



OS-CLIMATE BRIEFING DOCUMENT

May 5, 2021

Introduction

Investors, banks, insurers, companies, and governments lack the necessary trusted data and tools to quantify and act on climate-related risk and opportunity. This problem is complicated by a lack of standardized analytic methodologies and a chaotic, fragmented market of providers promoting their small pieces of the puzzle. Until these barriers are removed, there is no way capital will be reallocated at the scale and speed to close the >\$1.2 trillion annual gap needed to meet Paris Climate Accord goals and prevent catastrophic disruption.

The Linux Foundation (LF), the leading nonprofit organization enabling innovation through collaborative open source projects, is forming LF Climate Finance Foundation (LFCF) to build the OS-Climate (OS-C) platform <http://www.os-climate.org/> -- a breakthrough data and analytics solution for climate-aligned investing, finance, and regulation. of the risk and opportunity related to climate physical impacts and economic transition.

Our goal is to rapidly accelerate the shift of global investment away from relatively GHG-intensive and climate-vulnerable companies, technologies, and infrastructure into mitigation, resilience, and adaptation that is financially sustainable and high-impact — especially in developing countries — as well as to enable the design of better policy that effectively engages capital markets in addressing climate change.

Members and Governance

BNP Paribas, Goldman Sachs, and KPMG are Premium Members. Other initial Founding Members include Allianz, Amazon, Federated Hermes, London Stock Exchange Group, Microsoft, the Net Zero Asset Owner Alliance, Ortec Finance, and S&P Global. Red Hat IBM also has joined and is contributing a 9-person technical team. OS-C's Planning Team includes WWF, Ceres, and SASB. The membership has more than tripled since September 2020. The number of individual subject matter experts, data scientists, software engineers, solutions architects, and other contributors to the initiative from the members has grown more than 500% over that period.

- The Governing Board members are:
 - Remco Fischer, UNEP-FI as part of the Secretariat of the Net Zero Asset Owner Alliance.
 - Frank Manahan, KPMG
 - Udo Riese, Allianz
 - Truman Semans, OS-Climate Core Team
 - Rim Tehraoui, BNP Paribas
 - Jared Westheim, Goldman Sachs
- Governing Board Observers are:
 - Adrian Cockcroft, Amazon
 - Lisa Eichler, Ortec Finance
 - Daniel Godfrey, Federated Hermes
 - David Harris, London Stock Exchange Group
 - James Salo, S&P Global
 - Nicholas Schifano, Microsoft
- The Technical Advisory Council members are:

- Pierre de Belen, Goldman Sachs
- Vincent Caldeira, Red Hat IBM
- Robert Moroney, KPMG
- Ludan Stoeckle
- The OS-C Core Team leaders are:
 - Hewson Baltzell, Product Leader
 - Truman Semans, CEO
 - Michael Tiemann, Project Leader
- Senior Advisors include:
 - Monique Barbut
 - Lionel Johnson
 - Bob Litterman
 - Deborah Spalding

Solution

Through Open Source governance, collaboration structures, and licensing, OS-C is developing an AI-enhanced platform to fully integrate climate risk and opportunity factors into investment decision-making and accelerate creation by 3rd Parties of superior investment vehicles. Initial platform components include:

- Community-based open-source approach
 - Joint projects for new data, modeling, standards, and supporting technology.
 - “Community-based” governance, collaboration rules, licensing, and standard-setting that enable stakeholders to share cost, intellectual property, and effort.
- Global Data Commons
 - The Commons will serve like a “public utility” supporting a wide range of government, research, academic, and non-profit data providers by better connecting them to both open source and proprietary decision tools, and in many cases providing long-term data storage. The Data Commons will have fully transparent data governance.
 - Curated library of public and private sources, for both transition and physical risk/ opportunity.
 - Coverage includes corporate, economic, sector, policy, technology, linkage, and asset-level data.
 - More accurate corporate historical and forward-looking climate & ESG metrics as a public good.
 - One deliverable on the roadmap is to offer an “EDGAR Online” equivalent for climate-related corporate and factor data and, later, for broader ESG data.
 - Another deliverable on the roadmap is a technical facility where corporations can disclose in one place, with an efficient process, all of the voluntary and mandatory data disclosures they wish to make. Among other benefits, this would resolve the looming crisis of multiple new incoming for disclosure going to a given company (possibly dozens, for a multinational corporation) from financial institutions, driven by forthcoming financial regulation to manage climate-related market risk and by other policy objectives.
- Analytic Tools
 - Integrate climate-related risk and opportunity into decisions by investors, financial institutions, regulators, etc.
 - Top-down and bottom-up modeling.
 - Scenario analysis tools.

- Alignment tools.

For more detailed information about the Data Commons and tools under development, please see https://www.os-climate.org/wp-content/uploads/2021/06/OS-Climate_LinuxFoundation_Detailed-Overview_20210612.pdf

Open Source Approach

- OS-Climate applies the “community-based” governance, collaboration rules, licensing, and standard-setting that have revolutionized innovation in Tech and Life Sciences – including the Human Genome Project, accelerated COVID- 19 vaccine development, and the Linux Operating System used by the majority of the financial services firms’ IT.
- These systems, perfected over the last 20 years through 300+ global projects involving 1,400+ member companies and 243,000 individual contributors, make LF a powerful force multiplier by coordinating large numbers of companies and individuals in jointly tackling complex challenges.
- LF projects serve as a “Switzerland” where competitors can work together on the “pre-competitive” layer of technology and standards they all need. This prevents “wheel re-invention” and frees up resources to accelerate innovation.
- The LF method is specifically suited to situations for markets early in their development, when some patterns of competition can impede market progress by sowing confusion and slowing crucial standards development – exactly the current situation with climate-aligned finance, investing, and business.
- LF Open Source initiatives are especially well suited to areas in which convergence on data standards is needed to accelerate innovation. See <https://www.jointdevelopment.org/>. Additionally, Goldman Sachs has recently open sourced its Legend platform to the Linux Foundation FINOS project, and Legend has been successfully used to develop data standards for a global financial securities association. See <https://www.finos.org/legend>.

Focus Users and Use Cases

- OS-Climate's initial focus is to enable asset owners, asset managers, financial institutions, and financial sector regulators to run scenario-based predictive analysis.
- This analysis will inform decisions to exit companies / projects that contribute excessively to climate change and to reallocate toward solutions-oriented companies, projects, and financial products, and to design climate-aligned financial products.
- The platform will facilitate corporate disclosures and make these publicly accessible.
- Initial Focus Use Cases:
 - Stress testing.
 - Risk management.
 - Asset allocation.
 - Portfolio construction.
 - Research (investment, banking, etc.).
 - Manager selection.
 - Analysis of securities & loans.
 - Design and execution of benchmarks, strategies & products.

- Disclosure & reporting.
- Engagement with companies & financial institutions.
- Facilitating corporate disclosure.

COP26 Focus

OS-Climate is planning a high-visibility event at COP26 where we aim to roll out what could be one of the most substantial set of climate finance “deliverables” of the COP -- beta versions of the following.

- Data Commons with completed architecture from ingest of corporate and other climate-related data to APIs feeding data to a range of tools for climate-aligned finance and investment processes.
- Open Source Implied Temperature Rise Tool for alignment of portfolios and company-level investment and finance decisions.
- Open Source Physical Risk Assessment Tool.