



Cardano Blockchain: India Market Deep-Dive



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Executive Summary

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Cardano has progressed into the Voltaire phase, which emphasizes decentralization, including the development of a comprehensive constitution. This effort will be supported by developer workshops across various cities in India and globally. Additionally, EMURGO Academy has successfully onboarded and trained over 3,500 graduates, establishing partnerships with more than 14 universities in India, representing over 70% of our global educational partnerships. EMURGO remains committed to driving the commercial adoption of Cardano within India through robust infrastructure, engaging hackathons, comprehensive education, and strategic investments.”

- **Nikhil Joshi**, COO, EMURGO



“

India's crypto market has indeed matured, reflecting a growing appetite for digital assets that extends beyond the initial hype. The involvement of institutional players, bolstered by the recent approval of ETFs and increased capital inflows, has significantly boosted confidence among traditional investors, prompting them to explore this emerging asset class. As the demand for diverse products grows, investors are showing heightened interest in DeFi tokens and pre-launch tokens, signalling a more sophisticated and nuanced market.

A notable trend is the emergence of tier-2 and tier-3 cities as key adoption hotspots, alongside the increasing participation of women investors. This signals the development of a broader and more inclusive ecosystem. Despite ongoing regulatory challenges, the mandatory registration with the Financial Intelligence Unit (FIU) India has enhanced trust within the sector, although the 1% TDS remains a hurdle for many. India continues to lead in crypto adoption, and the industry's resilience, coupled with the nation's technological prowess, positions the country as a potential global leader in the Web3 space.”

- **Sumit Gupta**, Co-Founder, CoinDCX



“ India’s relationship with crypto-assets has transformed dramatically, evolving from initial skepticism to a more supportive and regulated approach. This shift has been fueled by the digital revolution and the growing integration of technology with finance, prompting a focus on responsible regulation and user protection over outright bans. The Indian government has made significant progress in establishing a regulatory framework for crypto-assets, with the introduction of PMLA guidelines. These guidelines require Virtual Digital Asset Service Providers (VDASPs) to register with FIU and monitor transactions, representing a crucial step towards formalizing the crypto landscape in India. This is also reflected in discussions during India’s G20 presidency, where crypto regulation was a significant topic. The growing acceptance of crypto-assets is reflected in the rising interest from both retail investors and institutions. Looking ahead, India has the potential to become a global hub for crypto-assets and blockchain technology, supported by its large youth population and dynamic startup ecosystem. The continued development of regulatory frameworks, combined with technological advancements, points to a promising future for crypto adoption in India”

- Statement from **Balaji Srihari**, Business Head, CoinSwitch



Introduction

Cardano is a third-generation blockchain platform that aims to provide a more secure, scalable, sustainable, and interoperable infrastructure for the development of decentralized applications (DApps) and smart contracts. It has three pioneering entities, including [EMURGO](#), [Input Output Global \(IOG\)](#), and the [Cardano Foundation \(CF\)](#). EMURGO facilitates Cardano’s commercial adoption via education, investment, and infrastructure development. Charles Hoskinson leads IOG and the development of the layer-1 PoS blockchain. The CF is a non-profit organization that scales and diversifies the Cardano ecosystem, focusing on community management and raising awareness. Cardano is now transitioning to a fully community-run blockchain governance model.

Goals of Cardano

1. **Scalability:** Cardano aims to achieve scalability by utilizing a layered architecture, separating the [settlement layer \(CSL\)](#) from the [computation layer](#).
2. **Security:** Cardano's security is largely attributable to the [Ouroboros proof-of-stake protocol](#), which employs an [extended UTxO model](#). Ouroboros is a mathematically provably secure model that enhances security and privacy by segregating transaction validation data, thus reducing vulnerability to attacks. This is also borne out by the fact that there has not been a single hack on Cardano smart contracts to date.
3. **Interoperability:** The platform seeks to facilitate interoperability between different blockchains, allowing seamless communication and transfer of value.
4. **Sustainability:** Cardano emphasizes sustainability through its consensus mechanism, which aims to be energy-efficient and environmentally friendly.
5. **Decentralization:** With a focus on decentralization, Cardano aims to empower individuals by providing them with the ability to shape the blockchain's [governance system](#) as well as control over their financial assets, personal data, and more.

