







Country Profile





Blockchain and Digital Transformation in Africa.

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Note: The information presented here highlights crucial focus areas for the country, especially in the context of the emerging industries of Fintech, DeFi (Decentralized Finance), NFTs (Non-Fungible Tokens), and cryptocurrencies. The information presented sheds light on several developments and pioneering enterprises that are fueling the country's digital progress in the blockchain domain. However, it is important to note that this is not an exhaustive list; rather, it provides a glimpse into the country's direction and ability to achieve key milestones in the blockchain sector.

Fintech

Mobile Money and Digital Payments	 Benin's When compared to other modes of digital payment, mobile money transfers come out on top¹.
	• By providing Kenyans with QR codes, the CBK hopes to increase the number of people who use digital payment methods/ State-backed QR codes aim to improve payments interoperability in Kenya ² .
	 The fees charged for mobile money transfers was reinstated by the Central Bank of Kenya³.
	 Kenya is planning to monitor mobile payments to increase tax revenue⁴.
	 The telecommunications companies in Kenya are considering separating their mobile money operations to promote digital payment innovation⁵.
Peer-to-Peer Lending and Crowdfunding	 Increasing peer To Peer loan apps in Kenya, including Pezesha, Ubapesa, Pesapata, Loans254, Pesazetu, and Hela.
	 Online crowdfunding platforms such as Zidisha and Mchanga
	 Kenya tops the African peer-to-peer (P2P) business financing market, however most online alternative finance originates from platforms outside of Africa, showing the potential for domestic platforms⁶.
Insurtech (Insurance Technology)	 Rising InsurTech startups and companies in Kenya, including Bismart Insurance, Lami InsurTech, Elastic Fs, Insurance On The Go, SEIL AFRICA, Bluewave Insurance, RODROT, and MotiSure.
	• Bold insuretech startups like Lami and Bluewave have provided innovative payment alternatives with support from established players and underwriters.
	 In 2022, Kenyan insurtech Turaco raised \$10 million, while female-led Lami Technologies raised \$3.7

¹ Vincent Owino, "Mobile Money Transfers Beat Other Digital Payment Platforms," The East African, April 26, 2023.

⁴ Abraham Augustine, "Kenya Wants to Spy on Mobile Money to Collect Taxes," TechCabal, January 25, 2023.

² Kenn Abuya, "Kenya Boosts Payments Interoperability with State-Backed QR Codes," TechCabal, May 3, 2023. ³ The Central Bank of Kenya, "PRESS RELEASE REINTRODUCTION of CHARGES for MOBILE MONEY WALLET and BANK ACCOUNT TRANSACTIONS," 2023.

⁵ Central Bank of Kenya, "PRESS RELEASE SEPARATION and TRANSFER of MOBILE MONEY BUSINESS to AIRTEL MONEY KENYA LIMITED," 2022.

⁶ Tom Jackson, "Kenya, SA Lead Africa in P2P Lending," Disrupt Africa, July 10, 2017.

	million, advancing insurtech in Kenya and Africa ⁷ .
	 Insurtech-enabled microinsurance for low-income households is expanding in the country.
	 Lipa Later, a buy now, pay later (BNPL) startup, collaborated with Lami Technologies to offer inexpensive credit insurance for products purchased through its platform, protecting clients during the installment term from accidental loss or damage.
AgriTech (Agriculture Technology)	 Mobile-based Farming Solutions: Kenyan AgriTech companies are creating apps and platforms to help farmers. These apps provide weather forecasts, pest management advice, market prices, and financial services. (Mkulima Young, Twiga Foods Ltd, DigiCow, DigiFarm, and Farmingtech Solutions).
	2. Precision Farming Technologies: Kenya's agricultural sector is adopting precision farming technologies. AgriTech startups use remote sensing, drones, and IoT devices to monitor crop health, optimize irrigation, and improve farm management. (For instance, Agrvision, SunCulture, UjuziKilimo).
	3. Digital Marketplaces: Online platforms and smartphone apps connect farmers directly with buyers, eliminating intermediaries and facilitating efficient and transparent transactions. These digital platforms help farmers sell their produce at fair prices and reach more customers. (For example, SC Ventures, Twiga Foods, Sokojanja).
	4. Farm Management Systems: AgriTech companies are creating complete farm management systems to streamline operations. Crop planning, inventory management, record-keeping, and analytics help farmers make data-driven decisions and boost productivity. (For example, iCow and Farmforce).
	5. Financial Technology Solutions: Kenyan smallholder farmers struggle with financing. AgriTech firms use digital technology to offer mobile-based financing, crop and livestock micro-insurance, and agricultural savings and payments platforms. These methods promote financial inclusion and farmer economic prosperity. (For example, Pula and Apollo Agriculture).

