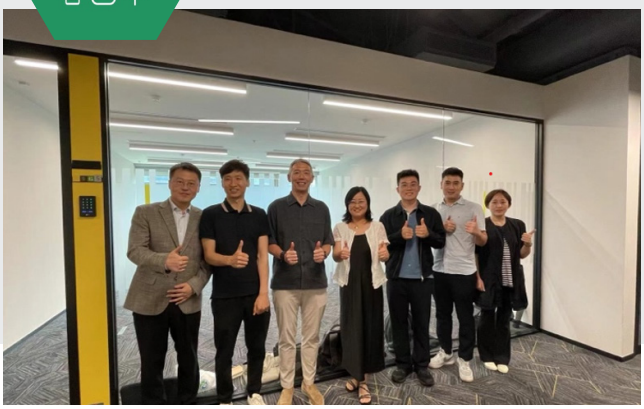
Notable Investors

Starlight Ventures

Key People

- Rodrigo Veloso, Founder & CEO
- Allen Salmasi, IoF Committee Chairman; Chairman of Veea, ONE Amazon's Technology Partner
- Anthony Steains, Advisor

Stellerus Technology



Stellerus

Accurate quantitative Climate Tech company empowered by satellites and AI.

"With comprehensive & continuous monitoring, analysis and verification empowered by multimodal satellite data and AI algorithms, Stellerus provides transparency and traceability throughout NbS project lifecycle, increases investor confidence with quantifiable risk control, and incentivises sustainable investment with science-backed investment decision support."

Company Description

Utilising proprietary data from space-air-ground sensing network and in-house physics-guided large AI models, Stellerus delivers whole suite of cutting-edge ClimaTech solutions to serve government and industry stakeholders to manage high value assets against mounting climate risks. StellerusTech provides an easy-to-use, science-backed intelligent ClimaTech service platform that delivers key climate data, insights and actionable decisions.

Solution Description

StellarGreen is a green finance platform solution for lifecycle management of NbS. Utilising multimodal satellite-based space-air-ground sensing network and proprietary AI analytical algorithms, StellarGreen provides accurate monitoring, transparent verification and assurance, and certification with compliance of IUCN standards throughout project lifecycle in an accurate, objective, and cost-effective manner.

Technology

Accurate and continuous NbS (mainly forests/mangroves) data acquisition with multi-modal intelligent satellite constellation and space-air-ground sensing networks Proprietary AI models for data fusion and calculation of key performance indices of NbSs following IUCN standards. All-in-one platform with LLM assistant to visualise the project status across NbS lifecycle and allow users to interact without prior knowledge of NbS/remote sensing etc.

Location

Hong Kong

Year of Incorporation

2023

Website

www.stellerustech.com

Number of Staff

10 - 20

% of Gender Diversity in Workforce

40% female, 60% male

Funding Received

Yes

Ownership

Private

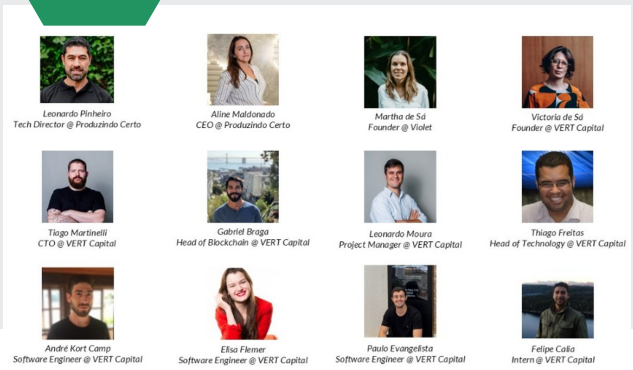
Notable Investors

David Liu, CEO & Managing Director, Mithera Capital & Executive Chairman, Beyond Limits

Key People

- Prof. Hui Su
- Weifan Xu
- Mingyuan Hu
- Piyush Yadav
- Kaya Heathman
- Ono Kouta Castillo

Violet, VERT, Produzindo Certo



Leveraging blockchain, ESG scoring, and financial expertise for Nature-based solutions.

"Our platform leverages blockchain technology to transform investments in biodiversity and nature-related projects. By issuing assets natively on-chain, automating processes, and ensuring transparency, we create a secure and efficient ecosystem for all stakeholders."

