Open-Source Climate (OS-C) Ovewiew

Tapping the Massive Power of Open Source to Build a Public Utility of Data and Analytics

September 11th, 2022

OS-C

Problem: investors lack data coverage, quality, interoperability required for scaling climate impact

1. Data and existing tools' coverage of asset classes beyond listed large-cap equities is poor

2. Situation in countries outside OECD even worse

3. Quality, comparability, interoperability, and trust are often poor

OS-C proposes concrete measures to address climate risks and opportunities

Problem → **Specific issues** → **Actions**

Investors
Companies
Society
Governments

Overexposed to Climate Risks / Underexposed to Climate Solutions

Gap of $5+ trillion annually to achieve Paris Climate Accord goals

Until government regulation / incentives enter into force, **most corporations will not transition fast enough** on their own

Accelerated large scale capital reallocation by financial institutions is needed

GFANZ, corporates, NGOs, and the public urgently need trustworthy data and **transparent analytic tools** **to drive change**

1

Build holistic data and analytics solution essential to meet Paris Goals

2

Build Co-op to leverage many stakeholders‘ intellectual property, know-how, and effort

Solution: OS-C is uniquely able to breakthrough by...

building a **world-class shared platform …**

Employs cutting edge technology architecture, IT backbone, and “data as code” approaches

A “public utility” of data and tools that can interact easily with private data and tools

Translates science & evolving accounting standards and metho-dologies into code

through **community collaboration …**

Builds trust through publicly transparent governance, open meetings, open dialogue

Combines know-how and aligns interests among stakeholders – regulators, investors, banks, NGOs, academia

that is **truly open source**!*

Linux Foundation governance structure and licensing enable sharing of effort, cost, and intellectual property.

Data as code, accurate data provenance, interoperability

More accurate and forward-looking climate and ESG metrics as public good

* Note: not “Openwashed” – most initiatives in the ESG finance space claiming to be “open source” are “open code” or “open access” which lack the transparency and open collaboration characteristics essential for trust..

OS-C operating model leverages open source principles

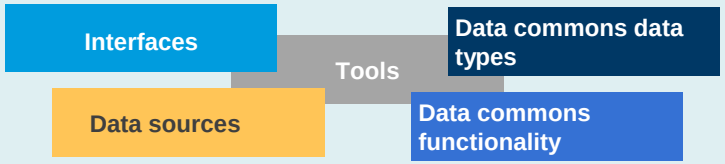
COMMUNITY INPUT

- Business leaders set goals
- Data providers offer data and determine access
- Develop and deploy models and tools
- Monitoring and Management incl. review and audit before making updates

PLATFORM based on Red Hat's Operate First

"Trust open communities with **running** and **managing applications** and **infrastructure"**

OPEN DATA SCIENCE PLATFORM



- Total open source visibility and participation in the configuration and deployment managed by OS-Climate

SHARED ADVANTAGES

- Maximal reliability and transparency
- Increased scalability
- Public record of all configurations and community discussions
- Share costs, intellectual property, and effort

