How To Make Your Own Cryptocurrency

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Cognitive Convergence offers blockchain consulting services to harness the potential of blockchain and gain valuable insights on DeFi (decentralized finance), NFTs, Web3, and Metaverse.

It also provides cryptocurrency, cryptocurrency wallet, cryptocurrency exchange, tokenization of assets, NFTs marketplace development services.

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OBJECTIVE

Today, cryptocurrency is becoming a more common topic of conversation in casual settings. Cryptocurrency offers numerous benefits to entrepreneurs and gives them a substantial advantage over their competition. While thousands of cryptocurrencies are currently available, most people may wonder how easy it is to create your own cryptocurrency. Cryptocurrencies refer to digital currencies that use both coins and tokens.

Therefore, how does one end up creating their cryptocurrency? This document breaks down everything that you need to know about how to create your own cryptocurrency.

WHAT IS BLOCKCHAIN?

- In simple terms, blockchain is a peer-to-peer distributed ledger that stores information and keeps track of transactions.
- Each and every member of the blockchain community has its own copy of the information.
- The information is recorded subsequently into units called blocks and protected by strong cryptography, creating a chain of data.
- Changes to blocks are not permitted by the blockchain system architecture, so every action and event could be traced to its origins.
- A blockchain could store data on agreements between the parties, their credentials, transactions, and any other information presented in a digital form.
- Since this information is distributed and highly secured, any attempt at fraudulent activity can be seen by the members of the blockchain community.
- This creates trust and transparency for any type of ecosystem that the blockchain is integrated into.

How does blockchain work?

Blockchain is a platform that ensures the integrity of the information stored and maintains interactions between the members of the ecosystem. Here's a high-level overview of the way it works:

- Each member maintains their own blockchain node with the full history of all the events and data appended to the network, including credentials, identities, certificates, etc.

- Every update to the network entails the creation of a new block at the end of the chain. A blockchain protocol dictates how these blocks are recorded, validated, and distributed.
- A consensus mechanism is employed to verify each created block where members of the blockchain network decide if it's valid to be added to the chain.
- Once a block is created and confirmed, it cannot be revoked. All entries on the blockchain are permanent and securely stored. This allows for members of the community to trace the full history of transactions and any other modifications in the7i blockchain.
- Smart contracts are a special type of agreement between the members of the network that have the conditions programmed into them, making sure that they are met before each party receives what was agreed upon. Smart contracts eliminate the need for third parties and middlemen to be involved in agreement resolution.
- Transactions in cryptocurrency play a very important part in the blockchain ecosystem, providing the incentive for all members of the community to make valuable contributions and participate in the development of the system as a whole.

These key pillars of blockchain technology lay the foundation for its uses throughout different industries, including in education. It has the potential to create a global environment where learning materials, publications, student credits, and transcripts are easily accessible. It can also introduce new and innovative ways for accountability, incentivization, and communication between teachers, students, and other participants.

WHAT IS A CRYPTOCURRENCY? BASIC DEFINITION

What is a currency?

- It is far more than just a banknote or coins. A currency is a unit of storage and account and a means of exchange. In simple terms, it is a universally accepted way of buying or selling any goods or services.
- In older times, when the barter system was in place anything from rice and grains to wool and even feathers would be considered a currency. Then came in banks to regularize this means of payment. That's when they made coins and printed banknotes.
- Now in the digital time and age, the coins and banknotes seem to become outdated. So came in a new form of currency, the cryptocurrency.

What is Cryptocurrency?

- It is just like a normal currency but in a digital platform and accepted universally unlike physical currencies that work only in a specific country. A single centralized platform does not bind cryptocurrencies.

What Is a Cryptocurrency? Advance Description

- Cryptocurrencies don't have banknotes, but they do have coins. There is also one more term, Token in cryptocurrencies. People often get confused between a token and a coin.
- **So, what exactly is the difference between a Token and a Coin in Cryptocurrency?**
- **The three main differences are:**

1. Coins are part of a single blockchain while tokens operate on the existing blockchains.
2. Tokens are limited to a specific industry or community; coins can be used anywhere.
3. Coins can buy tokens, but tokens can't buy coins.

