



THE LAB'S FIRST FIVE YEARS

Impact and Lessons
Learned, 2014-2019

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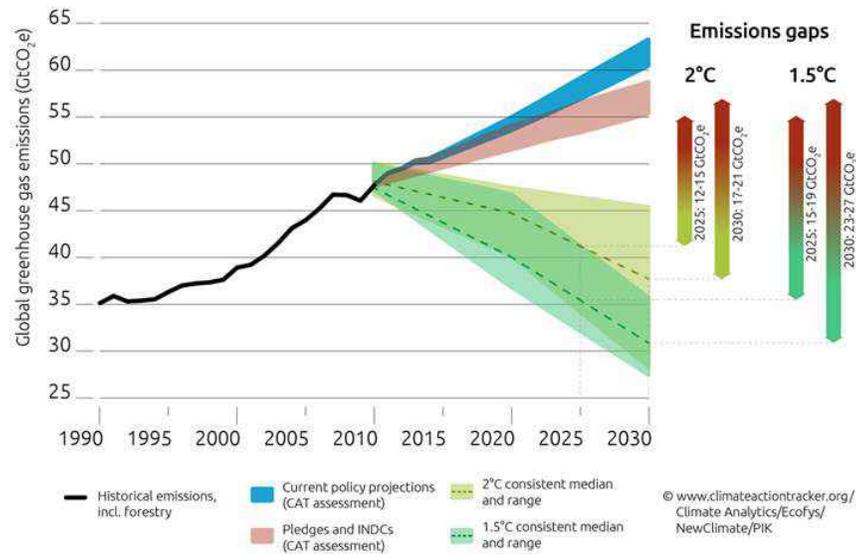
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*Case studies of many of the Lab's solutions are highlighted throughout the report.

DRIVING SUSTAINABLE INVESTMENT: THE NEED FOR THE LAB

Sustainable investment is critical to tackle the key global challenges of the 21st century

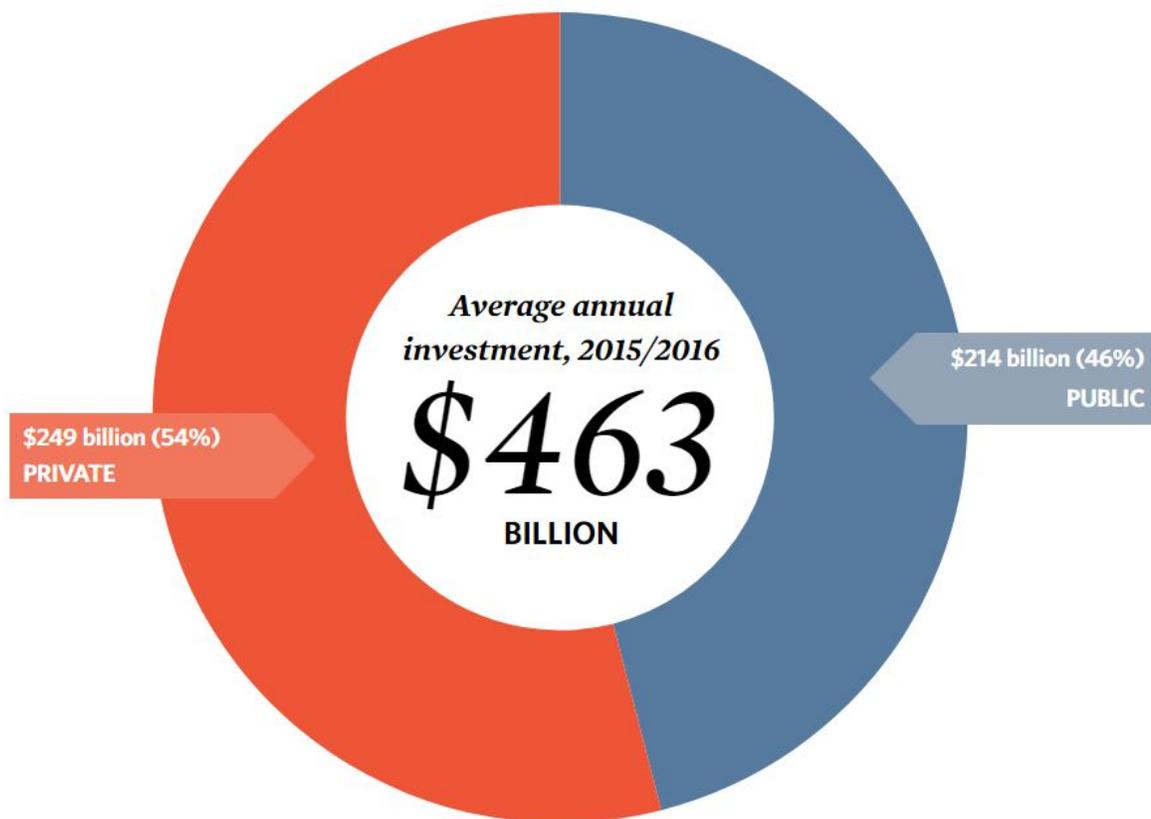
Climate Change – Meeting the Paris Agreement goals and ramping up ambition in emissions reductions



Sustainable Development – Meeting the Sustainable Development Goals



Investment is flowing, but not nearly enough



\$463 billion annually flowed towards climate change mitigation and adaptation in 2015 and 2016. However, much more is needed to achieve global climate and sustainable development goals.

While there is no single cohesive estimate of investment required for mitigation and adaptation in a 1.5° C scenario, it is in the trillions of dollars.

For example, the IPCC estimates that a \$1.6-3.8 trillion annual investment in energy systems alone is required to keep warming within a 1.5° C scenario.



The Lab identifies, develops, and launches innovative finance instruments that can drive billions in private investment to action on climate change and sustainable development.