Cardano's Focus on Emerging Markets

Cardano has shown a strategic interest in emerging markets like India due to several factors:

1. **Large Untapped Market:** India represents a vast, untapped market for blockchain technology, with

a burgeoning interest in cryptocurrencies and decentralized finance (DeFi) applications.

2. **Tech Talent Pool:** India boasts a large pool of skilled developers and technologists, making it an attractive destination for blockchain projects and innovation. However, Cardano has been slow to gain traction among Indian developers. But, this is changing.
3. **Financial Inclusion:** Cardano aims to address financial inclusion challenges in India by providing an open-source and decentralized blockchain platform for DApps which have the potential to deliver banking services and financial infrastructure to the unbanked and underbanked population.
4. **Regulatory Support:** India has shown a growing interest in blockchain technology, with regulatory bodies exploring its potential applications. Cardano's focus on compliance and regulatory clarity could be seen as a positive factor in the Indian market.

Key Findings on Developer Activity, Community Building, and Projects within India

1. **Developer Activity:** Cardano has seen a growing interest among developers in India, with several local developer communities actively contributing to the ecosystem. The [Cardano India X Club](#), for instance, has witnessed significant growth in membership and engagement.
2. **Developer Education:** New developers joining and graduating across multiple cohorts of [EMURGO Academy's](#) Cardano Solution Architect and Haskell-based courses have grown

exponentially across India, inside and outside of leading university programs.

- 3. Community Building:** The Cardano community in India is vibrant and engaged, organizing meetups, webinars, and hackathons to foster collaboration and knowledge sharing. Initiatives like the [Cardano Ambassador Program](#) have helped in expanding the platform's reach and awareness.
- 4. Projects:** Several blockchain projects and startups in India are exploring Cardano's technology for various applications, including DeFi, supply chain management, identity verification, and healthcare.

Potential Challenges and Opportunities for Cardano in India

- 1. Regulatory Uncertainty:** Despite growing interest, India's regulatory environment for cryptocurrencies and blockchain technology remains uncertain, posing potential challenges for adoption and investment. However, recent developments to streamline VDA (virtual digital asset) businesses using the Financial Intelligence Unit (FIU) guidelines show affirmative moves toward regulations.
- 2. Competition:** Cardano faces competition from other blockchain platforms and cryptocurrencies in the Indian market, such as Ethereum, Binance Smart Chain, and Solana.
- 3. Education and Awareness:** Increasing education and awareness about Cardano's technology and its potential applications will be crucial for adoption in India, especially among non-technical stakeholders.
- 4. Partnerships and Collaborations:** Forming strategic partnerships with local businesses,

governments, and educational institutions will help Cardano navigate regulatory challenges and foster adoption. Those interested in Cardano are working on the ground to ensure smooth expansion in the Asia-Pacific region.

- 5. Scalability and Performance:** As Cardano continues to evolve and implement its roadmap, ensuring scalability, security, and performance will be essential for meeting the demands of a large and diverse market like India.

Addressing these challenges requires initiatives to increase awareness, clarify regulatory frameworks, expand the developer ecosystem, establish specialized accelerator programs, and showcase Cardano's unique features and successful projects.

The opportunity for **Cardano in India:**

- India has a growing tech talent pool and potential for blockchain solutions. India has 12% of the world's Web3 developers, ranking it within the top five countries in terms of the supply of developers. On top of it, India has 35 million Web3 users and investors, as of 2023. These numbers should continue to grow once Indian regulators streamline the virtual digital asset market by taking cues from existing global regulations.

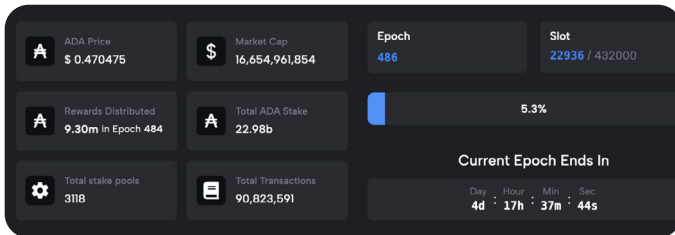
Developer and Community Activities in India

Cardano's engagement in emerging markets like India reflects its commitment to fostering global financial inclusion and technological innovation. By leveraging India-based EMURGO Academy, the existing community, and strategic partnerships to broaden awareness, Cardano has the potential to drive significant impact and adoption in India's rapidly evolving blockchain ecosystem.