- Let's simplify using a real-life scenario. If you go to Starbucks regularly, then you may earn loyalty points for your frequent purchases. With these points, you can redeem a drink. These loyalty points are token that an establishment (in this case Starbucks) offers.
- Now you can buy such loyalty points by giving money which in turn gives you free coffee. This money is the coin (in this case a real-life coin or bank note).
- You can buy loyalty points using coins, but you cannot get real money using loyalty points. So, a crypto coin can be used to buy a business's token, but you can't buy a crypto coin using a token.

Starting a New Cryptocurrency: Is It Right for Your Business?

Now you have a fairly good idea what a cryptocurrency is and how it is used. Now comes the question, does your business actually need cryptocurrency? Just answer the questions below, and you will get a clear picture:

- Will your business be on the internet?
- Does your revenue come more from digital payments than hard cash?
- Will an online payment option increase your userbase?
- Do you plan to stay in business for more than a couple of years?

Okay, the last question was a rhetorical one. If the answer to all these questions is “yes” then your business needs a integrate cryptocurrency.

Benefits of building your Own Cryptocurrency:

- Eliminate Fraud Risk
- Transaction Anonymity
- Lower Operational Costs
- Immediate Transactions
- Access To New Customer base
- Security For Funds

TOP BLOCKCHAIN PLATFORMS OF THE WORLD

1. Ethereum (Market Leader With 82.70% Shareholding)
2. XDC Network
3. Tezos
4. Hyperledger Fabric
5. Hyperledger Sawtooth
6. Stellar
7. EOS
8. Corda
9. Klaytn
10. Tron
11. Hedera Hashpraph
12. Ethereum

1.XDC Network

- A ready enterprise-grade hybrid blockchain for finance and global trading, XDC combines the features of public and private blockchains via cross-chain smart contracts.
- XDC is a decentralized and liquid network leveraging interoperability.
- It powers digitization and tokenization with instant regulation of trade transactions, increasing efficiency and minimizing dependency on complicated FX infrastructures.
- The XDC is a unique digital asset for staking XDC tokens, powering XDC Blockchain Network.
- Various wallets support XDC like Guarda Wallet, Freewallet, XcelPay, Lumi Wallet, D'CENT wallet, BitFI Wallet, Ellipal Wallet, and Trezor Wallet.

2.Tezos

- Tezos is an open-source and decentralized blockchain network that can perform peer-to-peer transactions and deploy smart contracts. It has a modular architecture and formal upgrade mechanism that allows its network to facilitate formal verification.
- Founded by Arthur Breitman and Kathleen Breitman, Tezos is designed to offer the safety and code correctness needed for digital assets and high-value use cases. It is a decentralized blockchain platform that is self-governing.
- Tezos is a smart contract and dApp platform, just like Ethereum, Waves, Neo, but its self-amending cryptographic mechanism makes it different from other platforms.
- Following are some of the features of the Tezos platform that distinguish it from other platforms:
    - Self-amendment Protocol
    - Delegated Proof of Stake Consensus Mechanism
    - On-Chain Governance
    - Smart Contracts and Formal Verification

3. Hyperledger Fabric

- Hyperledger Fabric is proposed as a foundation for building apps or solutions with a modular architecture. It allows components, including membership services and consensus, to be plug-and-play.
- It has a wide range of modular and versatile design that meets various industrial use cases.
- One of the significant features of Hyperledger Fabric is the enablement of a network of networks.
- Members of the Fabric network work together, but because businesses want to keep some of their data to remain private, they usually maintain separate relationships within their networks.

- For example, a buyer may interact with different sellers, selling the same product. The transactional relationship between buyers and sellers should be private and not visible to all sellers. It can be made possible via the “channels” feature in Hyperledger Fabric.
- Instead of an open and permissionless system, Fabric provides a secure and scalable platform that supports confidential contracts and private transactions.
- Here are some of the features of Hyperledger Fabric that makes it different from other platforms:
    - Highly modular
    - Low latency of finality
    - Support for Solidity and EVM
    - Multi-language smart contract support
    - Pluggable Consensus
    - Queryable Data
    - Multi-language smart contract support