OS-C: 3 main building blocks for a game-changing solution

OPEN SOURCE COMMUNITY

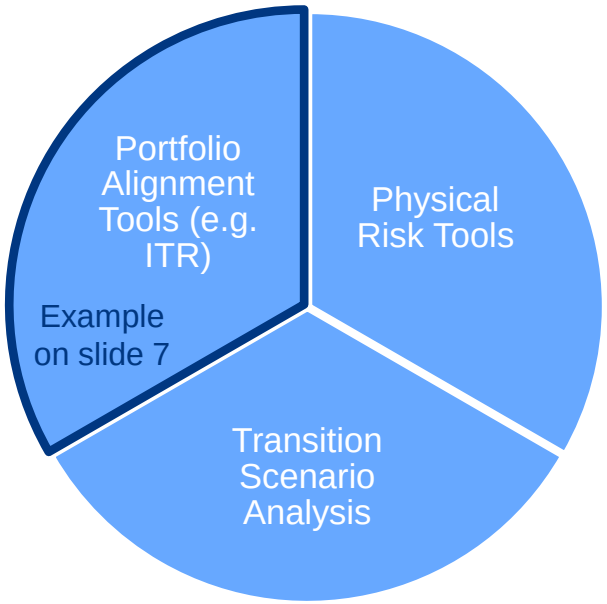
GLOBAL DATA COMMONS

ANALYTICAL TOOLS

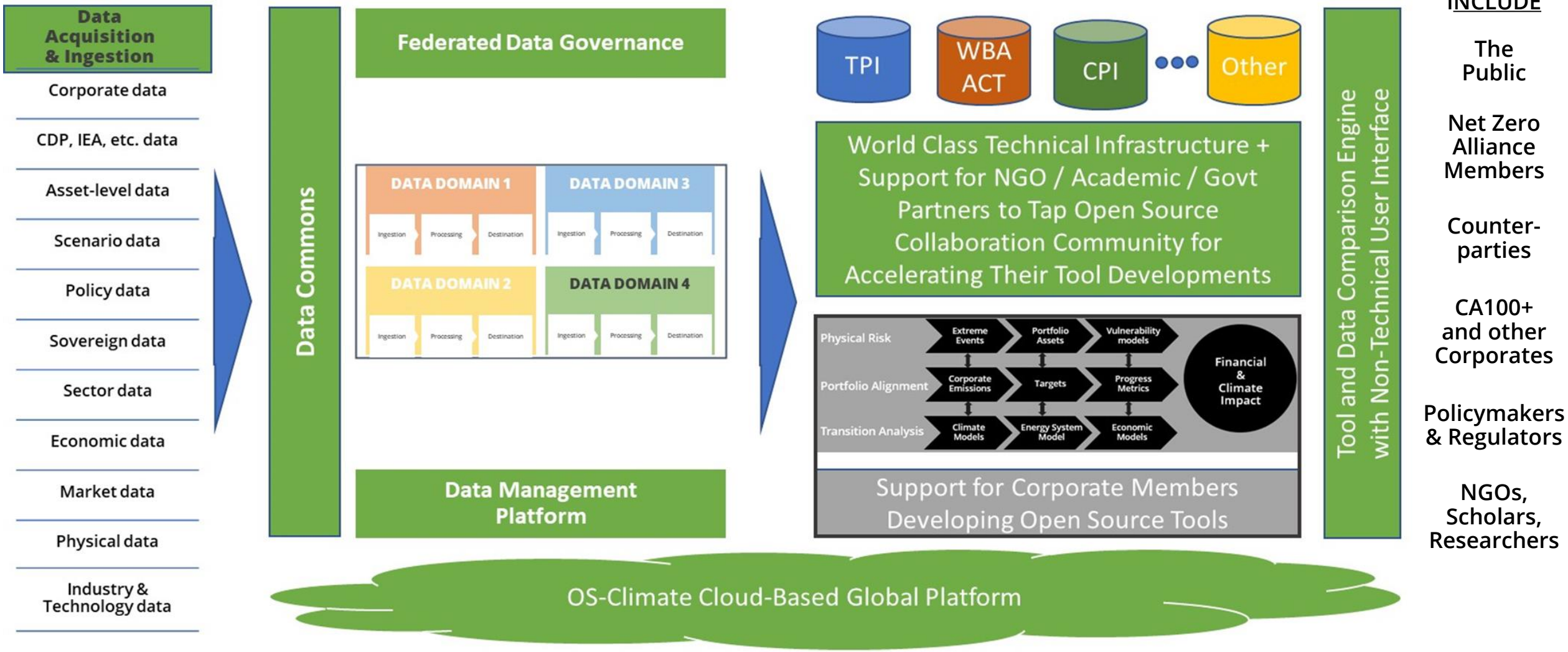
Climate factor data

Platform Infrastructure

Company data



Data & Analytics Public Utility >> Global Impact



USERS INCLUDE

The Public

Net Zero Alliance Members

Counter-parties

CA100+ and other Corporates

Policymakers & Regulators

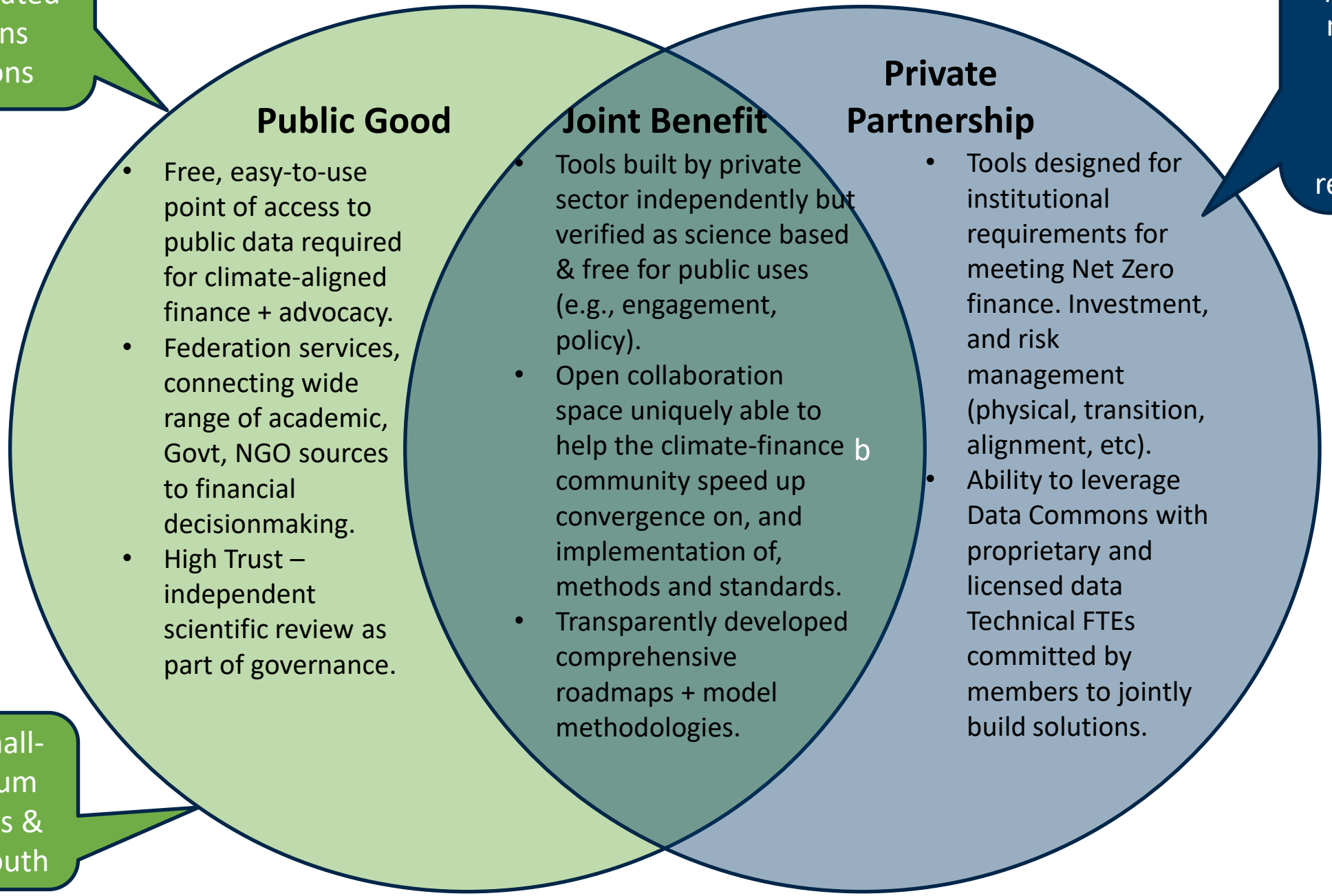
NGOs, Scholars, Researchers

IMPACT: Closing the Data Gap >> faster financial institution exit from laggards and reallocation into leaders + more effective investor and public engagement + clearer risk and incentive pricing >>> informs corporate strategy and planning >>> drives investment in resilience and Net Zero >>> **Accelerated reduction of Gigatons CO2E**