⁷ Annie Njanja, "Insurtech Lami Raises \$3.7M Seed Ext Led by Harlem Capital," TechCrunch, August 2, 2022.

Financial Inclusion and Access to Banking Services	 Digital Identity Solutions: Kenya is developing blockchain-based digital identity solutions for secure and verifiable identification (for example, BitPesa). These solutions allow people access banking and other financial products despite limited access to formal identifying documents.
	2. Mobile Money Integration: Kenya's mobile banking is being integrated with blockchain platforms to improve financial inclusion. This integration allows mobile money users to access banking services using blockchain-based platforms. (For example, Pesabase and BitLipa).
	3. Microfinance & Lending: Kenyan blockchain-based microfinance platforms like Pezesha offer small loans to people and businesses with poor credit. These services use blockchain technology to make lending secure and transparent, giving marginalized communities affordable credit.
	4. Cross-Border Remittances: Blockchain-based platforms like BitPesa and BitSoko are making cross- border remittances easier and cheaper for Kenyans. These platforms use blockchain's speed and security to make remittances faster and cheaper.
	5. Agricultural Financing and Supply Chain Management: Blockchain is helping Kenyan smallholder farmers get financing. Blockchain systems like Farmshine and Twiga Foods let farmers get loans based on production records. Blockchain also tracks and verifies agricultural supply lines, assuring product traceability from farm to market.

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Financial Inclusion and Digital Banking	 Digital Savings and Lending Platforms: Tala, a renowned Kenyan digital lending company, offers immediate loans using a mobile app to meet financial demands.
	2. Cryptocurrency Wallets and Remittance Services: BitPesa (now AZA), a digital wallet and remittance service, lets users send and receive cryptocurrencies and fiat currencies for fast cross-border transactions.
	3. Decentralized Exchanges (DEX): Pesamill, a decentralized exchange platform, lets users trade cryptocurrencies and tokens directly without intermediaries in a secure and transparent environment.
	4. Blockchain-based Payment Solutions: Kenyan mobile payment solution vendor Sokowatch uses blockchain technology to enable small retailers to make and receive digital payments, improving efficiency and financial inclusion.
	5. Tokenization of Assets and Investment Opportunities: Cowrywise, a digital investment platform, lets users invest in tokenized equities and bonds to enhance their wealth.
Decentralized Lending and Borrowing Services	 Peer-to-Peer Lending Platforms: Direct lending platforms without financial intermediaries. For example, Pezesha is a Kenyan peer-to-peer loan network for SMEs.
	2. Blockchain-based microfinance: These solutions target the unbanked and underserved communities. For example, Blockchain-powered GrassRoots Bima provides microinsurance and microcredit to Kenyan smallholder farmers and microentrepreneurs.
	3. Smart Contract Lending: Automating lending and borrowing with blockchain smart contracts for transparency and efficiency. For example, Pesabase uses smart contracts to enable peer-to-peer lending and borrowing in Kenya.
	 Celo: A blockchain platform that facilitates stablecoins and decentralized lending and borrowing in Kenya and other countries.
	5. Kora Network: A blockchain-based infrastructure that issues and uses stablecoins for lending and