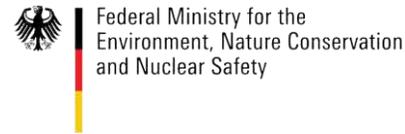
35 instruments launched

60+ public and private Lab Member institutions

300+ supporting experts, nearly half from developing regions

The Lab brings together over 60 institutions to address the sustainable investment gap

FUNDERS



MEMBERS



PAST FUNDERS



SECRETARIAT



\$1.4+ bn

mobilized by
35 instruments for climate
action in developing countries

\$200+ mn

invested by Lab Member institutions

\$1.2 bn

catalyzed in
additional investment

Lab instruments have
mobilized

200x

what funders have invested
in the Lab Secretariat

LAB IMPACT HIGHLIGHTS: 2014-2018

Since 2014, the Lab has launched 35 solutions that tackle investment barriers in the **most critical sectors and regions** for action on climate change

Number of Lab instruments:



Renewable
Energy
18



Cities &
Transport
16



Water, Land use
& Agriculture
9



Climate
Risk
8



Energy
Efficiency
7



Energy
Access
6



Asia
15



Latin America
12

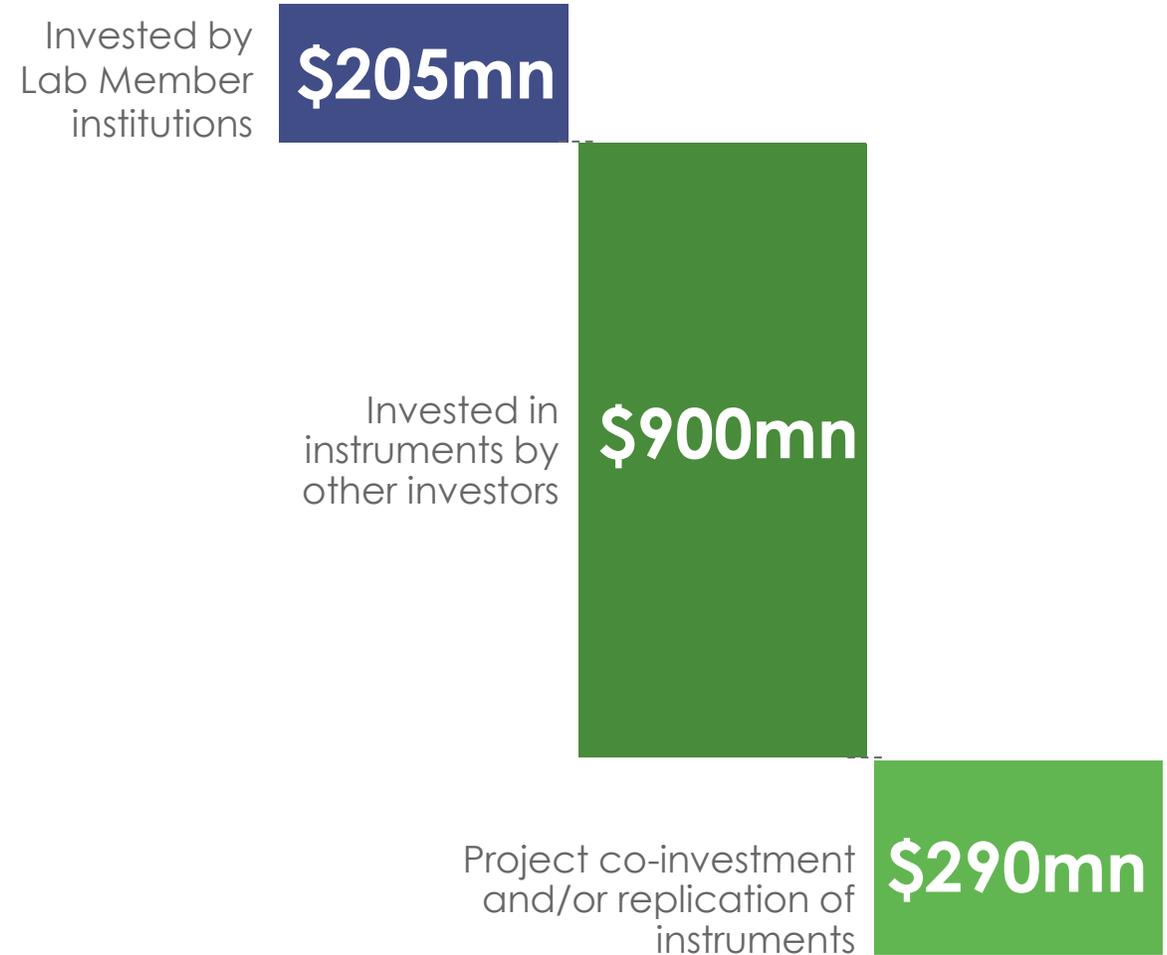


Africa
10



Global
4

Lab Member
investments have
catalyzed an additional
\$1.2 billion,
more than five times
their original
investments



Lab instruments
have successfully
mobilized over
\$445 million
in investment from
the private sector

More than 90% of measured private finance has come from institutional investors and commercial banks. A small amount has also come from private equity investors.

Private investors also co-invest in projects on the ground, which is more difficult to measure.

Case Study

Mobilizing Private Investment: Climate Investor One

2015 Lab Instrument

Climate Investor One is a “whole-of-life” financing facility for early-stage project development, construction financing, and refinancing to fast-track renewable energy projects in developing countries.

CIO has mobilized private sector investment from:



IMPACT



Aims to catalyze **~\$2.5+ bn in private sector funds** at construction phase

Has raised \$555 mn across Development & Construction Equity funds so far

Has deployed \$50 mn into inaugural construction project CleanTech Solar, a pan-Asia rooftop solar platform