OS-C's Public v. Private Benefit

Measure ROI by accelerated emissions reductions

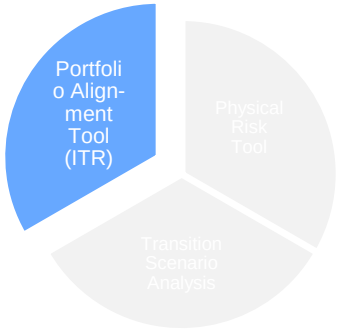
Measure ROI by speed and scale of net-zero aligned decisions and projected GHG mitigation & resilience impacts



Serve small-to-medium sized orgs & Global South

OS-C

Project create tangible results: ITR Portfolio Alignment Tool (Allianz lead)

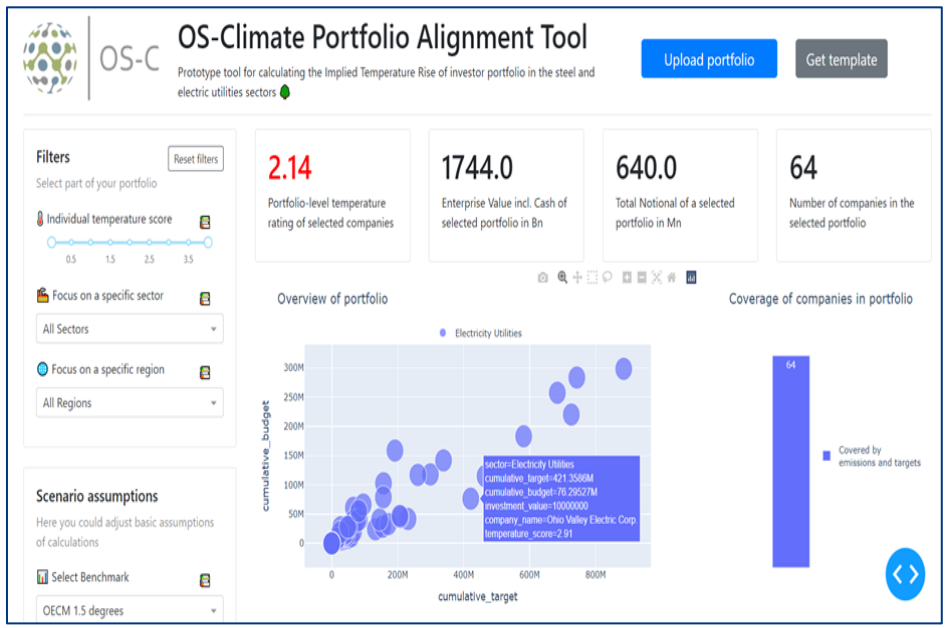


ITR-Objective

ITR tools compare company emissions with sector specific pathways and finally put a temperature to each investee company

- along TCFD recommendations
- guided by science
- full transparency in each step
- Company data are key --> data commons

