

Advanced Computing R+D+i Statement in LAC

From HPC SCALAC Observatory



SCALAC

Sistema de Computación Avanzada
para América Latina y el Caribe

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April 2026

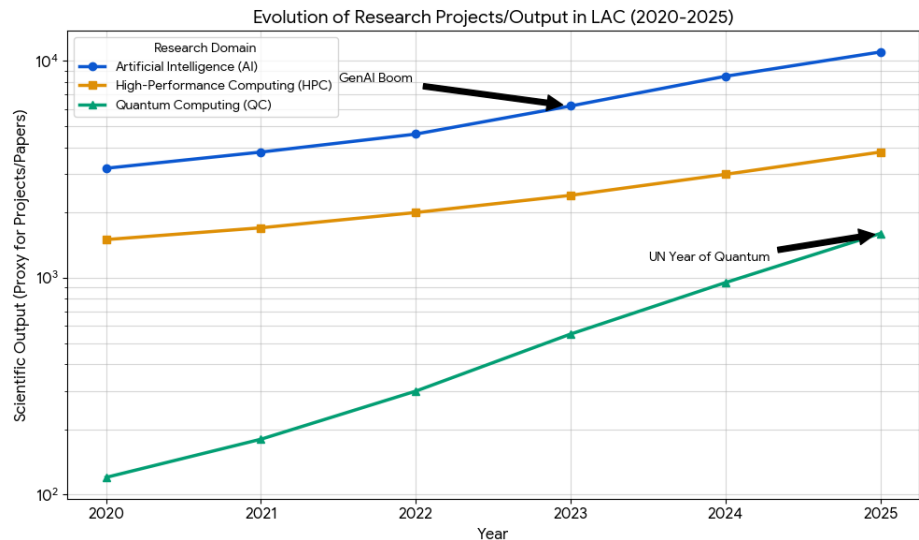


530 Top Level Universities in the Region (QS 2026)

- 14 Top Universities in Computer Science (QS & THE)
- 6 in Shanghai Ranking <100 (Brazil, Chile and Mexico)
- Strong collaboration with Europe: Spain, Portugal, France and Germany.
- 1,869 officially recognized higher-education institutions by EU.
- **33 SNCTI Systems** + 300 High Impact Research Centers
- + 250000 High Level Researchers
- + 2000 Active Researchers (In HPC/HTC/AI/QC Subjects)
- + 30 in Advanced Computing (or related) Public and Private
- **HPC/Advanced Computing Community joins SCALAC.**

<https://scalac.redclara.net>

AI Development in Latin America and the Caribbean (LAC)



Source: SCALAC HPC Observatory and Scopus (Including Brazil) – Sep 2025

AI investments in LAC have increased by 37% in the last years (2023/2025...). (Source ILIA, SCALAC HPC Observatory, and HALO (HPC-AI Leadership Organization))

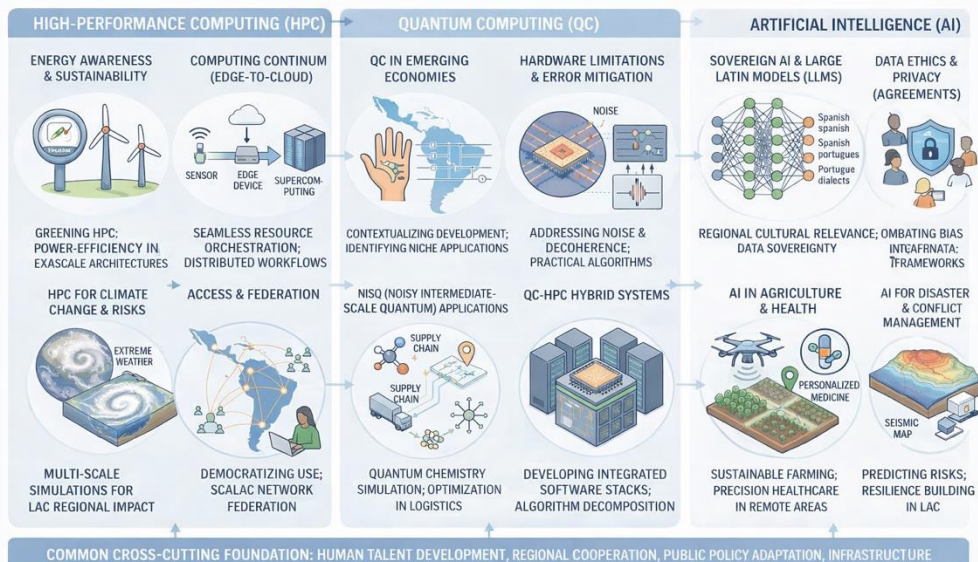
All LAC governments have developed programs and policies around AI (and digital transformation)