Targets **~4,800 GWh** (1,700MW) in electricity generation per year

Will reduce **~1.8 mn tons of CO2e** emissions each year

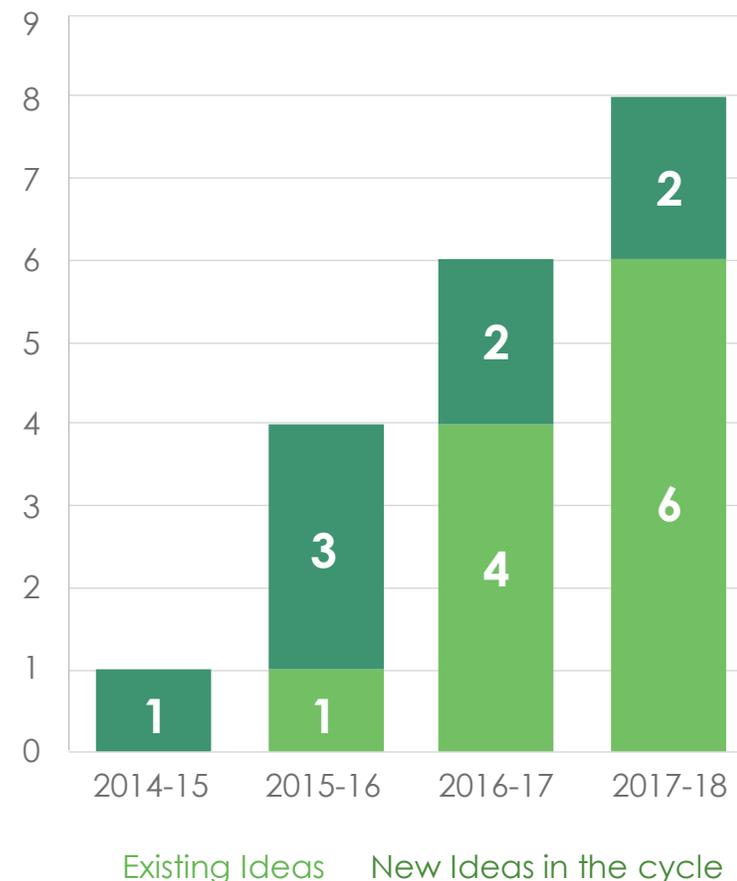
Will serve **~12 mn people** over project lifetimes

The Lab has prioritized innovation in adaptation finance by supporting instruments that tackle critical barriers to investment

To date, eight Lab instruments address climate change adaptation challenges. These include:

- **Cloud Forest Blue Energy Mechanism** – A mechanism for restoration and conservation of cloud forests in Latin America, which can reduce sedimentation and increase water flow
- **The Oasis Platform** – A platform to provide open access to data and open source modeling tools that enable risk assessments and evaluation of economic and financial losses associated with climate-related events
- **The Agricultural Supply Chain Adaptation Facility** – A facility to provide farmers with know-how and finance for climate-resilient investments, by enabling development banks to partner with agribusiness corporations who empower farmers within their supply chains

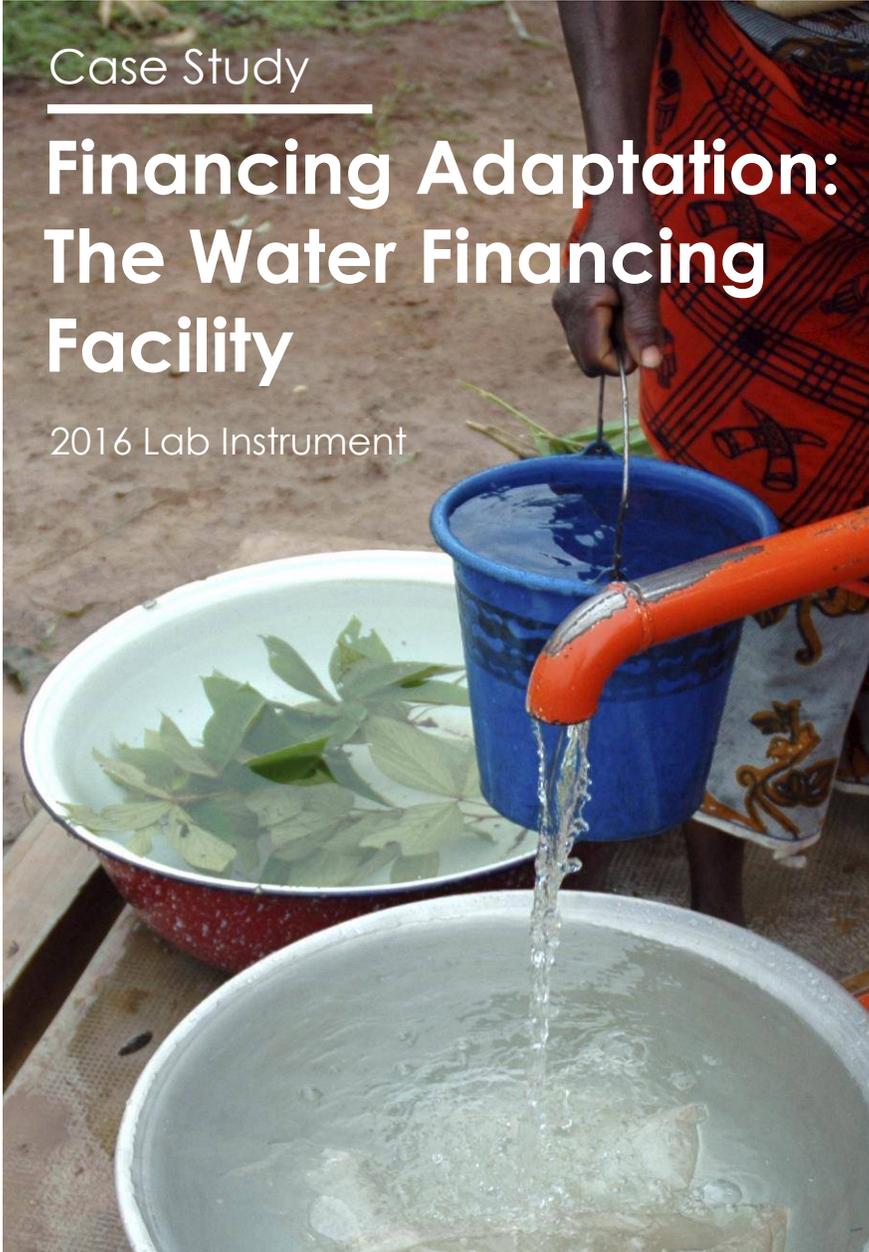
Lab Ideas Addressing Adaptation by Year



Case Study

Financing Adaptation: The Water Financing Facility

2016 Lab Instrument



The Water Financing Facility mobilizes domestic investment into climate compatible water sector projects through the local bond market, to shift the way the water sector is being financed in order to increase global access to water and sanitation.