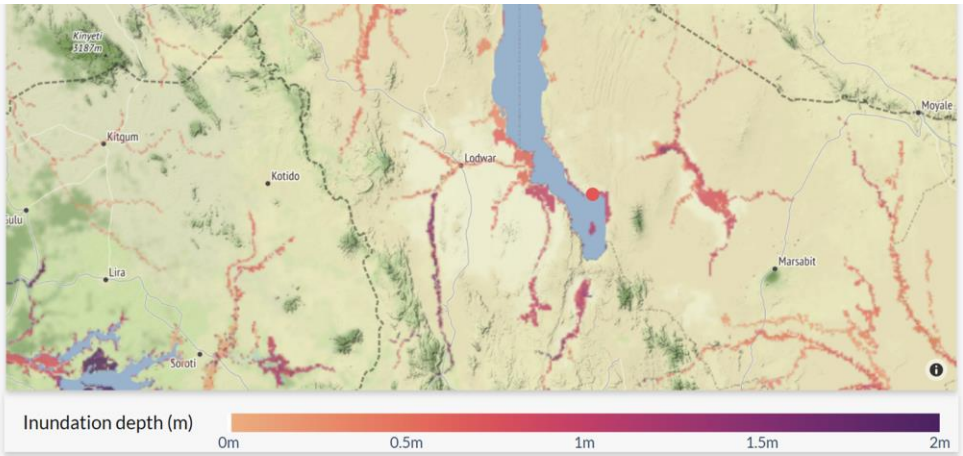
Operating model



Output

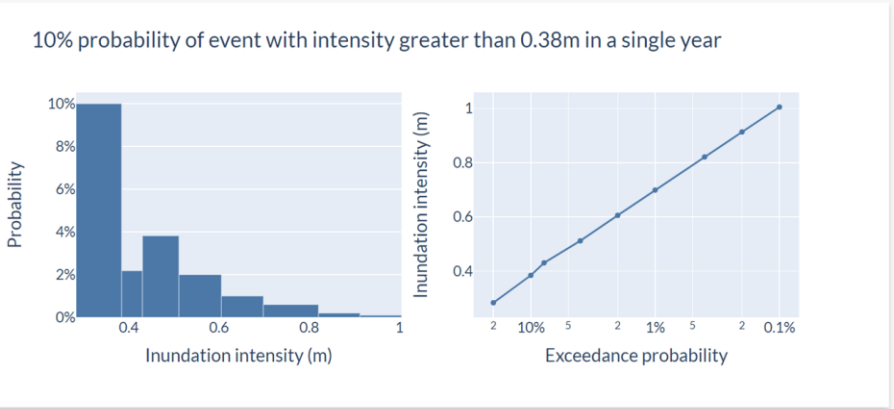
- Tool will be released in May 2022 for 4 initial sectors, covering Scope 1 & 2 emissions.
- Release cycle will cover additional sectors and scope 3 emissions.
- A transparent and **open source model** facilitates the **wider application** of the tool and methodology **improvement over time.**

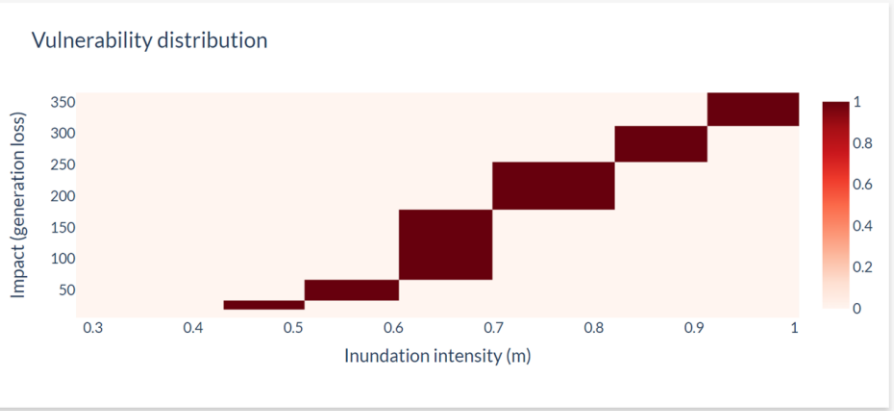
Projects create tangible results: Physical risk and resilience tool (BNP Parisbas lead)



Turkana 1

ID	Name	Primary Fuel	Capacity (MW)	Est. annual Generation (GWh)
WRI12541	Turkana 1	Gas	102	394.4



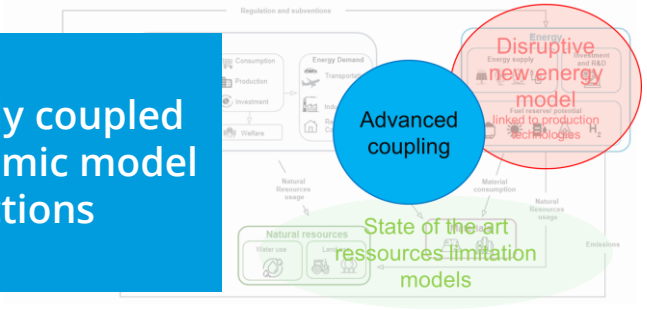


Transition Analysis Modeling Platform (Airbus Lead)

[Airbus Amber]

