

Gigatons of climate innovations from Brazil



**>1 Gigaton of innovations
from Brazil improving the
lives of 1 billion people**

Towards 8–12 billion people living flourishing
lives on a flourishing planet

With solutions from



Summary

For the first time the potential of Brazil to be an internationally leading climate solution provider that improves lives around the world has been assessed. More than 100 innovative start-ups and solutions from six tech parks, incubators, and universities in five Brazilian cities have been evaluated using a comprehensive climate solution assessment. The results indicate that these innovations could improve the lives of more than one billion people and deliver more than one Gigaton (1,000 Megaton) of avoided emissions around the world. That is almost twice the total CO₂ emissions from Brazil. The findings indicate that Brazil should be approached not merely as a country tasked with reducing emissions, but as a global solution provider with the capacity to significantly improve human well-being.



Solution providers

>100

start-ups & innovation initiatives

Cities

São José dos Campos

Viçosa

São Paulo

Campinas

Rio de Janeiro



Tech parks/ incubators

Technology and Innovation Park
São José dos Campos (PIT)

Inova Unicamp

Unicamp Science and Technology Park

Impact Hub São Paulo

Technology Park of Viçosa

UFRJ Science Park



Impact on flourishing lives

>1 billion people

living increasing flourishing life-years

Avoided emission potential

>1 gigaton

of avoided CO₂e emissions

CO₂

By exporting innovations that simultaneously improve people's lives and avoid greenhouse gas emissions at a scale greater than the country's current total emissions, Brazil has the potential to lead the world into the next generation of innovation and climate action. While much of the international dialogue has focused on Brazil's, and other countries', own territorial emissions and deforestation challenges, this report reframes Brazil's role in the global sustainability landscape. By leveraging its unique natural resources, diverse population, and above all dynamic innovation ecosystem, including start-ups, tech parks, and academic institutions, Brazil can identify, develop, scale and export solutions that help deliver a future where everyone on the planet lives flourishing lives on a flourishing planet.

The report uses an Expanded Innovation and Sustainability Agenda (EISA)¹, developed in collaboration with FL4ALL², RISE³, ICLEI⁴, the UNFCCC Global Innovation Hub⁵, and leading IPCC scientists, to assess Brazil's potential as an



exporter of globally sustainable climate solutions. From Brazil the work to gather the innovations was coordinated by Technology and Innovation Park São José dos Campos (PIT) and included Technology and Innovation Park São José dos Campos (PIT), Inova Unicamp, Unicamp Science and Technology Park, Impact Hub São Paulo, Technology Park of Viçosa, UFRJ Science Park⁶.

The paper highlights the benefits when the focus shifts from merely reducing emissions within existing systems to a focus on how to improve the lives of people, do so in globally sustainable ways, and encourage export. It emphasizes four major shifts:



1. Focus on human needs and flourishing lives, not just emissions

Rather than emission reductions from current structures there is a need to focus on how to improve people's lives with a focus on human needs and flourishing.



2. Include everyone on the planet, not only the rich that are causing today's emissions

Rather than just trying to make the current system, that also focuses on meeting the needs of those in the rich parts of the world, fossil-free, there is a need for a "8-12 billion people filter". Such a filter could guide all relevant innovations to ensure a focus on globally scalable and affordable solutions that are compatible with a world where everyone can live flourishing lives on a flourishing planet.



3. Looking forward towards solutions with start-ups, not only back at the problems

Rather than looking back with a focus on yesterday's systems there is a need to foster disruptive innovation with a focus on the needs of tomorrow. This requires investment in start-ups and those supporting these such as incubators, accelerators and tech parks, i.e. the places where "the future is born".



4. Embrace export and revenues, not just territorial reductions and cost savings

Instead of only celebrating cities that report reduced emissions, expand the focus to leading cities that have the capacity to develop the solutions the world needs and make it possible for other cities to deliver what is needed in ways that are globally sustainable.

The over 100 Brazilian innovations included in this report were selected and assessed in an international innovation collaboration where leading parts of the innovation ecosystem from around the world came together to explore Brazil's potential as a world leading climate solution provider. The assessment and international coordination were done by Flourishing Lives for All (FL4ALL)/RISE with support from UNFCCC Global Innovation Hub, ICLEI, and leading IPCC scientists.

In the same way that start-ups have changed the way we eat, move, meet, shop, find information, get energy, etc. compared with 30 years ago, we can assume that it is among start-ups that the major innovations will happen that will affect the way we live in 30 years.



Brazil is particularly well-positioned to ensure that the next generation of start-ups deliver what we need. Its innovation ecosystem includes start-ups and clusters working across areas such as regenerative agriculture, circular economy, sustainable food systems, renewable energy, and health innovation with a focus on improving people’s lives. In many ways Brazil is like the world in miniature, with very many different climates and a significant span when it comes to income and cultures. If Brazil can scale solutions that deliver flourishing lives for its own population it is also ready to export solutions that are relevant for the rest of the world.

By embracing a role as an exporter of globally sustainable solutions that improve people’s lives, Brazil can demonstrate that climate action should not be approached as a burden, but an opportunity to use innovation to create prosperity and shared value globally.

Brazilian start-ups could provide solutions for the world that people will take for granted in 30 years in many different areas. On the right are examples of a small selection of leading Brazilian start-ups with the potential to provide solutions that the world is in urgent need of and that can change the way we think about how we meet our human needs in ways that are globally sustainable.