- **Developer Activity in India**

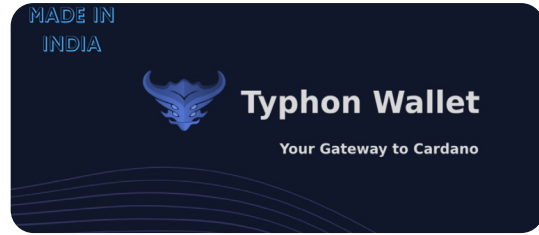
The [Strica team](#) is a group of developers contributing to the Cardano blockchain ecosystem in India. Here's a glimpse of some contributions:

- **Cardanoscan:** Strica head Ashish Prajapati developed [Cardanoscan](#), a widely used and user-friendly block explorer for Cardano that supports mainnet, preview, and pre-production networks. The Cardanoscan platform is funded by two stake pools, [CSN1] and [CSN2]. It is the leading and most popular block explorer for Cardano. Cardanoscan is an atypical block explorer focusing on block and transaction data.

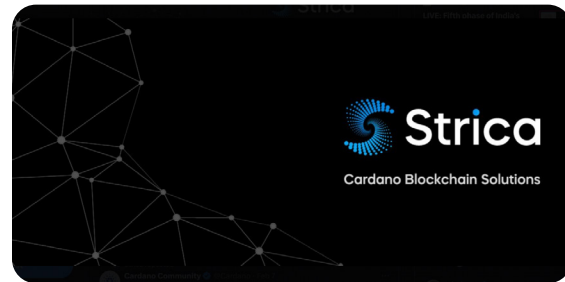


Moreover, it offers much deeper analytics of the Cardano blockchain, analytics that includes pool and token explorers, inspectors for datums and addresses, lists of the top addresses and staking accounts, and a section for viewing the on-chain Stake Pool Operator (SPO) polls.

- This allows users to explore and query data on the Cardano blockchain. Users can search on-chain transactions, [here](#).
- **Typhon Wallet:** The team of developers has also built Cardano Wallet [Typhon](#), designed for both entry-level and advanced users. This wallet caters to a wider range of users within the Cardano ecosystem.



- **Cardano Integration with Ledger Live:** Strica played a key role in integrating Cardano functionality into [Ledger Live](#), a popular hardware wallet application. This integration allows users to securely store and manage their ADA and other tokens on Ledger hardware wallets.



Open-Source Libraries

Strica has also contributed several open-source libraries to the Cardano ecosystem, [GitHub Stack](#), including:

- **TyphonJS:** A JavaScript library for building Cardano wallets.
- **Ouroboros-network-js:** A pure JavaScript networking library for interacting with the Cardano network.
- **Bip32ed25519:** A pure JavaScript library for working with the BIP32 and Ed25519 cryptographic standards used in Cardano.
- These contributions by the Strica team have helped to improve the usability and accessibility of the Cardano blockchain for users in India and around the world.

- **Community-Building in India**

Active Cardano communities in India

- *Major online forums, Telegram groups, or social media channels.*

[Nucast](#) and [Flac Finance](#) have strong and thriving Indian communities on X (Formerly Twitter). Nucast is a Web3 media and entertainment platform, leveraging Cardano-based NFTs to offer IP rights and content ownership. Flac Finance is a RealFi project that enables Web3 users to borrow, pay, earn, and swap with crypto.

- *Details on member count and engagement levels:*

Over 10,000 Indian community members are interacting and engaging within the Cardano ecosystem across community-focused social media platforms.

Offline meetups and events

- *Major conferences, workshops, or hackathons focused on Cardano in India.*

In 2023, Nucast and [Cardano Spot](#) held four major events for the local blockchain community including three in-person gatherings and a virtual hackathon for Indian developers. Cardano Codex 2023, a virtual hackathon, saw notable traction from hundreds of Indian projects and Web3 developers. In 2024, the nationwide Cardano hackathon covered six Indian cities, namely Chennai, Hyderabad, Mumbai, Pune, Bangalore and Delhi. The [Cardano Codex](#) events witnessed nearly 1000 developers and non-tech web3 participants. The hackathon was hosted by Nucast and funded by Project Catalyst. Cardano Spot supported this initiative with regional co-promotions and educational workshops with [Trivolve Tech](#) and [Intersect](#).