	borrowing, encouraging financial inclusivity.
	6. Amani: A blockchain-powered platform that lends to underprivileged Kenyans and SMEs using alternative credit scoring and decentralized identity verification.
	 BitPesa: A blockchain-based platform that uses credit rating and identity verification to lend money in Kenya and other African countries, especially for cross-border transactions.
Cross-Border Remittance and Payment Platforms	1. Transparent and Traceable Transactions: Blockchain technologies aim to provide a secure and accountable method for cross-border remittance and payment transactions. For example, Pesabase, Kenya's blockchain-based cross-border remittance and payment network offers transparency and visibility.
	2. Lower Transaction Costs: Blockchain technologies aim to reduce transaction fees for cross-border remittances and payments, making them cheaper. For example, BitLipa, a Kenyan blockchain-powered platform that reduces transaction fees for cross- border remittances and payments.
	3. Instant Settlements: Using blockchain's decentralized and distributed ledger to settle cross-border transactions instantly, reducing delays and speeding up transactions. For example, BitSoko, a Kenyan blockchain-based payment platform, provides quick cross-border remittances and payments.
	4. Improved Security and Fraud Prevention: Using blockchain's immutability and cryptography to secure cross-border remittances and payments. Example: Wala: Kenyan blockchain-based financial platform Wala offers cross-border remittance services with better security to prevent fraud.
Tokenization of Local Assets and Real Estate	 Increased Liquidity: Tokenizing local assets and real estate in Kenya allows fractional ownership and token trading, making it easier for investors to acquire and sell. For example, Kenya's blockchain- based Nurucoin technology tokenizes real estate properties, allowing investors to own fractional shares and sell them easily.
	2. Accessibility to Investment Opportunities: Tokenization makes local assets and real estate investments accessible to regular investors. For example, Land LayBy: Kenya's blockchain- powered platform tokenizes land, allowing small investors to buy tokenized land shares and invest in

	real estate.
	3. Improved Transparency and Security: Tokenization makes local asset and real estate ownership and transfer transparent, eliminating fraud and assuring a secure and trustworthy system. Example: Kenyan real estate firm HeriHomes tokenizes its homes using blockchain technology to provide investors with transparent ownership records and safe transactions.
	4. Fractional Ownership and Diversification: Tokenization allows investors to diversify their portfolio by investing in numerous tokenized assets or real estate properties. For exampleChamaPesa, a Kenyan blockchain platform that supports group investments and tokenization of assets, allows investment groups to possess fractional shares in various assets.
Decentralized Insurance and Risk Management Solutions	 Peer-to-peer insurance: Individuals can pool their resources and cover each other directly without traditional insurance intermediaries. Kenyan insurtech platform BimaPesa allows community- based microinsurance, where members contribute to a fund and receive coverage for certain risks. Parametric insurance: Predetermined triggers like weather data or geolocation automatically
	decide policy payouts. Smallholder farmers in Kenya can get parametric insurance through platforms like ACRE Africa for weather-related crop losses.
	3. Microinsurance for informal sectors: Kenya's informal sector is insured via decentralized insurance solutions. Microinsurance platforms like GrassRoots Bima offer modest plans that cover risks including accidents, hospitalization, and funeral expenditures for informal employees.
	4. Data-driven risk assessment: Kenyan insurtech startups use advanced analytics and data-driven models to effectively analyze risks and create customised insurance policies. Kenyan insurtech business Turaco uses alternative data sources and digital platforms for risk assessment to offer affordable health insurance to low-income populations.

Cryptocurrency

Regulatory Framework	1. Legal position and Classification of Cryptocurrencies: Cryptocurrencies' legal position and classification are significant. For example, cryptocurrencies are likely to constitute securities under the Capital Markets Act. However, market participants and investors will benefit from clear rules.
	2. Consumer Protection and Investor Safeguards: The cryptocurrency market must protect consumers and investors. For instance, initial coin offerings (ICO) standards will help safeguard investors from fraud and improve fundraising transparency.
	3. Anti-Money Laundering (AML) and Counter Financing of Terrorism (CFT): Cryptocurrencies need strong AML and CFT legislation. Implementing KYC rules for cryptocurrency exchanges and wallet providers and monitoring and reporting suspicious transactions will reduce money laundering and terrorist financing threats.
	4. Licensing and Regulation of Crypto Exchanges and Wallet Providers: To preserve market integrity and user funds, cryptocurrency exchanges and wallet providers must be licensed and regulated. For instance, a licensing framework that enforces security standards, operational requirements, and frequent audits will boost consumer trust and reduce the risks of uncontrolled platforms.
	5. Taxation and Reporting: Cryptocurrency transactions need clear taxation and reporting procedures. The Income Tax (Digital Service Tax) Regulations, 2020, imposed a digital service tax on cryptocurrency transactions to ensure that cryptocurrency traders pay income taxes and contribute to the country's tax revenue.
Education and Awareness	 Education and awareness: The Blockchain Association of Kenya (BAK), Bithub Africa Blockchain Accelerator, Nairobi EOS Community, and Andela Kenya promote blockchain education and adoption in Kenya. They foster blockchain development in the country through training, mentorship, and community-building.
	2. Regulatory Guidelines and Consumer Protection: Developing clear regulatory norms that address consumer protection, danaers, and best practices in

bitcoin transactions. Thus, cryptocurrency users will learn about their rights and risks from these guidelines. For example, the Central Bank of Kenya and other regulatory organizations publish guidance on safe cryptocurrency use and warning against scams and fraud.