Company Description

VERT Tokens: Compliant capital markets solutions based on blockchain.

Violet: Integrated platform for ESG and financial data, enabling seamless credit and investment monitoring.

Produzindo Certo: GIS-based ESG scoring for investment validation and environmental compliance.

Solution Description

The blockchain-based platform bridges sustainability and investment by leveraging NbS-linked promissory notes (CPRs) to provide NbS farmers with capital while offering investors a blended finance structure. It integrates smart contracts, satellite imagery, and stablecoins to deliver transparency, efficiency, and automated processes, combining financial innovation with ESG compliance.

Technology

The fully on-chain solution ensures efficiency, with a unified ledger, real-time data, and automation to reduce costs and errors. Deterministic outcomes enhance trust and mitigate risks. More info at: https://docs.vert-capital.com/vert-tokens-g20.

Location

Brazil

Year of Incorporation

VERT – 2016, Violet – 2023, Produzindo Certo - 2007

Website

www.vert-capital.com
www.violet.net.br
www.produzindocerto.com.br

Number of Staff

230+

% of Gender Diversity in Workforce

36% female, 64% male

Funding Received

Yes

Ownership

Private

Notable Investors

N/A

Key People

- Martha de Sá
- Victoria de Sá
- Thiago Freitas
- Tiago Martinelli
- Paulo Evangelista
- Elisa Flemer
- Andre Kort-Klump
- Leonardo Moura
- Gabriel Braga
- Aline Maldonado
- Leonardo Pinheiro

Clara ESG

Tokenised Green Bonds with Built-in Impact Ratings.

"By incorporating sustainability disclosures and impact assessments into digital assets, we aim to boost investor confidence, enhance transparency, and optimise resource allocation for the green transition."

Company Description

Clara ESG is a platform designed to revolutionise the green finance sector by incorporating impact ratings and environmental assessments into the metadata of digital assets.

Solution Description

The G20 TechSprint Solution offers a platform for tokenised green debt instruments, enhancing trust and transparency while optimising resource allocation by integrating sustainability disclosures and impact ratings within its digital framework. The prototype was developed based on the Brazilian Framework for Sustainable Sovereign Bonds, incorporating its required metrics and the IFRS S1 and S2 standards into the tokenised bond.

Technology

Clara ESG utilises advanced digital technologies to assess ESG metrics, evaluate biodiversity potential, monitor environmental regeneration, and quantify impact metrics from field-based data.This approach ensures efficient measurement, reporting, and verification within the tokenised asset infrastructure. Additionally the platform features the capability to map and track various data sources on-chain providing a trustable way to comply with required compliance standards and impact metrics.

Location

Brazil

Year of Incorporation

2024

Website

www.clara-esg.com
www.landprint.earth

Number of Staff

10+

% of Gender Diversity in Workforce

20% Female, 80% Male

Funding Received

Yes

Ownership

Private

Notable Investors

N/A

Key People

- Paula Palermo
- Verber Alves
- Daniele Cesano
- Guttardo Pereira
- Valter Lobo

Composite.ai

"The need for ESG supply chain transparency transcends borders. It's a challenge that also creates an opportunity for meaningful global collaboration and unity."

Your partner in supplier management and sustainability.

Company Description

Composite.ai builds AI-driven technology that empowers companies to meet their sustainability and governance goals. It creates policy chatbots, optimise ESG compliance processes, and deliver customised solutions to tackle complex organisational challenges.

Solution Description

Composite.ai makes it easy for companies to track Scope 3 emissions. Its platform helps collect and analyse supplier ESG data, simplifying supply chain management for compliance.

Technology

Composite.ai uses proprietary AI agent technology and fine-tuned LLMs to deliver secure, scalable solutions for efficient data collection and global Scope 3 tracking.

Location

United States

Year of Incorporation

2024

Website

www.composite-corp.com

Number of Staff

2

% of Gender Diversity in Workforce

50% female, 50% male

Funding Received

No

Ownership

Private

Notable Investors

C10 Labs

Key People

- Mary Catherine Hanafee LaPlante, CEO
- Leon Chan, CTO

GreenFi AI

GreenFi | ESG due-diligence software for sustainable financing & supply chain.