WFF is setting up a pilot project in Kenya. It has established a first loss reserve fund with the support of the Kenyan Treasury and secured additional guarantees provided by USAID, SIDA, and GuarantCo. The Commercial Bank of Africa will underwrite the first bond issuance, which is expected in Summer 2019. This will allow for financing of water and sanitation projects and will lead to a second bond issuance aiming for Winter 2019.

WFF is also in the process of replicating the facility in other countries; presently Indonesia is being assessed.

IMPACT



Aims to mobilize \$1 bn equivalent in local currencies.

\$15.4 mn in investment secured from seven sources

Seeking approximately \$75 mn in total co-financing support

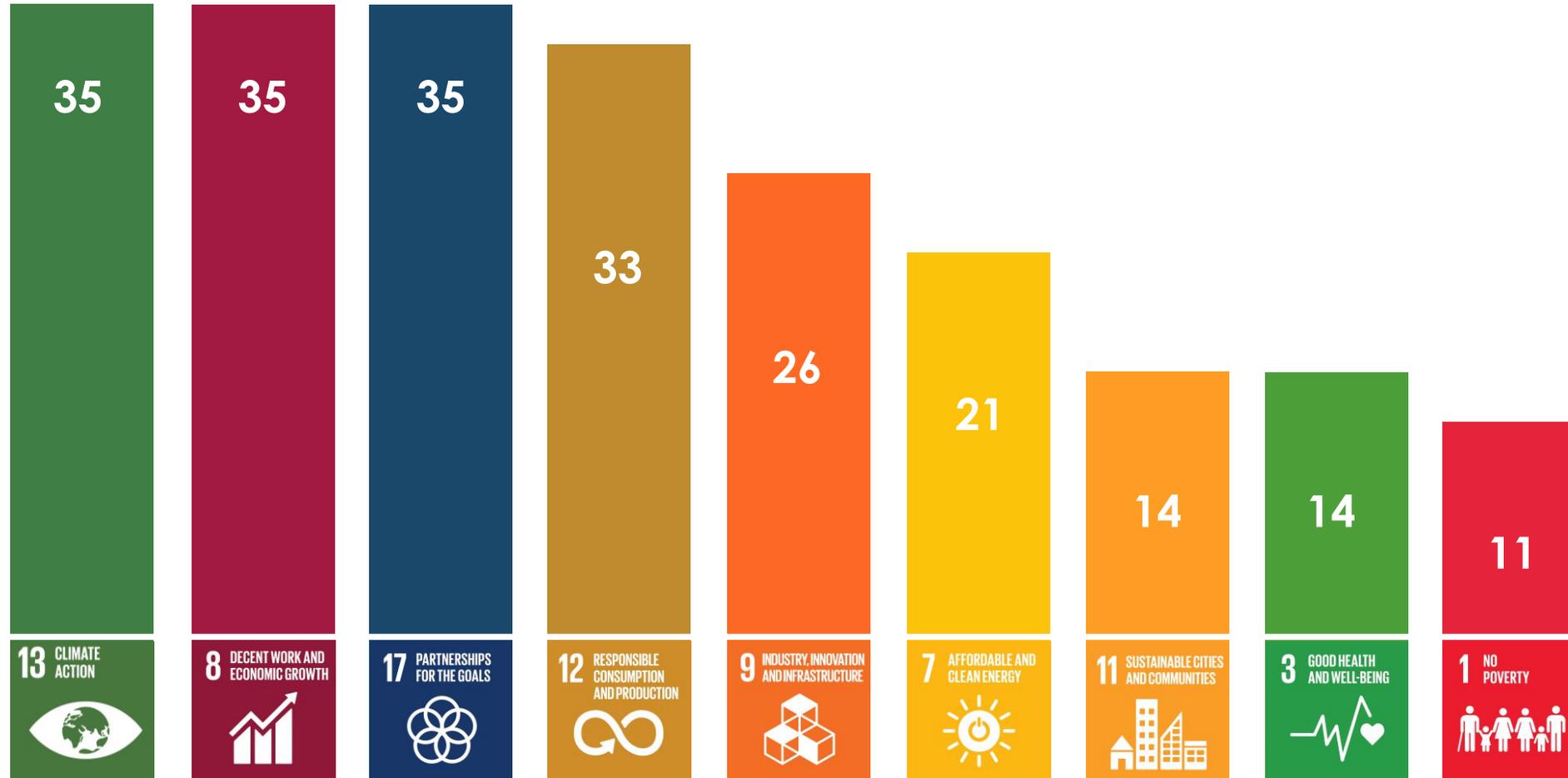


Aims to provide sustainable access to safe water and sanitation to **20 million people**

Target growth to **8 countries**

Lab instruments support the Sustainable Development Goals

Number of Lab instruments by SDG:



Case Study

Supporting the SDGs: Long-Term FX Risk Management

2015 Lab Instrument

Long-Term FX Risk Management provides tools to address currency and interest rate risk – helping overcome major barriers to investment in renewable energy and climate-relevant projects in developing countries. For context, one in eight developing world currencies fall 20% or more against the dollar in a given year; and one in 20 crash by 50% or more.

Proponents TCX provide a vital currency hedging mechanism, with a portfolio of exposure to almost 60 hard-to-hedge currencies in developing countries, allowing climate-relevant projects to access finance. Many of the projects supported contribute to both climate goals and the SDGs.

IMPACT



Hedged **\$240 mn of climate-related investment** in 11 countries

Total currency risk managed **grew 40%** from 2017 to 2018



Examples of supported projects with SDG benefits include:

- M-KOPA, is tackling poverty and access to affordable and clean energy by providing **solar home systems to more than 500,000 low-income households** in Kenya, Tanzania, and Uganda
- InsuResilience Investment Fund in Georgia, is helping to ensure sustainable cities and communities by providing **weather insurance for households that are affected by climate-related extreme weather events**

Recognitions of the Lab's value

The Lab has been formally endorsed by the governments of the G7, India & Brazil.