Energy model take into account regulations and subventions

Energy model fully coupled with macro-economic model in both directions



Energy model including production technologies mix allow to take into account specific materials resources usage limitation

Energy model including production technologies mix allow to take into account accurately natural resources usage limitation

Macro-economic model take into account natural resources usage limitation

Energy model including production technologies mix allow to take into account accurately energy production emission

Our Members

Premium Members

BNP PARIBAS

Goldman Sachs

General Members

Allianz

amazon

BNY MELLON

EY

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LSEG

Microsoft

THE NET-ZERO ASSET OWNER ALLIANCE

ORTEC FINANCE

Red Hat

S&P Global

Associate Members

CLIMATE POLICY INITIATIVE

OpenEarth

GLEIF

Enabling global identity
Protecting digital trust

Data and Model Partners

JUPITER

URGENTEM!

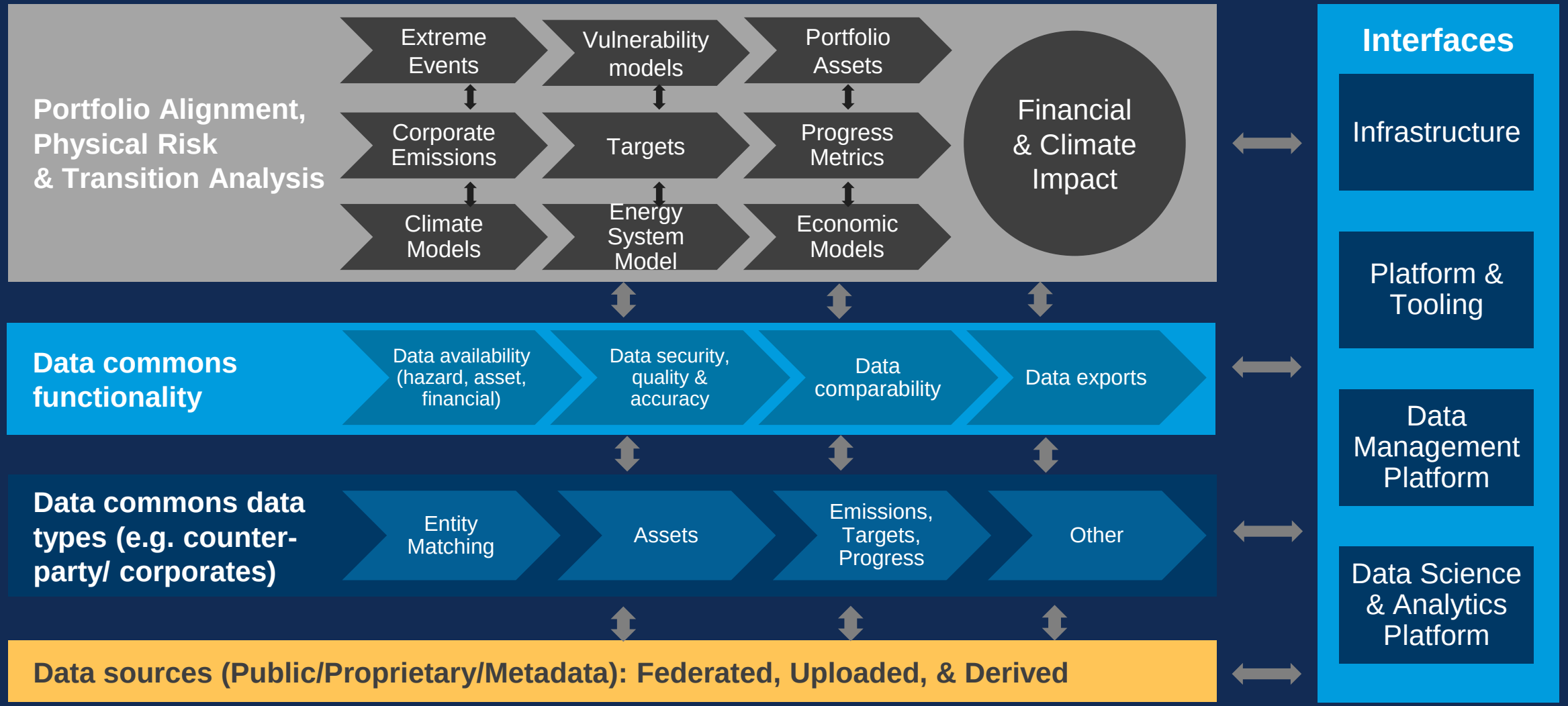
riskthinking.AI

WORLD RESOURCES INSTITUTE

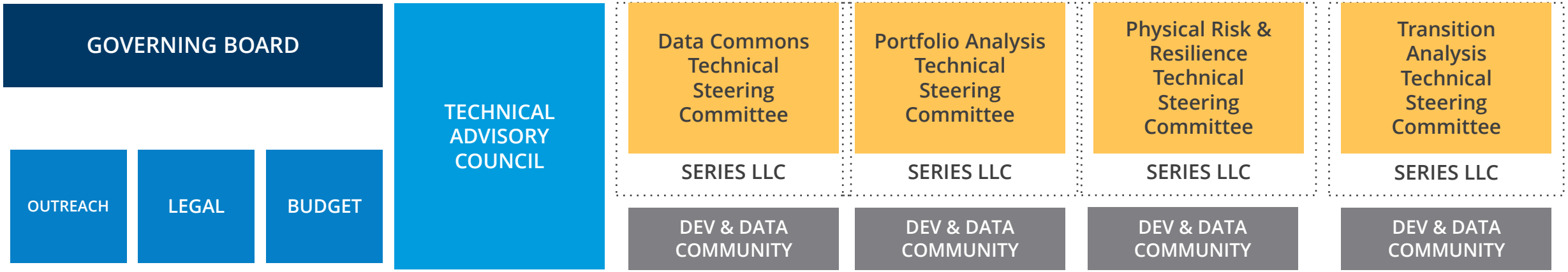
OS-C

APPENDIX

OS-C is platform of interconnected components and workstreams



Governance structure and business model



Business model: non-profit 501(c)(6) business association under the Linux Foundation (largest organizer of open-source tech initiatives globally); platform management and development funded by annual member fees plus philanthropic grants.

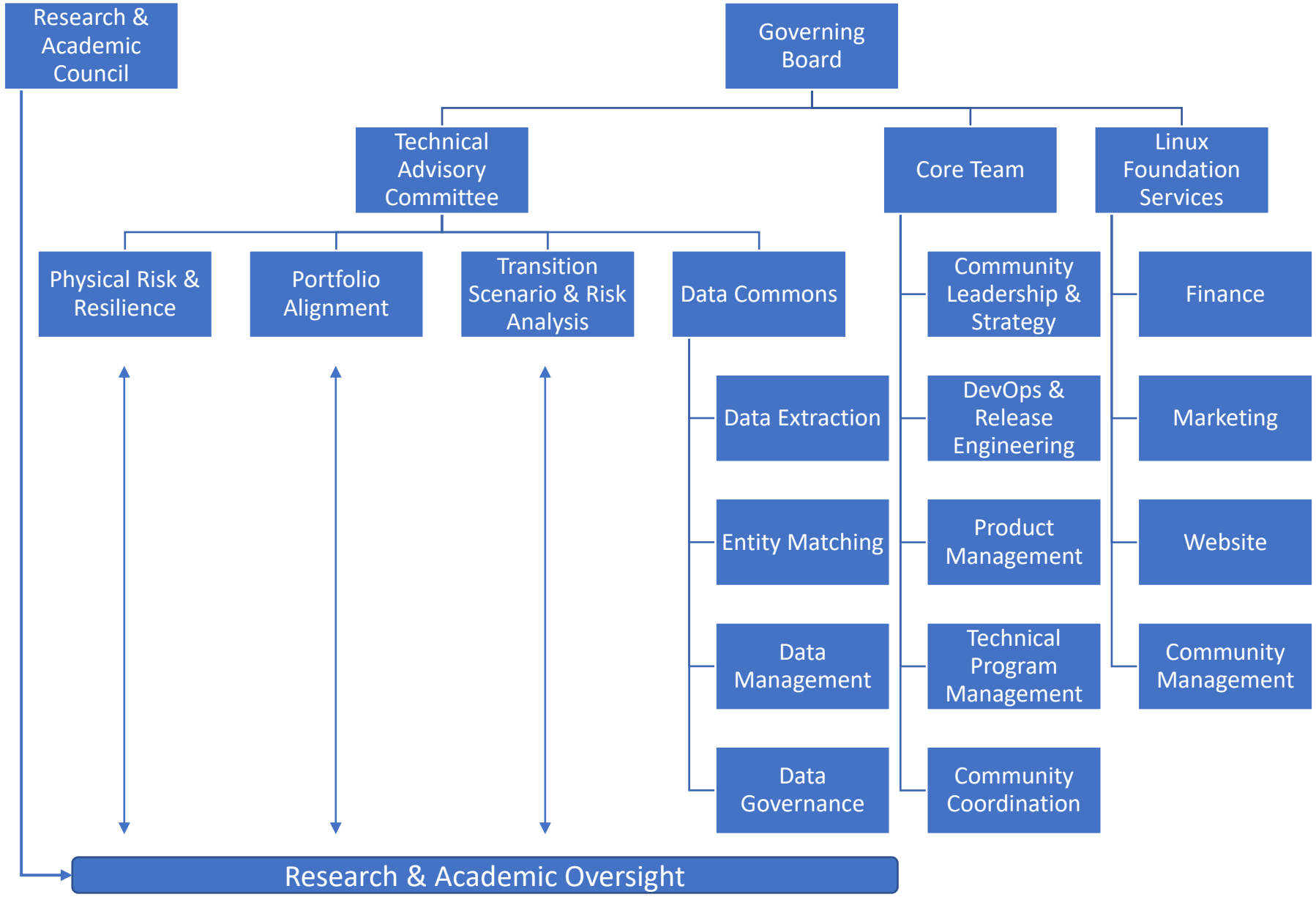
➔ Governing Board (fee-paying members + Academia, IGO, NGO) decides strategy, priorities, & budget.
- Premier Membership: $100K/year; General Membership $30K/year; Associate Membership (Academia, IGO, NGO): $0K/year
- Meets every 3rd Wednesday of the month