- Infrastructure Developments (i.e. Mexican Supercomputing System Upgrade)
- Data sovereignty and governance (i.e. CELAC Agreement)
- Cooperation (i.e. Digital Agenda EU-CELAC (Signed in 2025))

LAC Countries understand that without HPC, modern AI cannot scale.

- HPC Capabilities and Technology
- Skills and Knowledge

CORE RESEARCH CONCERNS IN HPC, QC, AND AI FOR LATIN AMERICA AND THE CARIBBEAN LAC



Year	IA (Pubs. / Patents)	HPC (Pubs. / Patents)	QC (Pubs. / Patents)
2020	2,500 / 120	1,100 / 40	80 / 5
2021	3,200 / 165	1,270 / 45	125 / 7
2022	4,100 / 230	1,480 / 50	190 / 10
2023	5,250 / 315	1,720 / 55	300 / 15
2024	6,700 / 435	2,000 / 65	460 / 20
2025	8,600 / 600	2,300 / 70	720 / 30

Country	Core Program(s)	AI Budget (Avg. M USD)	HPC Budget (Avg. M USD)	QC Budget (Avg. M USD)	Primary Focus / Notes
Brazil	PBIA (Plan 2024-28)	~\$800.0*	~\$150.0	~\$25.0	Largest regional investor; PBIA total is ~\$4B over 5 years.
Mexico	National AI Agenda	~\$120.0	~\$40.0	~\$5.0	Focus on industrial AI and academic HPC clusters.
Chile	National AI Policy 2.0	~\$45.0	~\$15.0	~\$3.5	Regional pioneer in ethical AI; host to major data centers.
Colombia	ColombIA Inteligente	~\$65.0	~\$12.0	~\$4.5	Includes specific \$4.5M fund for Quantum/AI research.
Argentina	IA for Development	~\$25.0	~\$18.0	~\$2.0	Strong HPC tradition (e.g., TUPAC/CLEMENTINA supercomputers).
Uruguay	Digital Uruguay 2025	~\$15.0	~\$5.0	< \$1.0	High per-capita AI readiness; focus on government services.
Peru	National AI Strategy	~\$10.0	~\$4.5	< \$1.0	Early-stage adoption focused on digital transformation.
Costa Rica	Strategy 4.0	~\$8.0	~\$3.0	< \$0.5	Regional leader in AI talent and ethics policy.

HPC/AI Data Centers

(The Big Ones : From Top500.org)

Rank	System	Cores	Rmax (PFlop/s)	Rpeak (PFlop/s)	Power (kW)
70	Pégaso - Supermicro A+ Server 4124GO-NART+, AMD EPYC 7513 32C 2.6GHz, NVIDIA A100, Infiniband HDR, EVIDEN Petróleo Brasileiro S.A Brazil	233,856	19.07	42.00	1,033
89	Santos Dumont - BullSequana XH3000, Grace Hopper Superchip 72C 3GHz, NVIDIA GH200 Superchip, Quad-Rail NVIDIA InfiniBand NDR200, Red Hat Enterprise Linux, EVIDEN Laboratório Nacional de Computação Científica Brazil	68,064	14.29	20.26	312
134	Dragão - Supermicro SYS-4029GP-TVRT, Xeon Gold 6230R 26C 2.1GHz, NVIDIA Tesla V100, Infiniband EDR, EVIDEN Petróleo Brasileiro S.A Brazil	188,224	8.98	14.01	943
163	Gaia - PowerEdge XE8545, AMD EPYC 74F3 24C 3.2GHz, NVIDIA A100, Infiniband, DELL Petróleo Brasileiro S.A Brazil	84,480	6.97	13.73	574
226	Atlas - Bull 4029GP-TVRT, Xeon Gold 6240 18C 2.6GHz, NVIDIA Tesla V100, Infiniband EDR, EVIDEN Petróleo Brasileiro S.A Brazil	91,936	4.38	8.85	547