4. Hyperledger Sawtooth

- Hyperledger Sawtooth provides a modular and flexible architecture that separates the core system from the application domain. Therefore, smart contracts can imply the business rules for applications without understanding the underlying design of the core system.
- It supports different consensus algorithms, including Proof of Elapsed Time (PoET) and Practical Byzantine Fault Tolerance (PBFT).
- It is an enterprise blockchain platform used for developing distributed ledger networks and applications.
- It aims at keeping ledgers distributed and smart contracts secure, specifically for enterprises. It streamlines blockchain app development as developers can specify business rules for their apps using their chosen language.
- Following are some of the features that distinguish it from other blockchain platforms:
    - Private networks with sawtooth permissioning feature
    - Parallel transaction execution
    - Ethereum contract compatibility with Seth
    - Pluggable consensus algorithms
    - The separation between the core system and application level

5. Stellar

- Stellar is an open blockchain network that allows the storing and moving of money. It facilitates you to create, trade, and send digital representations of all forms of money, for example, dollars, bitcoin, pesos, and a lot more.
- Over 69% of banks are currently experimenting with blockchain technology to make their services transparent, seamless, and secure.
- Stellar is one of the most scalable and significant blockchain platforms that can help build secure and fast fintech applications, tokens, and digital assets representing financial assets.
- A stellar blockchain platform can be used to issue your own assets, trade peer-to-peer tokens, and transform currency while sending.
- Below are the significant features of the Stellar Blockchain Network:
    - It has a decentralized and open database.
    - It enables thousands of transactions in a second.
    - It takes a confirmation time of only 3-5 seconds.
    - The network allows multi signatures and smart contracts.
    - It has a 1% fixed annual inflation.

6. EOS

- EOS is a blockchain platform designed to develop scalable and secure dApps. It provides dApps' hosting, smart contracts capability, decentralized storage of enterprise solutions to solve the scalability issues faced by Ethereum and Bitcoin.
- The EOS platform eliminates all users' fees and accomplishes consensus by leveraging multithreading and delegated proof-of-stake algorithms. They have a dedicated community named "EOS forum," where developers and investors can discuss the platform.
- Following are some of the features of the EOS blockchain that make it one of the reliable platforms:
    - Usability
    - Governance
    - Multiprocessing
    - Flexibility
    - Measurability
    - Upgradability
    - Permission Schema

7. Corda

- Corda is an open-source blockchain platform that allows businesses to transact directly and in strict privacy with smart contracts. It reduces record-keeping and transaction costs by streamlining business processes.
- It is a flexible and agile platform that can scale to meet business requirements.
- Applications built on Corda, CorDapps are designed and developed to transform businesses across a wide array of sectors, including healthcare, energy, insurance, finance, and more.
- Features of the Corda blockchain platform that make it one of the ideal platforms:
    - Privacy
    - Open design
    - Interoperability
    - Agile and Flexible
    - Open Development

8. Klaytn

- Klaytn is a worldwide public blockchain platform created by Ground X, the South Korean social media company Kakao's blockchain subsidiary.
- Service Chains are autonomously run sub-networks that form the backbone of Klaytn's enterprise-friendly environment. Because of the flexibility and customizability of these Service Chains, any online service may be built on Klaytn.
- Klaytn is a BFT-based public blockchain with excellent performance and enterprise-grade dependability. The following are important design objectives:
    - Immediate completion.
    - TPS is high enough to fulfill real-world use cases.
    - Reduce the cost of developing and running Blockchain applications.
    - Reduce the entrance barriers for end consumers.
    - Facilitate the industry's acceptance of new technologies.
- Klaytn released its mainnet, Cypress, with the following characteristics:
    - Block generation and confirmation take one second.
    - Four thousand transactions per second are possible.
    - Gas is approximately a tenth of the price of Ethereum.
    - Supports the execution of Solidity contracts by running EVM (Ethereum Virtual Machine).
- Klaytn Governance Council was founded by 19 respected businesses from around the world to run consensus nodes. The Klaytnscope displays the current number of consensus nodes.
- On Klaytn, over 50 first service partners have committed to launch Blockchain Applications.

- Klaytn's proposed notion of the digital property will help create a world where distribution is fairly based on contribution, which is a solution to the current society's major distribution problem. Because Klaytn is a platform, the blockchain services that are implemented on it are the primary characters.