➔ Technical Advisory Council (TAC) sets technical vision, facilitates collaboration among the Technical Projects, and recommends budget and technical decisions to Board.
- Comprised of TSC chairpersons and Premier Members' technical delegates.
- Meets 2nd and 4th Monday of the month

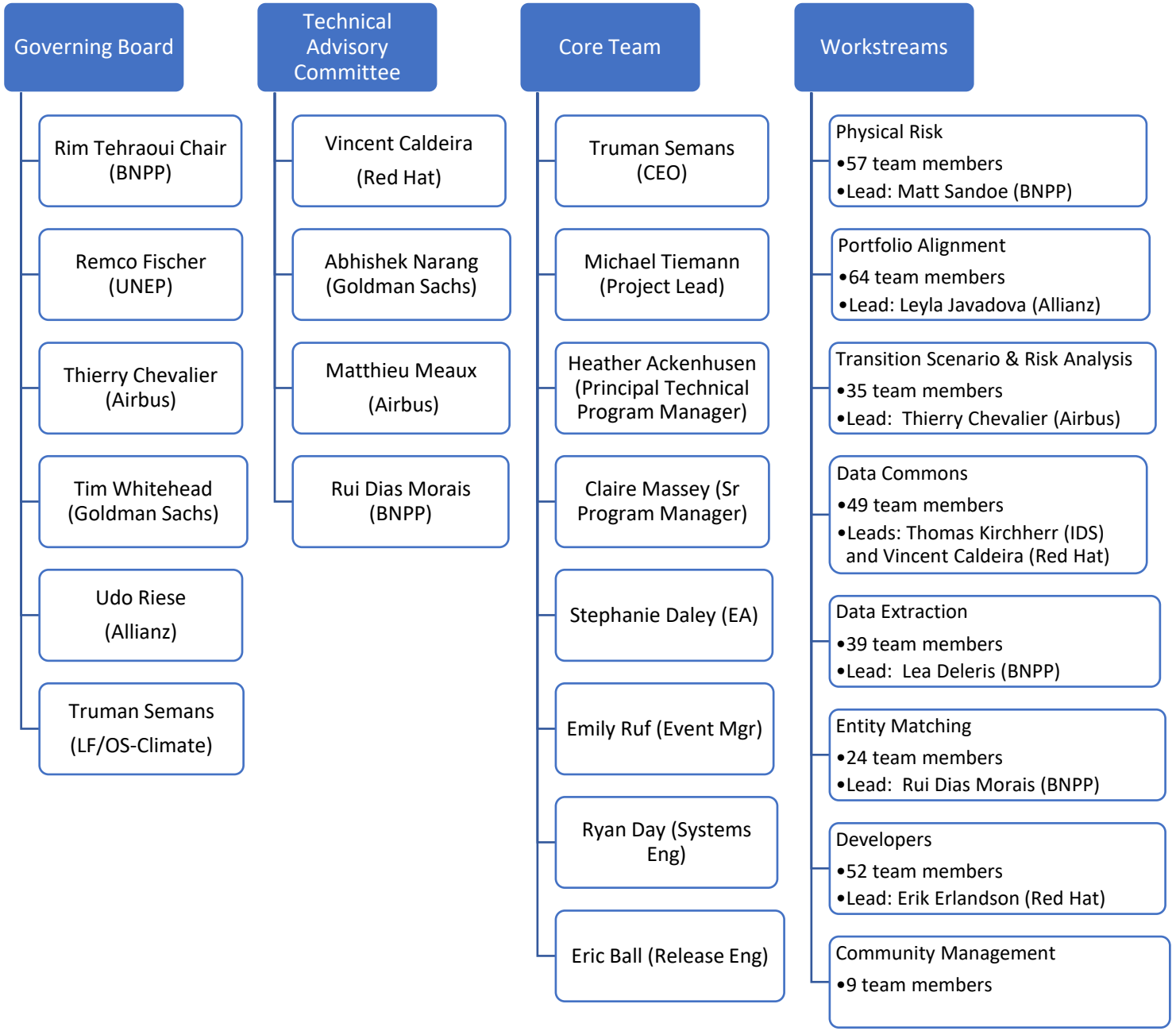
➔ Technical Steering Committees (TSCs) is responsible for technical oversight of each Project.
- Data Commons Charter: https://docs.google.com/document/d/1yLL3fBkwe_EC1EOtBHV7mAThlDVSA5dQnkI4Ijnv0eI/edit?usp=sharing
- Physical Risk & Resilience Charter: https://docs.google.com/document/d/1TiHw4KL2sQIdUsvkKq0Eg-ju5T681nQC/edit?usp=sharing&ouid=111309013911865667965&rtpof=true&sd=true
- Portfolio Alignment Charter: https://docs.google.com/document/d/1l5Sdz0YODYA8uLO4NHMykYLtOsUHl5nK/edit?usp=sharing&ouid=111309013911865667965&rtpof=true&sd=true
- Transition Analysis Charter: https://docs.google.com/document/d/1oApdAxwjM8_TCeHFgBE8GJp-JOeM6U21/edit?usp=sharing&ouid=111309013911865667965&rtpof=true&sd=true