By participating in these hackathons, Indian developers will get a chance to build on Cardano and seek access to the blockchain's decentralized funding program [Project Catalyst](#), which has 20 million USD allocated for innovative projects on Cardano.

Project Catalyst - Grow India, Grow Cardano Campaign

Project Catalyst had also dedicated a special category to raising Cardano's profile in India. In this category, ten proposals were awarded a total of 12 Million INR to support ecosystem growth in India. The funds were used for targeted expansion and localization of DApps, increasing the number of SPOs, enhancing the developer ecosystem, creating localized Cardano educational content, and supporting blockchain-based social impact projects like CNFT-based afforestation.

Cardano Educational Initiatives in India

- Founded in 2019, EMURGO Academy is a blockchain education unit of EMURGO, focused on building the Cardano community by educating new blockchain developers, upskilling professionals, and enhancing the overall awareness of blockchain and Web3 technologies with technical and non-technical learners. Globally, EMURGO Academy has trained thousands of developers in Cardano development, establishing partnerships with over thirteen universities in India and four internationally. Their certification programs have empowered nearly one thousand Indian students in blockchain development.

Additionally, EMURGO Academy has organized and hosted free and multiple-day workshops for students

and business professionals to further broaden awareness of Cardano and blockchain technology.

To date, EMURGO Academy has held training workshops with local institutions such as XLRI Jamshedpur, Symbiosis Institute of Business Management Pune, SASTRA Deemed University Thanjavur, Ramaiah Institute of Technology, and RV College in Bengaluru among other highly regarded Indian universities.

To provide a comprehensive education for beginners, intermediate, and advanced learners, EMURGO Academy offers a variety of blockchain courses on Cardano and Web3 based on differing student backgrounds. Whether a student is a developer or a business professional, there are technical and non-technical courses aimed at equipping students with the skills they need to work in blockchain. For a list of courses, interested students can go [here](#).

SmartBlocks is also a new university-focused initiative of EMURGO Academy launched in 2023, to create a forward-looking and blockchain-powered generation of educators and students. It is a plugin-based learning solution designed to empower universities to equip their students with the knowledge necessary to make an impact in the growing field of blockchain and Web3.



As of May 2024, there are 22 ambassadors representing different institutions in different countries. These selected ambassadors are leading talks about integrating SmartBlocks at their respective locations. Nine agreements have been made with universities

worldwide, and four partners in India are involved to date. One of these partners has agreed to include EMURGO Academy's course called "Foundations of Blockchain with Cardano Overview" in their educational curriculum.

Cardano360@Campus is another EMURGO Academy event specifically envisaged for universities to learn more about blockchain, Cardano, and discuss industry insights. To date, it has been organized with a few global universities to inform educators and students about the potential for Web3 to impact industries.

A flyer for the Cardano360 workshop. The title is "Cardano360 workshop - 24th Oct, 26th Oct, 27th Oct". It is divided into three columns for Day 1, Day 2, and Day 3. Day 1 is for university leaders, Day 2 for teaching fraternities, and Day 3 for students. Each day lists topics and a duration. The flyer also includes logos for Cardano and EMURGO Academy.

Day 1 - For Leaders of the Universities -	Day 2 - For the Teaching Fraternity -	Day 3 - For the Students -
1)What is Cardano and Blockchain Technology 2)Why adoption of Cardano is important, for the University . 3)How to adopt Cardano Blockchain. 4)What is Project Catalyst 5)How to promote Innovation and Entrepreneurship 30 minutes Individual consulting and helping lay a roadmap Duration: 3h 30 min Participants: 3 persons/university	1)What is Cardano Blockchain 2)What are the skill sets to build solutions on Cardano 3)A few Use Cases of Cardano Blockchain 4)What is Project Catalyst 5)Project Catalyst - Fund 10 - An insight Duration: 3h Participants: 5 persons/university	1)What is Blockchain 2)What is Cardano 3)What are the skill sets to build solutions on Cardano 4)What is Project Catalyst 5)Entrepreneurship and Project Catalyst Duration: 3h Participants: 20 persons/university

Community leaders and influencers

- **Bharat Mallapur** is the Chief Technology Officer at EMURGO Academy. He has experience in blockchain platforms such as Cardano, Ethereum, and Hyperledger. He has been contributing to the Cardano ecosystem since 2019.
- Lovelace Cardano NFT (CNFT) Club: <https://x.com/LovelaceClubNFT>
- Initiative: Supporting the community and [branding for Cardano-based NFTs](#)
- Sooraj Saju is one of the top Cardano voices from India. He posts educational material on X (formerly Twitter). Find him on X, [here](#).