In 2017, the Lab was included in the Center for High Impact Philanthropy's "Top 11 Best Bets" out of nearly 2,000 submissions to the MacArthur Foundation's 100&Change competition.



Media coverage in influential outlets



HOW THE LAB WORKS: FROM IDEA TO IMPACT

The Lab's three ingredients to success



Public-Private Collaboration

Strengthened partnership between the public and private sectors builds capacity and knowledge to identify and deploy effective climate finance solutions.



Innovation & Transformative Solutions

Innovative, actionable, catalytic, and financially sustainable solutions reduce risks and barriers to investment in sustainable development.



Mobilizing Finance

Catalytic finance from Lab Members and the broader network enables piloting and implementation of transformative solutions.

The Lab process has five steps

1.



Call for Ideas

The Lab publicizes an open call for innovative sustainable investment solutions

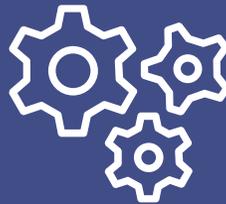
2.



Selection

Lab Members select the most promising ideas to take forward in each annual cycle

3.



Development

Selected ideas benefit from 7 months of analysis, stress-testing, and guidance from experts and investors

4.



Endorsement & Launch

Lab Members vote to endorse and launch the ideas for piloting

5.



Implementation

The ideas move into action and fundraising to launch pilots, with continued support from the Lab network

The Lab's structure fosters cross-sector cooperation and enables solutions to overcome investment barriers

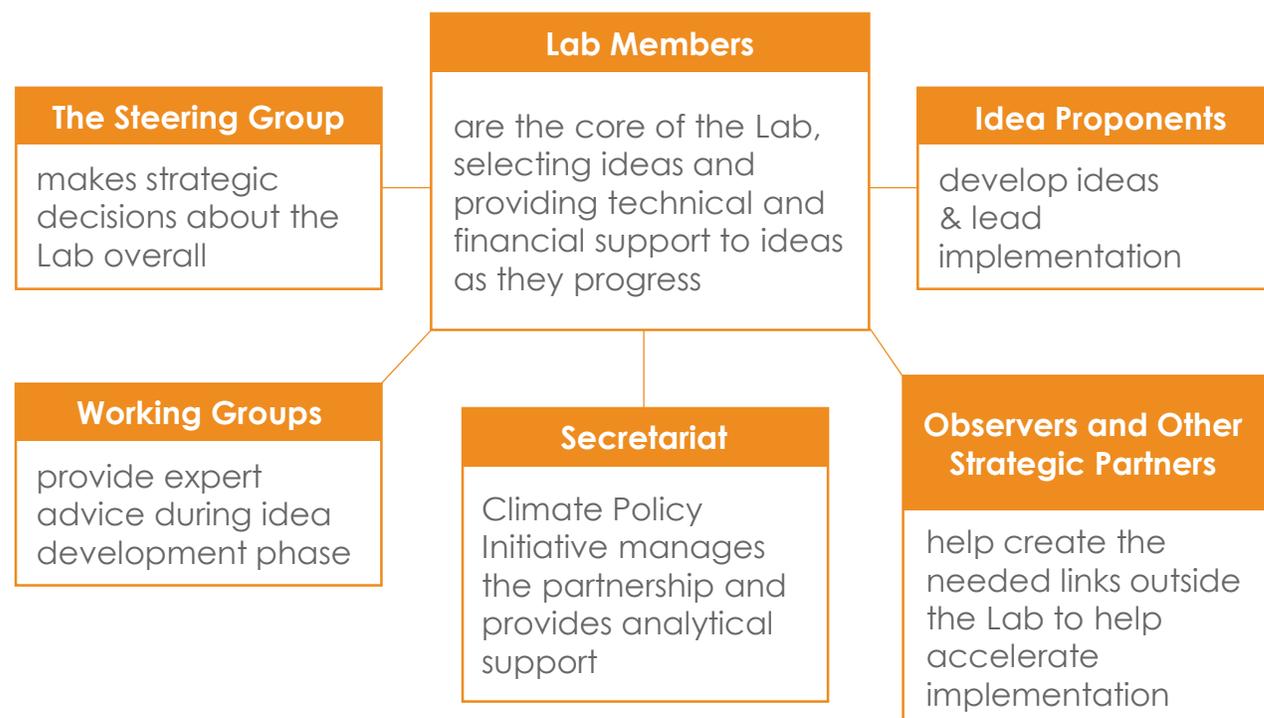
So far, 300+ experts from around the world, nearly half of whom come from developing regions, have participated in the first four Lab cycles.

Half of the Lab's participants come from the private sector and half from public institutions, including government agencies and ministries, and development banks.

The Lab has strong representation from the financial sector. A quarter of partners are from development banks and another quarter are from financial services.

A recent addition to the Lab has been observers and other strategic partners, who **help create linkages outside the Lab** to funding opportunities and other technical support, including to help scale ideas once proven.

The Lab's Participants



Lab Members from diverse sectors and regions drive innovation



**Karine Bueno,
Head of
Sustainability/
Corporate Social
Responsibility,
Santander**

“The Lab is a great example of how a focused, technical, and collaborative approach can identify and leverage innovative business solutions to some of the great challenges we face as society.”



**Alan Synnott,
Managing
Director,
BlackRock Real
Assets**

“It has been exciting to partner with the Lab to support the identification and development of early stage concepts into more developed instruments that now actively mobilize global capital for climate finance. The Lab format brings together a diverse set of stakeholders, skills and perspectives, and through active knowledge sharing, discussion and debate, helps incubate and accelerate the commercialization of viable ideas.”

The Lab covers four programs that have focused on different regions and investment stages

Global Innovation Lab for Climate Finance

The Global Lab, established in 2014, was the first of the four Lab programs. The Global Lab accepts submissions for ideas in all developing country regions. It also incubated the regional Labs.

India Innovation Lab for Green Finance

The India Innovation Lab for Green Finance was launched in November 2015 and focuses on solutions to finance infrastructure for renewable energy and other channels for green growth in India.