- 3. Partnerships with educational institutions: In March 2023, over three thousand students attended the first stop on Binance's East Africa tour at Nairobi's Jomo Kenyatta University of Agriculture and Technology⁸. In May 2018, Ether Africa's founder, Lamine Diallo, advocated for blockchain courses at both public and private institutions, including the University of Nairobi. Again, the Blockchain Training Alliance (BTA) and Funtrench have collaborated to offer official blockchain education in Kenya. Next, the @ilabAfrica at Strathmore University teamed up with 482.solutions to provide courses in blockchain solutions development. The institution also partnered with Land LayBy Technologies, a company that focuses on real estate and social impact technologies, to release a blockchain product built on the Ethereum platform.
- 4. Crypto community building: Kenya has several major cryptocurrency groups on Meetup, creating a thriving community. First, Nairobi-based Bitcoin Kenya has 886 members. Second, the 690-member Nairobi Ethereum Meetup serves the East African Ethereum community. Third, Blockchain Kenya promotes blockchain and its applications with 669 members. WORKING ONLINE IN KENYA, Hedera Hashgraph - Nairobi, Swisscoin Worldwide Meetup, Cardano Blockchain Kenya, ethafrica, Polkadot and Kusama, and Mombasa Ethereum Meetup are also some notable groups. These clubs provide networking, education, and bitcoin and blockchain technology inquiry. Besides, the NEAR Foundation, a Swiss non-profit that oversees the NEAR protocol, and blockchain community Sankore launched a regional hub in Kenya focused on blockchain innovation, education, and talent development to capitalize on Africa's growing interest in cryptocurrencies and blockchain technology⁹.
- 5. Public Awareness Campaigns: The Ajira program was created to enable more people to work online, with the following goals: increase awareness about online work opportunities among the unemployed, eliminate the negative perception of online work,

⁸ Binance, "Thousands of Students in Kenya Attend Binance's First University Campus Tour in East Africa," Binance Blog, 2022.

⁹ Stanley Kissinger, "Swiss Blockchain near Foundation Launches Regional Hub in Kenya," Kenya Investment Authority, May 12, 2022.

and establish it as a viable and respected career option. Notably, the Kenyan Office of the Data Protection Commissioner (ODPC) launched a nationwide awareness campaign to educate the public about their data protection rights under the Data Protection Act of 2019 ¹⁰ . The campaign, backed by Amnesty International and the Open Institute, educates individuals, government institutions, civil societies, and other stakeholders on data privacy obligations and compliance.
1. Mobile Payment Integration: Kenya's M-Pesa is a popular mobile payment system. Integrating cryptocurrencies into this infrastructure will boost digital asset uptake and accessibility. Users will smoothly switch between traditional and digital currencies if M-Pesa-compatible wallets supported cryptocurrencies like Bitcoin or Ethereum.
2. Blockchain-based Identity Systems: Building blockchain-based identity systems will help solve identity verification, data privacy, and security challenges. These solutions provide users control over their personal data and streamline KYC (Know Your Customer) requirements. For example, a blockchain-based identity framework for Kenya's informal sector employees was developed by IBM Research with the Kenya National Bureau of Statistics ¹¹ .
3. Remittance Solutions: Kenya relies heavily on remittances, and cryptocurrencies will speed up and lower cross-border transactions. Crypto-based remittance solutions save costs and improve financial access. For instance: BitPesa and Bitwala allow Kenyans to receive remittances in cryptocurrencies, which may be promptly changed into local fiat cash.
4. Blockchain-based Supply Chain Solutions: Kenya's agriculture and export sectors will benefit from blockchain-based supply chain solutions. Traceability, fraud reduction, and fair trade will be improved via transparent and immutable systems. Provenance, a blockchain firm in Kenya, records tea from farm to cup to ensure authenticity and fair trade.

 ¹⁰ DigWatch, "Office of Data Protection in Kenya Launches National Awareness Campaign | Digital Watch Observatory," DigWatch, May 8, 2023.
 ¹¹ Samuel Gebre, "Blockchain Opens up Kenya's \$20 Billion Informal Economy," Bloomberg.com, June 14, 2018.

