

The Nature's Intelligence Ideathon

Overview

The Nature's Intelligence Ideathon is an international innovation challenge jointly organised by the TIDE Centre (University of Oxford) and the Development Bank of Latin America and the Caribbean (CAF), as part of the Nature's Intelligence Studio, a new initiative launched at COP30.

The Ideathon aims to identify and provide initial support to early-stage ideas and prototypes that apply principles of bio-inspiration to tackle pressing sustainability challenges, across all fields. The initiative seeks to catalyse innovation ecosystems rooted in Latin America and the Caribbean, promoting locally grounded yet globally relevant solutions.¹

From the kingfisher-inspired design of the design of Japanese bullet trains; the burrs-inspired invention of Velcro, and wind turbine blades whose shapes are inspired by the ridges on the pectoral fins of humpback whales that create an aerodynamic flow in water, many of the technologies we rely on today have been influenced by solutions found in nature.²

The question is: how can we leverage this innovation method to push the innovation frontier for green and blue technologies? Most of the world's remaining biodiversity lies in developing countries, where scaling innovation and R&D is the most needed to promote economic upgrading and prosperity. The objective of this Ideathon is therefore to nurture and promote the next generation of bio-inspired solutions, with particular relevance and impact on Latin America and the Caribbean.

¹ See Lebdioui, A. (2025). Biodiversity and Productive Development: Extractivist traps and symbiotic innovation ecosystems in Latin America & the Caribbean. Retrieved from <https://scioteca.caf.com/handle/123456789/2541>

² Lebdioui, A. (2022), "Nature-inspired innovation policy: biomimicry as a pathway to leverage biodiversity for economic development," *Ecological Economics*.

Innovation method and thematic Scope

The Ideathon focuses exclusively on **bio-inspired solutions**, that is, innovations that *emulate principles, strategies, or mechanisms observed in nature* to address human challenges. Also sometimes referred to as *biomimicry*, *biomimetics*, *biodesign*, or *nature-inspired innovation*, bio-inspired innovation means learning from and emulating ideas from nature based on the premise that Nature has 3.8 billion years of R&D ahead of us.³ It studies how living things have evolved through natural selection to solve problems.

Bio-inspired innovation is not about using living organisms, instead the focus is on understanding how they work and applying those principles to human design. For example, instead of using fireflies to make light, it would consist in analysing and understanding how fireflies produce light, known as *bioluminescence*, and recreate that process through technology. This is the main difference between nature-based solutions and nature-inspired solutions.

This method and approach can help push the innovation frontier for green and blue technologies. For instance, recent innovations to improve energy systems are modelled photosynthesis, thermoregulation, or efficient material architectures found in biological organisms.

Participants must propose solutions aligned with at least **one** of the following challenge areas related to sustainability:

1. Renewable energy generation
2. Energy storage & transmission
3. Passive cooling, heating & ventilation
4. Sustainable mobility
5. Adaptive, self-regulating efficiency materials
6. Blue technologies (marine hydrodynamics, tidal/reef-informed systems)
7. Material pollution (e.g., oceanic plastic pollution)
8. Circular biomaterials & zero-waste design
9. Bio-inspired agriculture & food systems
10. Swarm intelligence & bio-robotics for environmental monitoring

Eligibility & Evaluation Criteria

Stage 1: Eligibility Screening

Projects must:

- Propose innovation that address sustainability challenges at scale.
- Demonstrate the explicit use of bio-inspiration as a method
- High impact/value creation potential for Latin America and the Caribbean

³ Benyus, J. M. (1997). *Biomimicry: Innovation inspired by nature* (Vol. 688136915). New York: Morrow.

Stage 2: Technical and Innovation Assessment

Criteria (equal weighting):

- Scientific Rigour – Depth of biological understanding and correct translation into engineering and design principles.
- Innovation and Scalability – Novelty and potential for practical or commercial application.
- Social and Environmental Impact – Potential contribution to sustainable development in the Amazon, LAC region or Global South more broadly.
- Feasibility and Prototype Quality – Technical viability and demonstration of proof of concept.

Bonus points:

- Demonstrated cross-disciplinary collaboration (e.g., across social sciences, engineering, chemistry, design, biology) or indigenous knowledge integration.

Evaluation will be conducted by a multidisciplinary international board including experts in biology, engineering, venture capital, entrepreneurship, and development economics.

- Open to teams of at least two members from countries in Latin America and the Caribbean, with strong connection to the Amazon ecosystem. Proposals from teams outside the region may be considered if deemed highly relevant, subject to the approval of the selection committee, which will include members from CAF and TIDE Centre.
- Applicants may be affiliated with universities, research centres, startups, NGOs, professional organisations or independent consortia.
- Proposed projects must reach at least at the conceptual stage

Submission Requirements and guidelines

Each proposal must include:

1. **Project Description**
 - Problem statement and proposed solution.
 - Clear explanation of the bio-inspired principle or organism inspiring the solution.
 - Expected environmental, social, and economic impact.
2. **Prototype or Proof of Concept**
 - Could be physical, digital, or conceptual (hardware, software, design, simulation).
3. **Supporting Documentation**
 - README or equivalent technical description.
 - Team composition.
 - References, acknowledgments, or data sources.

Applications must be made through the following [form](#).

Incomplete proposals in any of these requirements will not be considered.

Key dates

Stage	Date	Description
Announcement	14 November 2025	Launch at COP30, Belém (Brazil)
Open Call	21 January 2026 – 26 April 2026	Submission period via the official portal
Shortlisted Participants Announcement	11 May 2026	Shortlisted teams will be announced and invited to Brazil
Biomimicry Mentoring	15 May - 3 July 2026	Mentoring and technical development sessions start
Presentation to Experts	Late July / August 2026 (Belem or Manaus, Brazil)	Public showcase and final evaluation


Awards and Opportunities

- Up to **5 finalist projects** will be invited to a 3-day retreat in Brazil (July 2026).
 - Travel, accommodation, and meals for up to three team members per project will be covered.
- During the retreat, participants will receive mentorship and technical guidance from a team of industry experts, Oxford University and CAF staff.
- Following the retreat:
 - Three projects will be selected for specialised support and potential inclusion in the Nature's Intelligence Studio pipeline.
 - These projects will benefit from continued mentoring, technical validation, and visibility in exhibition spaces and the CAF–Oxford network.
- All participants will receive certificates and be featured in TIDE Centre's publications and digital media.

Intellectual Property, Ethics, Data Use and Confidentiality

- Intellectual property (IP) remains with the original creators.
- All data collected through the submission platform will be used solely for evaluation and contact purposes.
- Shortlisted participants agree that the summary and non-confidential elements of their submissions may be publicly shared for communication and educational purposes.
- Selected teams will have access to a template guide on intellectual property for biomimetic innovations, developed under this technical cooperation.
- By submitting, participants confirm that all materials are original, do not infringe third-party rights, and comply with local and international regulations regarding biodiversity and traditional knowledge.
- Personal data will be handled in compliance with the University of Oxford Data Protection Policy and relevant CAF data privacy regulations.

Communication and Contact

Do not hesitate to get in touch if you have any concerns or questions. All inquiries must be addressed to:  tide@qeh.ox.ac.uk with the subject line: **Nature's Intelligence Ideathon 2025 – Inquiry**

Please note that no direct contact with TIDE Centre staff, CAF staff or jury members will be accepted during the competition period.