- Charan is building NuAuth and NuCast Labs to support Indian developers and onboard projects to the Cardano blockchain. Get to know more about Charan, [here](#).
- Ashish Prajapati is one of the tech leaders building on Cardano. He is the creator of Cardanoscan, Typhon \$ADA Wallet, Strica, and now building the DeFi app Flac Finance. Learn more [here](#).
- Anuj Chaudhary, BD Country Manager - India Anuj is leading Cardano Spot content at EMURGO, business development efforts for India and driving community educational initiatives and adoption. Learn more about him [here](#).

Cardano Projects in India

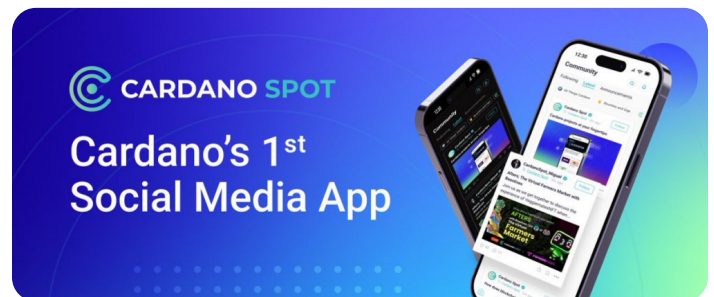
- **Cardano projects building in India**

- Flac Finance is a Cardano DeFi project being built in India. It focuses on decentralized finance solutions for the Indian region. The team has yet to announce their launch plans. Those interested can follow their X handle [here](#).
- NuCast is building an Invoice Factoring tool. This tool addresses the challenge Small & Medium Enterprises (SMEs) face in accessing quick, efficient financing by introducing a Cardano-based blockchain solution for efficient, secure, and transparent global invoice factoring.
- Cardano Spot is active in India and organizes initiatives for Indian students. The platform connects unconnected Cardano enthusiasts and provides the latest news and updates from the ecosystem.

- **Impact of Cardano projects on India**

How Cardano projects address local challenges:

- Bridge the blockchain technology education gap in the Indian market by raising awareness and educating people about the core use cases of blockchain technology.
- EMURGO Academy aims to educate the Indian public in blockchain technology by collaborating with local Indian universities and targeting domestic business professionals and developers.
- Cardano Spot focuses on core community contributors and blockchain-native users to encourage active governance participation and solutions usage.
- NuCast aims to train and onboard Indian Web3 developers through its hackathon and regional workshop initiatives.
- Strica leads Cardano product development directly from India. It has delivered world-class projects within the last four years.



Data Points from CoinDCX

- Total number of ADA holders on CoinDCX: 517,814
- Current ADA holdings on CoinDCX: 19,594,205 ADA
- ADA volume traded on CoinDCX to the date: \$1,058,619,105 (Data as of August 21, 2024)

Data Points from CoinSwitch

- Total number of ADA holders on CoinSwitch: 214,345 users
- Current ADA holdings on CoinSwitch: 14,393,258 ADA
- ADA volume traded on CoinSwitch to the date: Total volume: \$174,320,477 (Data points as of August 21, 2024)

Conclusion

Overall, the key findings on Cardano's presence in India can be summed up as:

- Various Cardano projects and related companies have started supporting the Indian public to understand the importance of decentralized technology and its use cases through new & existing DApps, social media, educational initiatives, events, and other means.

- Cardano's native cryptocurrency ADA has had significant trading volume on India's largest exchange, demonstrating its popularity with early adopters and future potential.
- EMURGO Academy is leading the blockchain education front in India and globally to prepare more developers and professionals to build on Cardano and utilize Web3 technologies.
- There is a core community of Indian developers building on Cardano and a largely untapped pool of competent web developers that can quickly expand Cardano's DApp ecosystem.
- Creating a friendly regulatory landscape along with the points mentioned above can propel Cardano forward.
- Cardano's Project Catalyst can be a significant funding mechanism and incentive for developers to build decentralized solutions on Cardano.

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