"At GreenFi, our mission is to make the world's business information on environment, social and governance accessible and useful, which is now in our index numbers over several million documents and it's an incredible resource. Never had access to such info in seconds with actionable sustainability recommendations and we have that now AI enabled, and to make it really useful, you have to have all the info accessible in one place."

Company Description

GreenFi helps banks to atomate ESG risk assessments of their customers, investments, assets, portfolio and transactions for reporting, monitoring, impact measuring, regulatory compliance and origination of sustainable financing.

Solution Description

All-in-One ESG AI platform for sustainable financing and supply chain. The AI enabled platform aggregates granular ESG data such as disclosure reports, emissions, climate risk, environment, biodiversity, regulations, certifications, incidents etc in one place as a single source of truth with automated risk indicators and recommendations.

Technology

GreenFi leverages Neural network, Deep learning, NLP, LLM, Machine learning and Composite AI models combined with human intelligence for ESG screening and business decision recommendations.

Location

Singapore

Year of Incorporation

2023

Website

www.greenfi.ai

Number of Staff

16

% of Gender Diversity in Workforce

60% female, 40% male

Funding Received

Yes

Ownership

Private

Notable Investors

Angel investors - banking and sustainability industry leaders

Key People

- Erica de Wit, CEO & Co-founder
- Barun Chandran, CTO & Co-founder
- Edwin Schoonbrood, COO
- Shavi Chawla, ESG Lead

Satva Trust

"Reliable data is critical for due diligence, the disclosure and management of ESG risks, and identifying sustainable commercial opportunities. The maritime industry and financiers have always had to accept on trust data known to be unreliable. Satva Trust is proud to bring the industry a uniquely reliable, independent alternative."

Uncertainty is expensive - bringing independent data clarity and insights.

Company Description

Satva Trust is a technology company providing uniquely independent data and insights on carbon emissions and fuel consumption to power better financial decisions and manage ESG risks in the maritime lending and insurance industries.

Solution Description

The solution empowers financial institutions with real-time, verifiable insights on ship carbon emissions and fuel use. Leveraging satellite and terrestrial data, AI/machine learning and blockchain technology, it eliminates reliance on self-reported data. This independent data and related benchmarking empowers decision-makers with actionable intelligence, enabling them to assess risks and make informed, sustainable investment and lending choices. Additionally, Satva Trust is pioneering an entirely new use for carbon credits in leverage financing, creating innovative ESG-aligned financial products.

Technology

Satva Trust's platform utilises a proprietary machine learning framework to deliver independent, accurate, per-voyage fuel consumption data for commercial vessels worldwide. It integrates a robust data pipeline that combines verified and reliable sources, such as satellite data, to ensure comprehensive and trustworthy insights.

Location

United Kingdom

Year of Incorporation

2023

Website

www.satvatrust.com

Number of Staff

5

% of Gender Diversity in Workforce

66% female, 34% male

Funding Received

Yes

Ownership

Private

Notable Investors

Graham Miles, Director & Co-Founder

Key People

- Leilya Shamel, CEO
- Kiruthika Sureshkumar, CTO
- Robin Russel, COO

Tese

Making sustainable business, just business.

"Many SMEs struggle to access the capital they need to grow. This challenge becomes even more critical in the pursuit of sustainable development and tackling climate change—two crises that require bold and creative resources to empower SMEs in their green transition. That's why Tese was born: to facilitate the financing that will fuel SMEs on their journey toward a brighter, sustainable future."

Company Description

Tese is a tech platform that helps SMEs to navigate the challenges of ESG and sustainability. Tese's ecosystem approach helps to reduce the friction between the critical elements of this journey - reporting, financing, and performance optimisation.

Solution Description

Tese provides SMEs and stakeholders with real-time visibility into their ESG performance. Armed with these granular, data-driven insights, Tese curates a tailored marketplace of sustainable products and services and facilitate access to cheaper sustainable capital to purchase these solutions.

Technology

Tese's industry-specific dashboard integrates real-time data from IoT sensors, AI analytics and advanced carbon calculations, creating a comprehensive data library essential for the sustainable finance application.