9. Tron

- Tron is a decentralized blockchain platform that aims to develop a decentralized web. Like Ethereum, Tron allows dApp developers to create and leverage complete protocols via smart contracts on the blockchain.
- The Tron platform can handle 2000 transactions per second, which put it on par as compared to major payment processors like Paypal. It has zero transaction fees.
- Tron depends on the Delegated-Proof-of-Stake consensus mechanism to secure the blockchain. A DPoS is similar to a proof-of-stake consensus mechanism that allows users to earn passive income whenever they stake their holdings in a network wallet.
- Features of Tron Blockchain Network:
    - High Scalability
    - High Availability
    - High Throughput
    - Compatibility with EVM
    - Multi-language extension
    - Eliminating counterfeit chain

10. Hedera Hashpraph

- Hedera Hashgraph Platform is a lightning secure, fair, and fast platform that does not require computing a heavy proof of work algorithm. It allows developers to develop new innovative and scalable decentralized applications.
- Smart contracts in the Hedera Hashgraph platform can be built dynamic just like any other software component. As the platform provides an optional mechanism that enables "binding arbitration", the smart contracts deployed with a list of public keys of arbitrators can be edited to fix errors or add new features.
- Following are some of the features of the Hedera Hashgraph platform:
    - Fast
    - Fair
    - Secure
    - Implementation of public BFT Notary Service for Corda
    - Connecting Hyperledger Fabric network to Hedera Consensus Service

11. Ethereum

- Ethereum is one of the leading blockchain platforms that have a native cryptocurrency called ETH or Ether. Developers use Ethereum to build new applications related to financial apps, decentralized markets, games, cryptocurrency wallets, and more.
- They have the largest community with core protocol developers, cypherpunks, crypto-economic researchers, and mining organizations. It aims to eliminate internet third parties who save data and track financial instruments.
- Below are some of the features of the Ethereum platform:
    - Smart Contracts Functionality
    - Turing Completeness
    - Permissioning
    - Privacy
    - Rapid Deployment
    - Tokenization
- As we have listed the top blockchain platforms that you would want to explore in 2022, now, you will have a question in your mind, “how do I choose the blockchain platform.” You would always need a platform that is ideal for your business use case.
- We are here to help you select the right blockchain platform.

PROS AND CONS OF CRYPTOCURRENCY

Cryptocurrency inspires passionate opinions across the spectrum of investors. Here are a few reasons that some people believe it is a transformational technology, while others worry it's a fad.

Cryptocurrency pros

- Supporters see cryptocurrencies such as Bitcoin as the currency of the future and are racing to buy them now, presumably before they become more valuable.

- Some supporters like the fact that cryptocurrency removes central banks from managing the money supply since over time these banks tend to reduce the value of money via inflation.

- Other advocates like the blockchain technology behind cryptocurrencies, because it's a decentralized processing and recording system and can be more secure than traditional payment systems.

- Some speculators like cryptocurrencies because they're going up in value and have no interest in the currencies' long-term acceptance as a way to move money.

- Some cryptocurrencies offer their owners the opportunity to earn passive income through a process called staking. Crypto staking involves using your cryptocurrencies to help verify transactions on a blockchain protocol. Though staking has its risks, it can allow you to grow your crypto holdings without buying more.

Cryptocurrency cons

- Many cryptocurrency projects are untested, and blockchain technology in general has yet to gain wide adoption. If the underlying idea behind cryptocurrency does not reach its potential, long-term investors may never see the returns they hoped for.

- For shorter-term crypto investors, there are other risks. Its prices tend to change rapidly, and while that means that many people have made money quickly by buying in at the right time, many others have lost money by doing so just before a crypto crash.

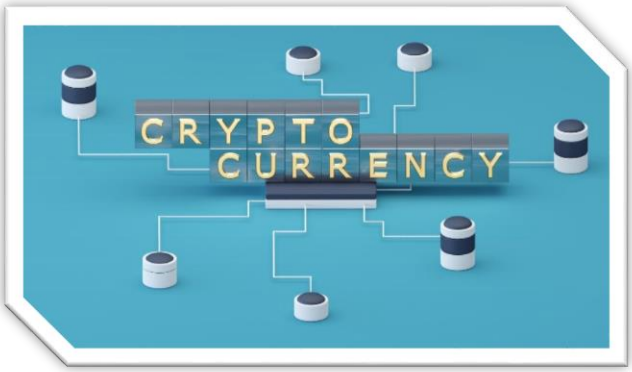
- Those wild shifts in value may also cut against the basic ideas behind the projects that cryptocurrencies were created to support. For example, people may be less likely to use Bitcoin as a payment system if they are not sure what it will be worth the next day.

