

Bruno Sánchez-Andrade Nuño, PhD

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Executive leader in AI and global impact with two decades of experience building and scaling data and analytics platforms across industry, government, and non-profit sectors. Proven track record of translating cutting-edge research into operational products, leading diverse teams, and delivering responsible AI solutions with measurable business value — from driving enterprise-wide AI transformation inside one of the world's largest companies to raising \$15M to push the frontier of AI for Earth with nimble, high-impact teams.

Professional Experience

LGND — Co-Founder & Chief Scientist (2024–Present)

- Building AI to index Earth — making the planet's data searchable, discoverable and usable.
- Raised \$9 M in seed funding from top-tier investors.
- Leading the scientific direction of geo-embedding research and large-scale AI infrastructure for planetary intelligence.
- Guiding cross-functional teams across continents to build enterprise-grade AI infrastructure, ensuring solutions are scalable, secure and aligned with responsible-AI principles.
- Developing partnerships with industry and government to commercialize AI-powered products and deliver business impact.

Clay — Executive Director & Co-Founder (2023–Present)

- Non-profit initiative to make open AI models that understand Earth — open-source, open-data and open for business.
- Raised \$6 M in venture philanthropy to build the Clay foundation model for Earth data.
- Leading vision, governance and technical development.
- Driving global open-source collaboration, community adoption and responsible AI governance to ensure inclusive participation and trust.

ImpactScience.dev — Advisory service (2017–2023)

- Advised clients including the World Bank, Mapbox, National Geographic, Inmarsat, HUB Ocean, Jefa and Satellogic.
- Delivered projects on AI, data architecture, public policy and entrepreneurship across 10+ countries.
- Authored *Impact Science* — a methodology for turning research into measurable environmental and social breakthroughs.
- Designed and implemented data- and AI-driven strategies for clients spanning finance, retail, telecom and government, managing multi-million-dollar budgets and distributed teams to deliver measurable outcomes.

Microsoft Planetary Computer — Program Director & Principal Scientist (2020–2023)

- Founded and directed the creation of Microsoft's Planetary Computer, from strategy to engineering execution.
- Oversaw hiring, partnerships and budget for the global AI for Earth platform.
- Managed the transition and sunset of the \$50 M+ "AI for Earth" program.

- Led the architectural design and deployment of a cloud-scale AI platform used by researchers, commercial entities and NGOs, integrating responsible AI frameworks and ensuring compliance with governance policies.
- Oversaw a global team of experts across Europe, Asia and the Americas.

Satelloptic — VP, Social Impact (2017–2019)

- Designed strategies to leverage high-resolution Earth observation for social and environmental good.
- Supported hyperspectral analytics for sustainability applications.
- Collaborated with international partners and guided a multi-disciplinary team across continents to deploy remote-sensing analytics in commercial and humanitarian contexts.

World Bank — Data Scientist, Innovation Labs (2015–2017)

- Led technical operations for global big-data programs across multiple regions.
- Managed a 20-project portfolio totaling over \$500 M in innovation initiatives.
- Served in the President's Delivery Unit and advised senior leadership on data-driven development.
- Executed transformation projects that delivered data-driven insights across global operations, working with cross-functional teams and diverse stakeholders.

Mapbox — Chief Scientist (2013–2015)

- Directed scientific and satellite work across a 10× scaling period (Series A → Series B).
- Advised global enterprise clients and advanced remote-sensing initiatives.
- Ongoing investor and advisor.
- Led the scientific direction during a rapid growth phase, shaping the organization's data architecture and AI strategy.

Global Adaptation Institute — Director of Science & Technology (2011–2013)

- Led development of the Global Adaptation Index (GAIN) for climate resilience assessment.
- Visiting Scholar at the Environmental Change Initiative, University of Notre Dame.
- The index continues today as ND-GAIN at the University of Notre Dame — a reference index for climate vulnerability and adaptation readiness.

US Naval Research Laboratory — NASA Contractor & Research Assistant Professor (2008–2010)

- Worked in the Space Science Division on satellite and rocket missions.
- Specialized in calibration, data analysis and scientific visualization.

Boards & Advisory

- **Clay** (non-profit) — Founder & Executive Director: built the organization and its governance, working with its Board of Directors (2023–Present)
- **Climate & deep tech funds** — Technical due diligence and retained advisory on earth observation and geo-AI investments (details)
- **Sovereign AI strategy** — National AI and competitiveness policy; past clients include the UAE and a Big Three consultancy
- **Mapbox** — Investor; Science Advisor (2015–2020)

- **Earthshot Prize & Global Teacher Prize** — Expert reviewer
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Education

- **Ph.D. in Solar Physics**, Max Planck Institute for Solar System Research, Germany (2005–2008)
- **M.Sc. in Astrophysics**, Universidad de La Laguna, Spain (1999–2004)
- **B.A. in Physics**, Universidad de Oviedo, Spain (1999–2003)
- **Mirzayan S&T Policy Fellow**, US National Academies of Science (2010)

Executive Education

- Princeton University — *Leadership in Energy Innovation* (2018)
 - Harvard Kennedy School — *Global Leadership & Public Policy for the 21st Century* (2017)
 - Stanford GSB & Stanford Earth — *Transformative Leadership for Sustainability* (2016)
 - Oxford Saïd Business School — *Transformational Leadership* (2015)
 - Yale SOM — *Strategic Impact Leadership* (2014)
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Publications

- **Book:** *Impact Science: The Science of Getting to Radical Social and Environmental Breakthroughs* (2019)
→ Full content available online at impactsience.dev
 - **Ph.D. Thesis:** “*Observations, Analysis, and Interpretation (non-LTE) of Chromospheric Structures of the Sun*”
 - 18 peer-reviewed publications, 130+ citations — Google Scholar
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Volunteer Work

- Expert Reviewer — Global Teacher Prize, Earthshot Prize, several venture capital firms (including dual-use technology funds).
 - Elected Member, Council for Foreign Residents — Spanish Consulate, Washington DC (2009–2016)
 - Founding Member — ECUSA (Spanish Scientists in the USA) (2015–2016)
 - Project Manager — AEGEE (European Students’ Forum) (2003–2008)
 - Civil Protection Volunteer — Gijón Fire & Rescue (2001–2004)
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Languages

- **Fluent:** English, Spanish
 - **Intermediate:** French
 - **Basic:** German, Danish
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