Location

Hong Kong

Year of Incorporation

2020

Website

www.tese.io

Number of Staff

14

% of Gender Diversity in Workforce

30% female, 70% male

Funding Received

Yes

Ownership

Private

Notable Investors

N/A

Key People

- Kuzi Charamba, CEO
- Sushil Singh, CTO
- Stephanie Hader, COO
- Tiffany Lau, Creative Director
- Nawneet Sharma, Director of Engineering

Climate Finance AI

Empowering smarter, faster decisions for impactful climate action.

"25 million climate related articles are published every year. This volume makes analysing and predicting climate investment trends increasingly complex. Our AI Assistant simplifies staying up to date with the latest data and empowers faster and more impactful decision making."

Company Description

Climate Finance AI specialises in AI-powered solutions that transform how investors navigate global climate trends. Its mission is to bridge climate science and finance, enabling smarter investment decisions. Delivering up-to-date insights and dynamic reporting, help to uncover impactful opportunities that drive both financial growth and a sustainable future.

Solution Description

The Climate Finance AI Assistant enhances decision-making by delivering insights into global climate trends. It enables investors to explore and monitor key topics, access the latest information, and create custom reports that evolve with new data, keeping them informed and uncovering insights for impactful investments.

Technology

The technology integrates advanced Natural Language Processing (NLP), Large Language Models (LLMs), and its information retrieval system to analyse and extract the latest insights from diverse climate data sources.

Location

Austria

Year of Incorporation

2024

Website

www.climatefinance.dev

Number of Staff

4

% of Gender Diversity in Workforce

25% female, 75% male

Funding Received

No

Ownership

Private

Notable Investors

N/A

Key People

- Fabio Pernegger
- Linda Ratz
- Navid Rekabsaz
- Shady Abushady

Datavaran

Datavaran
Unlocking Clean Energy Investment Opportunities

A climate finance ecosystem for accelerating renewable energy adoption in India and beyond.

"Datavaran can enable investment and direct power purchasing contracts between Clean Tech providers and impact investors."

Company Description

Datavaran is a team of Data Scientists, Web Developers, and Geospatial Analysts based in Bengaluru, India creating Open Data platforms and Open Source solutions for Environmental Sustainability with a focus on Clean Energy. During 2022-2023 the same team was responsible for building the State Clean Electricity Transition Tracker India (Scetti.org) with the goal of identifying policy opportunities for Indian States' clean electricity transition.

Solution Description

Datavaran is an AI/ML climate finance ecosystem for accelerating renewable energy (RE) adoption in India and beyond. The Datavaran platform brings together 3 sets of actors critical to India's Netzero journey: (1) State and local governments (2) Institutional and non-institutional investors (3) Clean Tech providers. The objective is to connect Clean Tech providers with potential investors and help them identify markets most conducive to RE growth based on policy and geophysical factors.

Technology

Energy Dashboard: Data Visualisation accompanied by a Q&A Chatbot to enable user interaction with structured, quantitative data on India's energy sector Green Screen: AI-based Natural Language Processing to extract insights from unstructured, textual data contained in climate policy and corporate disclosure documents. Geospatial Analyser: An interactive map-based interface depicting renewable energy projects. across India.

Location

India

Year of Incorporation

2024

Website

www.datavaran.org

Number of Staff

5

% of Gender Diversity in Workforce

20% female, 80% male

Funding Received

No

Ownership

Private

Notable Investors

N/A

Key People

- Ambar Nag, Project Lead
- Karthik Balakrishnan, Technology Lead
- Simran Sharma, Data Scientist
- Sabrinath D, GIS Specialist

EnergyLab

"Take action now—turn your environmental data into tangible and valuable assets with Green Tracker. Enhancing the economics of your sustainable initiatives, while making them more attractive, transparent, trustful, and scalable."

Turning environmental data into tradable tokens to drive sustainability and unlock financing.

Company Description

EnergyLab aims to develop innovative tools and business models in order to enhance and accelerate climate action, energy transition and sustainable use of natural resources. The company focuses on environmental markets and result-based finance, so "green projects" can economically benefit from the positive impact they do generate.

Solution Description

Green Tracker allows companies and governments to transform CO_2 reductions, water savings, and material recycling (among other positive environmental impacts), into tradeable assets, fostering trust, preventing double-counting, and maximising profitability of the initiatives.