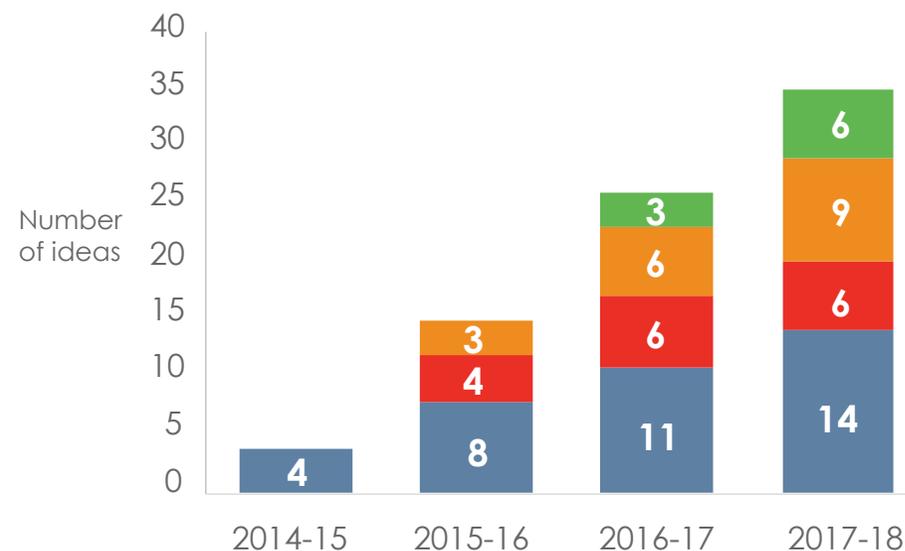
Brasil Innovation Lab for Climate Finance

The Brasil Innovation Lab for Climate Finance was established in November 2016 to identify, develop, and support implementation of finance solutions to drive funds for Brazil's national climate priorities.

Fire Awards for Sustainable Investment

The Fire Awards were created in 2013 and integrated into the Lab in 2016. The Fire Awards recognize and build momentum for ideas that are already showing promise through market testing or existing pilots.

Cumulative Lab Instruments and Fire Award Winners



Lab ideas meet four key selection criteria



Actionable

Identifies

1. The type of entity(ies) that could implement it,
2. the pathway towards implementation, including the timeframe, activities, and key milestones, and
3. possible challenges to implementation and related management strategies.



Innovative

Demonstrates the ability to address, directly or indirectly, barriers to private climate finance that

1. have not yet been addressed or
2. that will be addressed more effectively compared to other instruments in the market.



Catalytic

Demonstrates potential to

1. mobilize private climate capital within a sizeable market,
2. be scaled up or replicated in other contexts and,
3. achieve socioeconomic, development, and environmental impacts.



Financially Sustainable

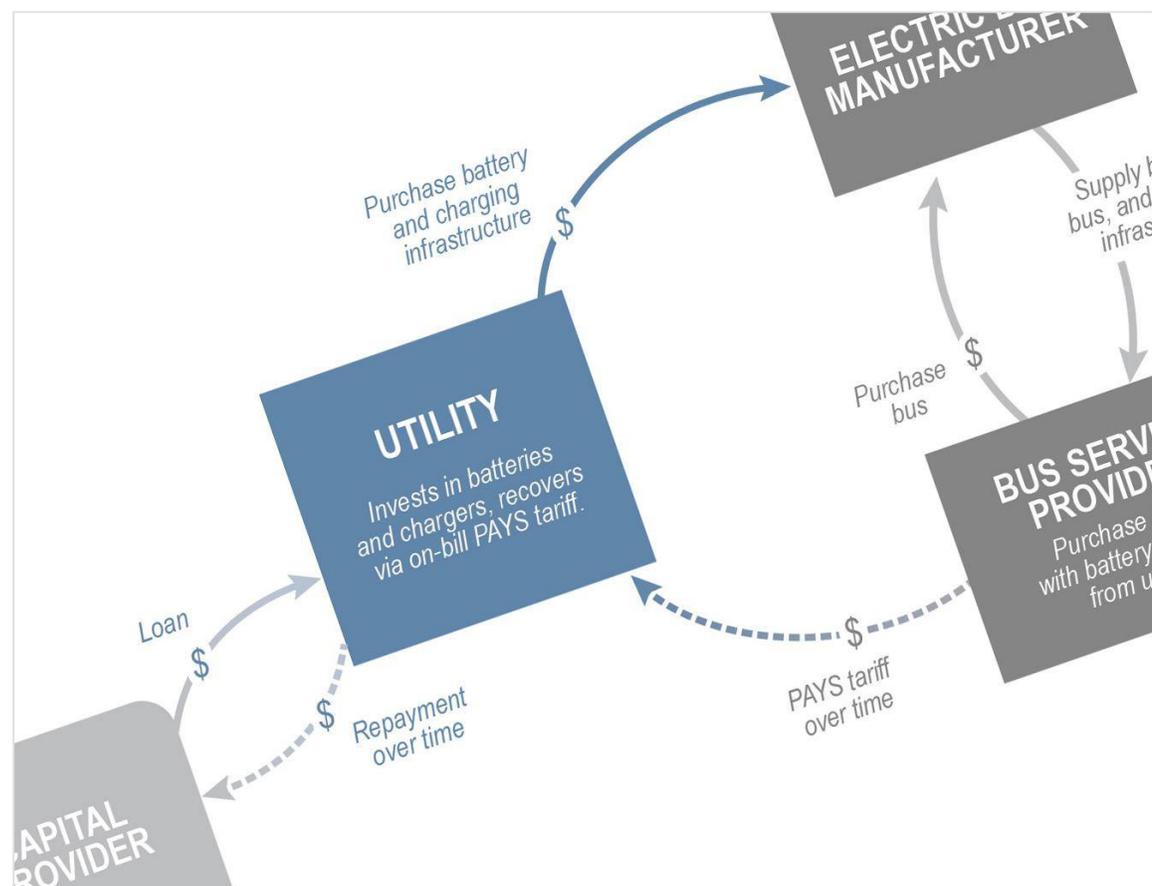
Identifies

1. a strategy to phase out public financial support, thereby achieving market viability and
2. possible challenges to achieving its intended objectives and related management strategies.