- The environmental impact of Bitcoin and other projects that use similar mining protocols is significant. A comparison by the University of Cambridge, for instance, said worldwide Bitcoin mining consumes more than twice as much power as all U.S. residential lighting. Some cryptocurrencies use different technology that demands less energy.

- Governments around the world have not yet fully reckoned with how to handle cryptocurrency, so regulatory changes and crackdowns have the potential to affect the market in unpredictable ways.

THINGS TO CONSIDER WHEN DESIGNING YOUR CRYPTO

Apart from the obvious choices like your blockchain or creating a coin or token, there are a few other key areas to consider:



- ### Define your cryptocurrency's utility

  Cryptocurrencies can play many roles. Some act like keys to access services. Others even represent stocks or other financial assets. To understand and map out the process of creating your crypto, you'll need to define its features from the beginning.

- ### Design your tokenomics

  Tokenomics are the economics that govern your crypto, like total supply, distribution method, and initial pricing. A good idea can fail if the tokenomics aren't correct and users aren't incentivized to purchase the cryptocurrency. For example, if you're creating a stablecoin but cannot peg it correctly, no one will want to buy or hold it.

- ### Check its legal compliance

  Countries around the world have their own laws and rules regarding cryptocurrencies. Some jurisdictions may even ban the use of cryptocurrencies. Consider fully your legal obligations and any compliance issues you might face.

HOW TO MAKE A CRYPTOCURRENCY?

Here are the steps to make your own cryptocurrency:

Step 1. Choose a Consensus Mechanism

Consensus mechanisms are the protocols that consider a particular transaction legitimate and add to the block.

Step 2. Pick a Blockchain Platform.

The correct choice of blockchain platform for your business depends on the consensus mechanism you've selected.

Step 3. Design The Nodes

You have to decide the workings and functionality of your blockchain and design the nodes accordingly. For instance, will the permissions be private or public? The hosting will be on the cloud or on-premises, or both? What would be the required hardware details for the execution?

Step 4. Establish Blockchain's Internal Architecture

Be sure about all the aspects before the launch as you won't be able to change several parameters of the blockchain after it's launched and running. The decisions could be as simple as what address format your blockchain will follow to providing exchanges between different cryptocurrencies without a 3rd party intermediary.

Step 5. Integrate APIs

Some platforms don't provide pre-built APIs so make sure yours does. If it doesn't still no need to worry, there are several 3rd party blockchain API providers like ChromaWay, Gem, Colu, Bitcore, BlockCypher, and Tierion.

Step 6: Design the Interface

Building a world-class cryptocurrency is of no use if your interface is not good. You need to make sure that the web, FTP servers, and external databases are of most recent and the front-end and back-end programming is done with the future upgrades in mind.

Step 7. Make Your Cryptocurrency Legal

Make sure that your cryptocurrency is prepared and abiding by the soon to become laws of international cryptocurrency regulations. This way your work is preserved and no sudden surprises can ruin your efforts in creating a new cryptocurrency.

PROS AND CONS OF MAKING A CRYPTOCURRENCY

Pros

- Can customize the cryptocurrency in any way
- Opportunity to learn more about blockchain technology
- Potential for the cryptocurrency to gain value

Cons

- Generally, requires technical knowledge
- Can be time consuming and costly
- Requires ongoing maintenance for the cryptocurrency to be successful

TOP CRYPTOCURRENCIES

1. Bitcoin
2. Ethereum
3. XRP
4. Tether
5. Cardano
6. Polkadot
7. Stellar
8. USD Coin
9. Dogecoin
10. Chainlink

1. Bitcoin

As the first cryptocurrency, Bitcoin (BTC) is also the most popular and highly valued, despite high volatility over the course of its history. Bitcoin was initially created to be used as a digital payment system, but experts say it is still too volatile to be used for that.

2. Ethereum

Ether (ETH) is the cryptocurrency of the Ethereum network, an open-source blockchain upon which developers can build apps and other cryptocurrencies. It's also the second largest cryptocurrency by market cap, behind Bitcoin. Ether's value has risen sharply since its creation in 2013, to nearly $3,000 for one token as of late May, but still lags well behind Bitcoin's value of nearly $40,000 per coin.

3. XRP

XRP is the cryptocurrency of the Ripple digital payment network. Built for digital payments, XRP touts itself as a faster and more efficient way to power global payments. Ripple and XRP also allow for third-party development on other uses for XRP.