Areas where start-ups will shape tomorrow’s world

Identifying and supporting the start-ups that are likely to shape tomorrow’s world in a positive way

How we provide spaces/protection



Spaces / Protection

How health is ensured



Health care



Preventative care / Exercise

How healthy nutrition is ensured



Healthy nutrition

Ways social development and personal growth is provided



Social development / Personal growth

How we provide access



Mobility / Access

What information/knowledge we have



Information / Knowledge

How we get energy



Energy

How nature/biodiversity is ensured



Nature / Biodiversity

Ways we connect with nature



Recreation / Exploration

How we find wisdom



Wisdom

How and what we consume



Access things

How we provide protection/shelter



Protection / Shelter

What we know and who we know



Access information

How we ensure justice/fairness



Justice / Fairness

How we create beauty



Beauty / Creativity

How we meet



Access people

How we get the right temperature and clean air



Right temperature / Clean air

What we know



Truth / Equity

How virtue/generosity is supported



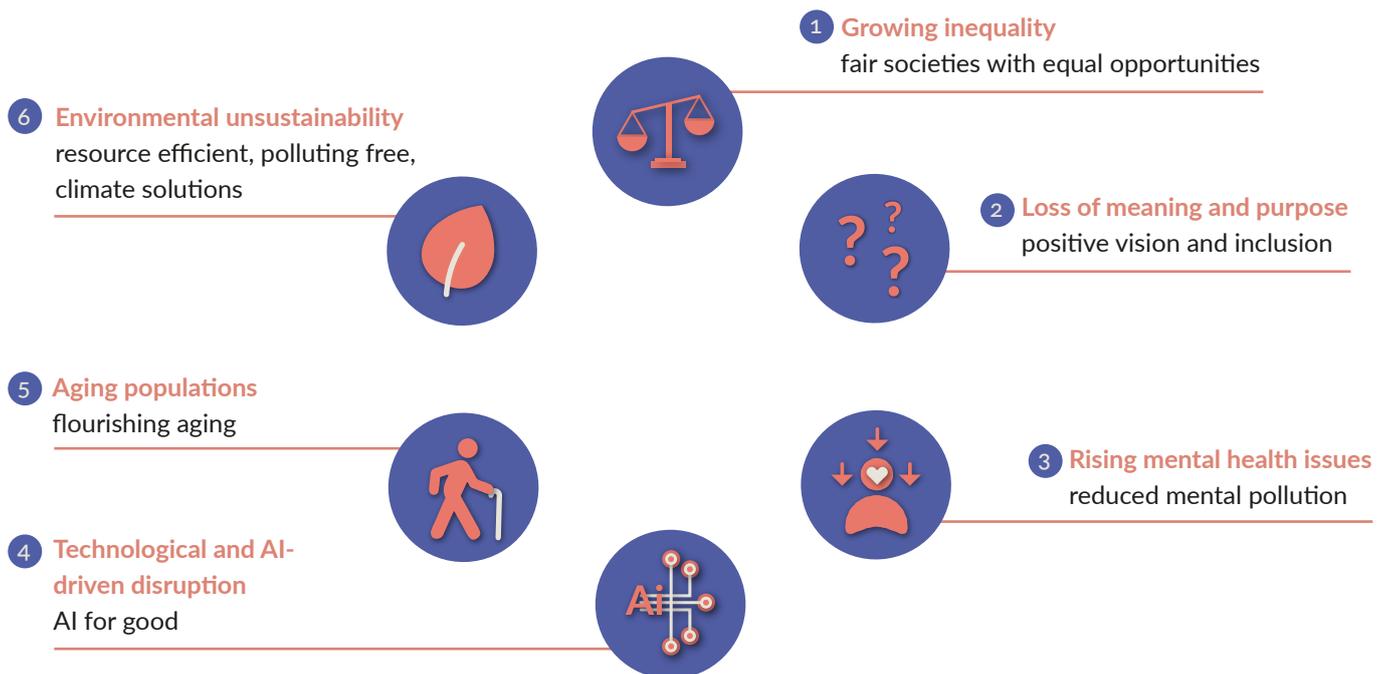
Virtue / Generosity

How light is provided



Light

Addressing six interconnected urban and societal challenges can drive a new generation of innovations for a better future:



By addressing these challenges through governance, business model, and cultural innovation as well as technological innovation, Brazil's innovation ecosystem, with international partners, can take the lead in accelerating the transition to global sustainability with a positive vision.

In order to support accelerated uptake and tracking progress of the solutions we need a public and transparent progress assessment where results are presented annually at each COP. This "countdown" can establish a transparency with regards to specific support of the innovation ecosystem to reach its full potential as a provider of globally sustainable solutions. There are many pledges and declarations, but few tools that track actual progress of solutions that make people's lives better in ways that support a future where everyone lives flourishing lives on a flourishing planet.

Endnotes

- 1 EISA builds on the Expanded Climate and Innovation Agenda, with a broader scope than only climate.
<https://www.fl4all.world/publications/an-expanded-climate-and-innovation-agenda-for-cities-and-region>
<https://unfccc.int/topics/un-climate-change-global-innovation-hub#Theory-of-Change—Fulfilling-needs-with-an-expanded-climate-innovation-space>
- 2 <https://www.fl4all.world>
- 3 <https://www.ri.se/en>
- 4 <https://iclei.org>
- 5 <https://unfccc.int/topics/un-climate-change-global-innovation-hub>
- 6 <https://pitsjc.org.br/en/>, <https://www.ufv.br>, <https://centev.ufv.br/en/>, <https://parque.ufrrj.br>, <https://unicamp.br/>, <https://parque.inova.unicamp.br/en/>, <https://en.inova.unicamp.br>, <https://saopaulo.impacthub.net>



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