OS-C

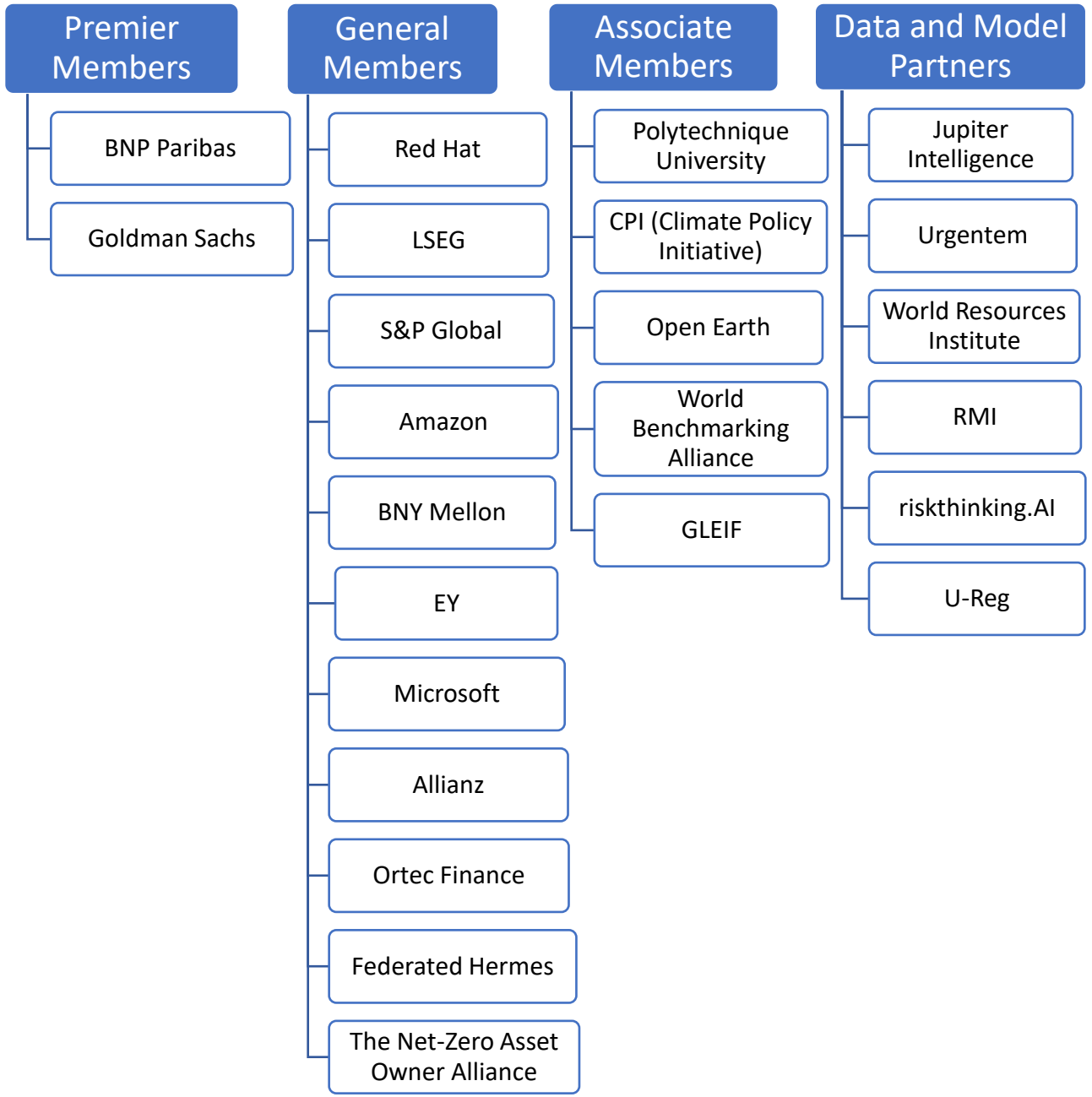
OS-C Org Chart



OS-C Org Chart -- Personnel



OS-C Members & Data Partners



Research & Academic Council's Role

- An independent body whose governance role is set forth below and in the applicable charter for each Technical Project.
- Ensures that OS-Climate's data and tools continue to be science-based and to meet the highest standards of scholarship in the fields relevant for climate-aligned business and finance.
- Reviews key modeling methodological choices and assumptions to ensure that these align with current, peer reviewed scientific studies and scholarship.
- Helps Technical Projects identify and attract excellent scholars and experts to advise on, and contribute to, the Projects' detailed development work on data and tools.
- Advises the Governing Board on strategically important developments in the academic and research community, including relevant topics of debate, research projects, and initiatives.
- Anchor member of RAC Selection Committee: Rosina Bierbaum, Chair of the Global Environment Facility Science and Technical Advisory Panel, https://www.moore.org/people-detail?personUrl=bierbaum-ph.d

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