4. Tether

Tether (USDT) is a stablecoin and was one of the first cryptocurrencies to tie its value to a fiat currency, in this case the U.S. dollar. Tether is also the largest stablecoin by market capitalization.

5. Cardano

Cardano (ADA) uses a technology called Ouroboros, a peer-reviewed blockchain protocol. It describes itself as a more secure and scalable way to maintain decentralization.

6. Polkadot

Polkadot (DOT) says its mission includes allowing different blockchains to exchange information and transactions with one another. Its website plays up data and identity security and users being in control.

7. Stellar

Stellar's native cryptocurrency is the Lumen (XLM). Stellar is designed as an "open network for storing and moving money" that allows people to create, send, and trade digital money. It's designed to sell and trade all digital monies, not just Stellar's own associated cryptocurrency, the Lumen — although you'll need to own some Lumen to make transactions.

8. USD Coin

USD Coin (USDC) describes itself as "the world's digital dollar." Created by a global financial firm called Circle, USDC is the result of work that has been invested in by Goldman Sachs, Baidu, and IDG Capital, among others. USD Coin is tied to the U.S. Dollar, which makes its price much more stable than other cryptocurrencies. That stability lends itself more toward digital payments, while other cryptocurrencies have more potential to increase in value as investments (along with more risk of losing value, of course).

9. Dogecoin

Dogecoin (DOGE) was originally created as a meme or parody cryptocurrency, but that didn't stop it from seeing a surge in value in early summer 2021. Tesla CEO Elon Musk has weighed in on Dogecoin, which helped drive its surge in value and popularity before it fell back dramatically in the second half of the year.

10. Chainlink

Chainlink (LINK) uses "real-world data and off-chain computation while maintaining security and reliability," according to its website.

CRYPTOCURRENCY PRICES BY MARKET CAP

#	Name	Price	24h %	7d %	Market Cap	Volume(24h)	Circulating Supply	Last 7 Days
1	Bitcoin BTC Buy	$43,532.39	1.82%	12.64%	$823,501,669,837	$36,472,411,481 839,376 BTC	18,952,062 BTC	
2	Ethereum ETH Buy	$3,081.90	0.01%	10.90%	$367,465,960,045	$17,888,564,424 5,817,134 ETH	119,495,266 ETH	
3	Tether USDT	$1.00	0.01%	0.03%	$77,975,837,243	$79,131,940,448 79,078,168,684 USDT	77,922,851,074 USDT	
4	BNB BNB Buy	$420.65	2.27%	9.47%	$69,440,942,671	$2,051,375,182 4,877,762 BNB	165,116,761 BNB	
5	USD Coin USDC	$0.9997	0.02%	0.06%	$51,406,188,951	$3,942,435,468 3,944,321,201 USDC	51,430,777,399 USDC	
6	XRP XRP	$0.8484	9.63%	36.66%	$40,499,677,912	$6,075,823,554 7,175,898,977 XRP	47,832,461,678 XRP	
7	Cardano ADA	$1.18	0.51%	10.78%	$39,540,458,553	$2,639,291,338 2,241,708,342 ADA	33,584,081,644 ADA	
8	Solana SOL Buy	$112.24	5.01%	5.07%	$35,678,327,720	$2,826,401,504 25,138,716 SOL	317,331,901 SOL	
9	Terra LUNA Buy	$56.03	2.15%	7.82%	$22,419,363,067	$2,261,384,805 40,478,727 LUNA	401,305,994 LUNA	
10	Polkadot DOT	$21.45	4.09%	9.39%	$21,142,794,577	$1,663,003,533 77,678,846 DOT	987,579,315 DOT	
11	Avalanche AVAX Buy	$85.48	3.60%	21.22%	$20,861,074,499	$2,023,119,004 23,780,108 AVAX	245,204,859 AVAX	

CONCLUSION

Cryptocurrency is one of the most promising investments of our time. The advantages that come with the development of cryptocurrencies outweigh the disadvantages. This means that those owning cryptocurrencies have a higher opportunity of benefitting from it.

If one plans to run a successful business in the future, it will be a good idea for them to come up with their own cryptocurrency. In that way, they will have laid the foundation of successfully growing their business, riding on the advantages of cryptocurrency. For that reason and others, you should learn how to create your own cryptocurrency.

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