Rank	System	Cores	Rmax (PFlop/s)	Rpeak (PFlop/s)	Power (kW)
199	Clementina XXI - ThinkSystem SD650-I V3, Xeon Max 9462 32C 2.7GHz, Infiniband NDR, Intel GPU Max 1550, RHEL, Lenovo Servicio Meteorológico Nacional Argentina	43,008	5.39	12.58	

263	Gemini - PowerEdge XE8545, AMD EPYC 74F3 24C 3.2GHz, NVIDIA A100, Infiniband, DELL Petróleo Brasileiro S.A Brazil	42,240	3.86	6.86	287
272	IARA - NVIDIA DGX A100, AMD EPYC 7742 64C 2.25GHz, NVIDIA A100 SXM4 40 GB, Infiniband, Nvidia SiDi Brazil	24,800	3.66	4.13	
285	NOBZI - ThinkSystem C2377, Xeon Platinum 8280 28C 2.7GHz, Broadcom, Lenovo Software Company MBZ Brazil	80,640	3.55	6.97	
315	Fênix - Bull 4029GP-TVRT, Xeon Gold 5122 4C 3.6GHz, NVIDIA Tesla V100, Infiniband EDR, EVIDEN Petróleo Brasileiro S.A Brazil	60,480	3.16	5.37	390



HPC/AI Data Centers

(The Other ones. Source SCALAC HPC observatory)

<https://scalac.redclara.net/en/hpc/hpc-observatory>

Institution type	Platform Name /ID	Manufacturer	Description	Cores CPU	# GPUs	GPU Tech	Processor Type	Interconexion	Year	Theoretical TFlops (GPU (FP32) + CPU)	TFlops (HPL)
Chile											
Laboratorio Nacional de Supercomputación/Universidad de Chile - NLHPC											
Public	Lefrararu -EPU	LENOVO	Multi Hybrid Cluster (One common access)	7104	0	None	AMD EPYC 9754	InfiniBand NDR 400	2024	497,66	270
					12	AMD Instinct MI210	AMD EPYC 9224			278,88	
					0	None	AMD EPYC 9224			7,68	
	Guacolda	DELL		2852	4	NVIDIA V100 32 GB	Intel Xeon Gold 6152		2019	61,91	196
					2	AMD Instinct MI100	AMD EPYC 7713			54,39	
					0	None	Intel Xeon Gold 6152			141,92	
					0	None	Intel Xeon Gold 6152			26,61	
	Lefrararu - ONE	HPE		2640	0	None	Intel Xeon E5-2660 v2		2014	0,352	44
TOTAL				9956	18	(Including all partitions)			1069,41	510	