Technology

Green Tracker leverages IoT, AI, and blockchain to automate monitoring, reporting, and verification processes. So, it transforms environmental information into tradeable assets (tokens). Becoming a cornerstone for scaling sustainable practices and unlocking new financing opportunities.

Location

Chile

Year of Incorporation

2018

Website

www.energylab.cl
www.greentracker.io

Number of Staff

12

% of Gender Diversity in Workforce

25% female, 75% male

Funding Received

Yes

Ownership

Private

Notable Investors

AES Corporation, Swiss Cooperation Agency (CLI), UAE Expo Live Innovation Programme

Key People

- Cristián Mosella V.
- Ignacio Guaico G.
- Linco Ñanco
- Patricio Lopez
- Egber Insignares
- Ignacio Valdivia

Kaleidofin

Creating a digital ecosystem to ensure finance for everyone, everywhere.

"Kaleidofin, through ki score, aims to empower financial institutions across the developing world to deliver tailored, timely credit to different customer cohorts, enabling new rollout models, new products and retention of their best customers - ultimately advancing financial inclusion, economic stability, and gender equality across the developing world."

Company Description

Kaleidofin is a fintech platform with a mission to build a digital ecosystem to ensure finance for everyone, everywhere. Kaleidofin's focus is to provide financial solutions to the underbanked and underserved populations that includes low-income households, farmers, youth and micro and nano enterprises, via the kaleidofin platform, combining credit health assessment (ki score), middleware rails, risk management dashboards (ki view) and debt capital markets structuring capabilities (ki credit).

Solution Description

Kaleidofin's ki score is a groundbreaking solution that democratises finance for underserved nano and micro-enterprises, especially women-owned businesses. By leveraging machine learning, ki score predicts credit risks, improves loan access, and supports financial inclusion. It offers real-time bulk scoring, customisable credit decisions, and empowers entrepreneurs to grow sustainably, driving impactful social change.

Technology

Kaleidofin's ki score is a proprietary credit model using AI/ML algorithms to assess creditworthiness of underserved, data-thin customers in the informal sector. It analyses diverse data points, enabling inclusive credit access for women-led SMEs. Kaleidofin's ki view is a risk analytics tool that tracks portfolio performance, forecasts risks, and improves product and risk management for more inclusive financial services.

Location

India

Year of Incorporation

2017

Website

www.kaleidofin.com

Number of Staff

134

% of Gender Diversity in Workforce

30% female, 70% male

Funding Received

Yes

Ownership

Private

Notable Investors

Bill & Melinda Gates Foundation, Oiko Credit, Michael & Susan Dell Foundation, Flourish ventures, Rabo Partnerships, Bharat Inclusion Initiative, Blume venture, Omidyar India

Key People

- Natasha Jethanandani
- Sucharita Mukherjee
- Ravi Teja Medikonda
- Abhijit Magade
- Deepak Srinivas
- Akshay Kumar

Pérola

Banco Pérola

Democratising access to fair credit for vulnerable entrepreneurs.

"Challenge 3 of the G20 TechSprint 2024 Brazil aimed to accelerate the achievement of the United Nations Sustainable Development Goals (SDGs) through innovative technological solutions. Potential areas of focus included sustainable finance, such as the Pérola APP ."

Company Description

Banco Pérola's mission is to democratise access to fair credit in Brazil, using technology to reach those excluded from the traditional financial system.

Solution Description

Pérola's goal is to provide financial inclusion and economic growth by increasing the availability of microcredit for the most vulnerable entrepreneurs.

Technology

Pérola's platform is built on a robust and reliable technological foundation, utilising secure processes and market-leading tools to ensure enhanced security and maintenance, such as JavaScript, PostgreSQL, Google Cloud, and others.

Location

Brazil

Year of Incorporation

2009

Website

www.creditoperola.digital

Number of Staff

6

% of Gender Diversity in Workforce

90% female, 10% male

Funding Received

Yes

Ownership

Private

Notable Investors

Credit Rights Investment Fund - LEVANTE

Key People

- Chief Executive Officer
- Administrative and Financial Director
- Credit Agents
- Collection Agents
- Technology Team

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