Innovation and Research

- 1. Blockchain Applications in Agriculture: Kenya is using blockchain to boost farmer earnings and agricultural supply networks. AgUnity, Virginia Tech University, and Kenya's Egerton University are leveraging blockchain and a smart token called AgriUT to verify agricultural data and reduce food broker malfeasance. The initiative has increased revenues, reduced waste, and created more participatory farming systems. Notably, Kenya is investigating blockchain's transparency, efficiency, and empowerment in land rights and government services¹².
- 2. Blockchain for Social Impact: Kenya's ChamaDAO and Ladies DAO empower vulnerable communities with blockchain technology. ChamaDAO provides transparent record-keeping, decentralized governance, and financial services to "chamas," savings and investing organizations. Ladies DAO promotes blockchain gender equality through education, mentorship, and networking for women. Both use blockchain to solve social and economic issues. ChamaDAO improves financial inclusion and confidence in chamas. while Ladies DAO addresses the blockchain gender gap. These projects show how blockchain can empower Kenyan communities and improve social impact. Besides, Play-to-earn is possible with blockchain technology in gaming. Due to its high youth population and growing smartphone connectivity, Africa, including Kenya, has enormous potential for blockchain gaming adoption. Kenya's Usiku Games has conducted blockchain gaming events with Harmony and Polygon, including a Women in Blockchain event.
- 3. Blockchain Applications in Election: Keith Martin, a JKUAT alumni, headed the Africa Law Tech Festival 2022 hackathon winning team. Their blockchain-Al solution aimed to improve Kenya's electoral process. The system analyzes ballot papers and records votes on a blockchain using computer vision technology for transparent and tamperproof results. However, Keith and his team are patenting and still seeking partners to implement the system. In congruence, Justus Abonyo, IEBC nominee, supported blockchainbased voting. Abonyo underlined blockchain's potential cost savings and transparency for Kenya's elections. Blockchain technology would help ensure free and fair elections in the

¹² David Whitehouse, "Kenya Turns to Blockchain to Improve Farmer Incomes, Food Supply Chains," Disruption Banking, February 28, 2022.

	 2022 general election by resolving integrity and security concerns. Notably, the Kenyan Blockchain Association and blockchain and AI task group have shown interest in blockchain¹³. 1. Regulatory and Policy Research: Kenya has adopted cryptocurrencies faster than it has developed a complete regulatory framework to protect users. This threatens Kenya's economy. Blockchain technology and cryptocurrencies have benefits like lower transaction costs and financial inclusion, but they also have drawbacks including theft, unlawful activity, and government supervision. The Central Bank of Kenya (CBK) and Capital Markets Authority (CMA) has warned that cryptocurrencies are unregulated and unbacked, exposing consumers to losses¹⁴. There is a need for cryptocurrency regulation in Kenya, drawing from other countries to maximize advantages and minimize dangers. Taxation, accounting rules, and cryptocurrency legality are key research issues. Besides, financial markets and illegal money transfers are undergoing policy assessments and risk analysis.
Partnerships and Collaboration	 BitPesa and Airtel: BitPesa, a blockchain-based payments network, partnered with Kenyan telecommunications giant Airtel to facilitate frictionless cross-border transactions between Kenya and Tanzania. Blockchain technology speeds, secures, and lowers money transfers through the collaboration¹⁵.
	2. Wala and Block Commodities: Wala, a blockchain- powered financial platform, and Block Commodities, an agricultural trading and processing company, launched a Kenyan smallholder farmer blockchain platform. The portal helps farmers access financial services, loans, and markets, improving their livelihoods and productivity ¹⁶ .

¹³ Discover JKUAT, "Blockchain Solutions to Election Fraud: JKUAT Alumnus Leads Winning Team in Hackathon. – Discover JKUAT," Discover JKUAT, August 3, 2022.

 ¹⁴ Hellen Kadenge, "Commentary: Developments in Use of Cryptocurrencies," EAA, August 3, 2022.
 ¹⁵ Kenyan Wallstreet, "Bitpesa Resumes Services after Partnering with Airtel Money - Kenyan Wallstreet," Kenyan Wallstreet, January 6, 2016.

¹⁶ Angeline Mbogo, "Blockchain Startup Wala to Lend \$10m in Tokens to African Farmers," BitcoinAfrica.io, April 12, 2018.

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