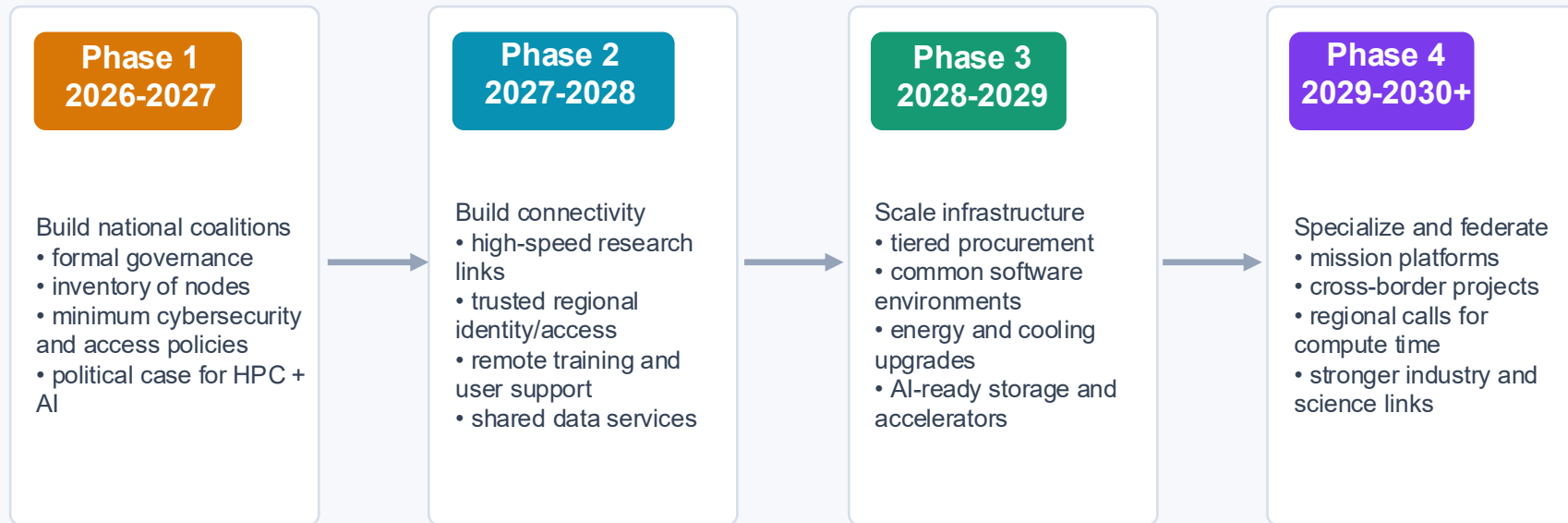
Institution type	Platform Name /ID	Manufacturer	Description	Cores CPU	# GPUs	GPU Tech	Processor Type	Interconexión	Year	Theoretical TFlops (GPU (FP32) + CPU)	TFlops (HPL)
Ecuador											
CEDIA											
Private	1	NVIDIA	3 nodos de computo DGX NVIDIA A100	384	24	NVIDIA A100 40 GB	AMD EPYC 7742	Ethernet	2019	495,64	
México											
Universidad Nacional Autónoma de México - UNAM											
	1	HPE Cray	Hybrid Cluster	8192	64	NVIDIA H100 80 GB	AMD EPYC 9354	Infiniband 100	2024	5139,96	
Centro de Análisis de Datos y Supercómputo/Universidad de Guadalajara (UDG-CADS)											
Public	Leo Atriox	FUJITSU	Hybrid Cluster	5400	2	NVIDIA TESLA P100	Intel Xeon-6154	Intel Omni-Path	2018	537	
					0	None	Intel Xeon-6154				
					0	None	Intel Xeon-6154				
ABACUS - Laboratorio de Matemáticas Aplicada y Cómputo de Alto Rendimiento del CINVESTAV											
Public	ABACUS 1	SGI Silicon Graphics Inc	Hybrid Cluster	7680	100	NVIDIA K40m	Intel Xeon 2697v3	Infiniband FDR	2016	800,40	429
Universidad de Sonora											
Public	Ocotillo	DELL	Hybrid Cluster	1168	6	None	AMD	Mellanox Infiniband FDR Connectx-3	2018		51
							Intel		2018		



A possible Latin American and Caribbean Roadmap

Sequence the infrastructure roadmap in layers: organize first, interconnect second, scale third, specialize fourth. *Courtesy Isidoro Gitler (SCALAC-CINVESTAV IPN)*

Roadmap



Key design principle: do not wait for a single “perfect” flagship machine; create a credible regional platform that can absorb future large-scale investment.

Supported by:



SCALAC

Advanced Computing System for
Latin America and the Caribbean

Red **CLARA**



Final Notes:

Growing Maturity Enables Strategic, Symmetric Cooperation

EU, USA, Japan, and LAC now demonstrate peer-level organizational, scientific, and infrastructural maturity in HPC, enabling balanced collaboration that supports long-term goals. (However, the main directive is to align with the European Union)

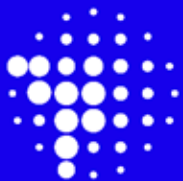
Software Stack Contribution and Deployment

The ecosystem's development has elevated major HPC centers, research groups, and innovation clusters to international prominence, fostering coordinated roadmaps, improved interoperability, and collective efforts to develop and deploy open-source initiatives. (Slices.eu SW stack deployment)

Technological Diversity Supports Sustainable Joint Projects For Global Challenges.

Global HPC/AI/QC/CC landscape fosters multi-partner projects that address global issues like climate, health, energy, and digital sovereignty... to develop with LAC.





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