Lab instruments are structured to meet a variety of needs for climate solutions in emerging markets

Lab instruments represent a range of financial innovations that help scale climate action. They are proposed by enterprises, fund managers, and market experts to overcome market barriers to investment.

They use a variety of finance sources: 27 make use of equity, 23 use commercial debt, 14 use preparation-stage grants, and 10 employ guarantees, among others.



Proponents are supported throughout the Lab process and beyond



Selected Lab ideas receive \$250k in in-kind analytical and communications support from the Lab Secretariat, Climate Policy Initiative.

Ideas receive guidance and support from high-level Lab Members who contribute expertise, political capital, and financial capital.

After endorsement and launch, Lab instruments benefit from continued support from the Lab Secretariat, including bespoke analytical support and continued connections with the Lab investor network and beyond.

Instruments benefit from the support of a robust Lab network



**Joan Larrea,
CEO,
Convergence**

“By providing early stage analysis and market scoping for bold concepts, the Lab plays a vital role in bringing innovative finance mechanisms to market. More specifically, the Lab has moved forward some very interesting blended finance vehicles that Convergence has been able to engage with at a later stage.”



**Leena Klossner,
Vice President,
Nordic
Development
Fund**

“Supporting the core principles of the NDF strategy, the Lab provides a good channel for NDF to identify innovative climate financing initiatives for further financing and development in the risky early phases. As a clear signal of the importance of the Lab, NDF is proud to hold the position as the institution which, to date, has funded the largest number of early-stage financial instruments developed through the Lab.”

Case Study

From idea to impact: Climate Resilience and Adaptation Finance and Technology Transfer Facility (CRAFT)

2017 Lab Instrument

CRAFT is the first commercial investment vehicle to focus on technologies and solutions for climate adaptation.

Using a blended finance structure, it invests growth equity in companies delivering climate intelligence or physical products and services for resilience.

PROGRESS TO DATE

- **Secured \$45 mn of approved investment commitments** towards a \$75 mn first close from European Investment Bank, Nordic Development Fund, and Government of Luxembourg
- **Identified 20 relevant climate resilience market segments totaling \$130 bn** of current spending and mapped more than 700 companies within these segments

THE LAB'S ROLE

- Helped develop and refine CRAFT's blended fund structure
- Engaged critical working group audiences to test investment thesis of the fund
- Facilitated intros and pitches to key investors and funders, particularly on the public/DFI side
- Led a deep dive design study examining structures of comparable technical assistance facilities to inform CRAFT's TA delivery mechanism



Sanjay Wagle, The Lightsmith Group and proponent of CRAFT

"The Lab was ideal at the early stage to incubate and develop a nascent idea and formalize it before it was taken out into the world...The questions that Lab advisors asked were the same ones that investors and governments would ask us later."

Case Study

From idea to impact: Sustainable Energy Bonds

2017 Lab Instrument

Sustainable Energy Bonds are a class of bonds to drive impact investment to sustainable energy projects in India by offering debt exposure, sufficient returns, and standardized impact measures.

Target projects include distributed renewable energy (small-scale and off-grid solutions), energy efficiency for buildings and industry, projects for increasing energy access, and projects to encourage sustainable urbanization.

PROGRESS TO DATE

- **Raised \$3 mn from CalCEF** in 2018 towards first issuance to finance:
 - 75% rooftop solar
 - 20% solar pumps and other energy access projects
 - 5% energy efficiency
- **\$15 mn second issuance** anticipated in second half of 2019

THE LAB'S ROLE

- Reached out to potential investors to understand common impact measures and confirm definitions of measures
- Helped formalize impact measures to give standardized information to investors and engaged with investors and the market



Pawan Mehra, cKers Finance and proponent of SEBs

"Lab support was really valuable in helping to formalize impact measures so that we could give needed information to investors. Standardization was crucial. The Lab liaised with investor groups to understand what was needed in this space."

Case Study

From idea to impact: Green Receivables Fund (Green FIDC)

2017 Lab Instrument

The Green FIDC is a project finance instrument that allows green projects to secure financing based on future cash flows from energy sales. A pilot is underway with private developer Órigo Energia to finance the sales of rooftop solar systems to Brazilian residential consumers, helping to drastically reduce energy costs for up to 10,000 residential customers.

The next step is a scale-up program targeting 2-3 new Green FIDCs in 2019-2020, representing 4.5 million tCO₂e avoided, and 2400 jobs supported.

PROGRESS TO DATE

- **Raised \$10+ mn towards \$25+ mn** close for pilot
- **Secured grants** to structure 1-2 new FIDCs. Potential transactions are energy efficiency for a public water utility and distributed solar projects
- **6 letters of intent signed with indicative pipeline of \$1 bn** of renewable energy and energy efficiency projects

THE LAB'S ROLE

- Helped Green FIDC navigate development finance and supported fundraising efforts
- Modeled climate and development impacts, helping communicate these effectively
- Provided validation and network to support investor engagement



Paulo Todaro, Albion Capital and proponent of Green FIDC

"The Lab was able to not only provide us with valuable networking, but also guide us to navigate the complexities of aligning concessional and commercial capital effectively."

WHAT'S NEXT?

In 2018, the Lab launched a new class of instruments

CLEAN ENERGY



Distributed Energy for Social Housing

A vehicle to enable distributed solar energy for low-income tenants in Brazil who cannot make the investments or don't have access to credit, by providing a robust legal and financial structure to make it an attractive and low-risk investment option



Green Aggregation Tech Enterprise

A vehicle to increase clean energy access through mini-grids in Sub-Saharan Africa, by addressing demand and revenue risk through a risk pooling guarantee



Residential Rooftop Solar Accelerator

A vehicle to accelerate mass adoption of residential rooftop solar to power 200 million households in India, through standardized product offering, easy financing and efficient execution at scale

SUSTAINABLE LAND USE



Smallholder Forestry Vehicle

A mechanism to scale up sustainable forestry in Africa through which investors buy portfolios of trees that have been planted by smallholders on degraded land, and recoup their investment once the trees are harvested and sold



Responsible Commodities Facility

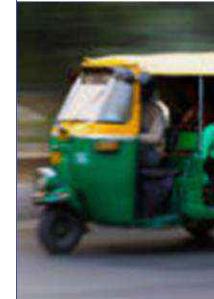
A vehicle to promote the responsible production of commodities, particularly soy, in the Brazilian Cerrado biome, through incentives to plant in already cleared and degraded lands



Socio-Climate Benefits Fund

A fund to increase forest restoration in the Amazon by investing and providing technical assistance to restore degraded lands in smallholders' farms with agroforestry systems and, at the same time, developing and facilitating sales of their products

LOW-CARBON TRANSIT



Financing for Low-Carbon Auto Rickshaws

A facility to deploy electric auto-rickshaws in Indian cities and provide better livelihoods for drivers, through a model that provides up to 100% debt financing at competitive rates, and opportunities for ownership



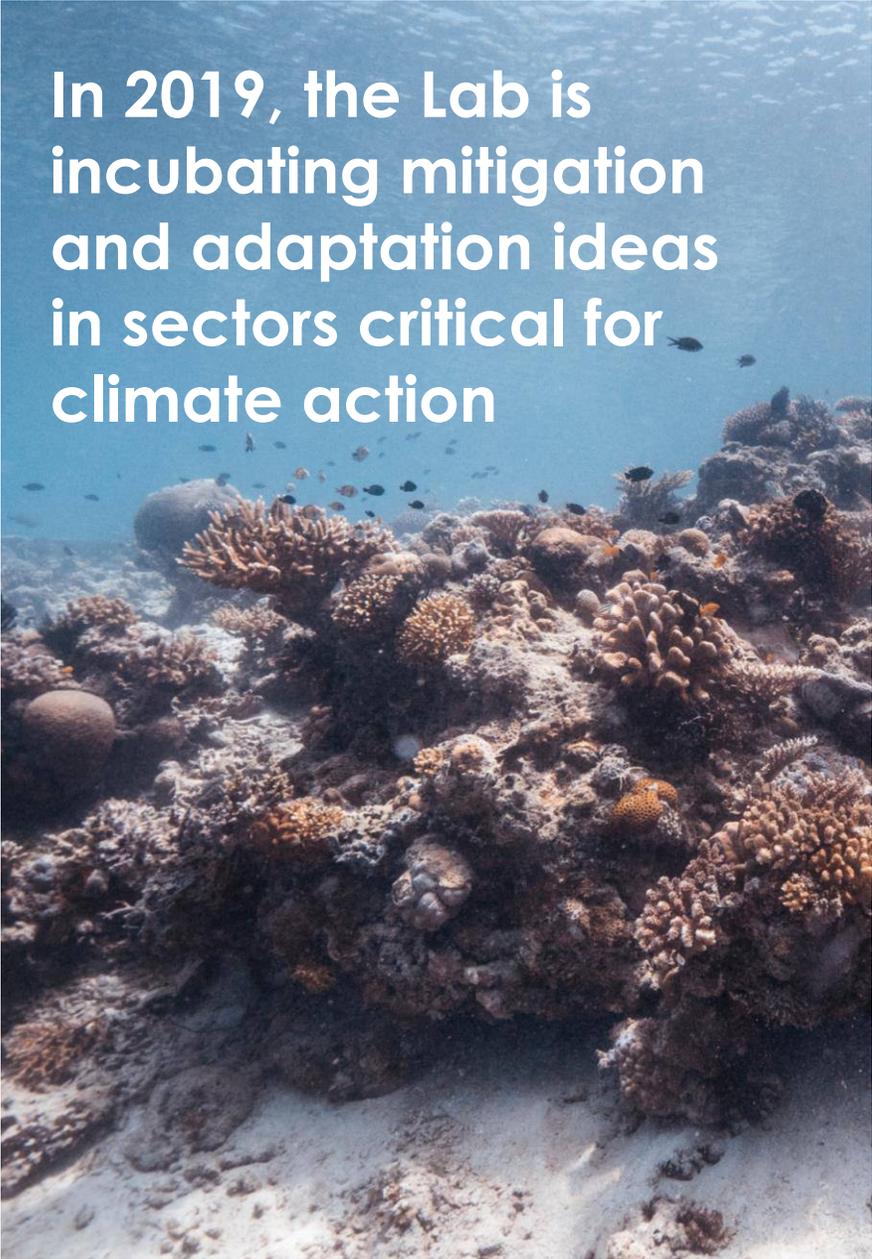
Battery Subscription Facility

An electric bus battery financing mechanism to provide long-term debt financing to the electric transit sector in India, and reduce the ownership cost of electric buses to compete with diesel buses



Pay-As-You-Save for Clean Transport

A vehicle to accelerate investment in clean transit by lowering the upfront cost of electric buses, allowing a utility to capitalize the on-board battery and charging station for bus owners and recover its costs with a predictable monthly charge

An underwater photograph of a vibrant coral reef. The scene is filled with various types of coral, including branching and brain corals, in shades of brown, orange, and white. Small fish are scattered throughout the water, and the background shows a clear blue sky through the water's surface.

In 2019, the Lab is incubating mitigation and adaptation ideas in sectors critical for climate action

Blue Carbon

Supporting ideas focused on mitigation and / or adaptation for coastal & marine ecosystems

Sustainable Agriculture for Smallholders

Supporting ideas focused on smallholders in West & Central Africa

Sustainable Cities

Supporting sustainable urbanization ideas in partnership with cities networks

Sustainable Energy Access

Supporting ideas targeting deployment of renewable energy for productive use

**This report was
prepared by Climate
Policy Initiative,
the Lab Secretariat**



**CLIMATE
POLICY
INITIATIVE**

With deep expertise in finance and policy, CPI is an analysis and advisory organization that works to improve the most important energy and land use practices around the world. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has six offices around the world in Brazil, Europe, Kenya, India, Indonesia, and the U.S.

Climate Policy Initiative, as Lab Secretariat:

- Manages the Lab
- Leads analytical support
- Supports ideas to succeed and scale
- Communicates findings, impacts, and lessons learned
- Convenes the Lab and gathers public and private investors



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