

# Badge 1 Blockchain, Cryptocurrencies and Digital Assets

## Chapter 1 - Basic concepts

- What is a cryptocurrency?
- Decentralization
- What is Blockchain and how does it work?
- What is Mining?
- What is staking?
- Consensus Mechanisms in Blockchain
- Public, Private, and Hybrid Blockchains
- Blockchain Governance
- Route Crypto Talk\_Basic Concepts

## Chapter 2 - Historical Aspects

- The History of Money, from Barter to Blockchain
- The Global Financial System
- The birth of Bitcoin
- The birth of Ethereum
- The ICO bubble
- Megatrends
- The institutional adoption
- Curiosity\_Historical prophecies on the birth of Bitcoin
- Curiosity\_The 1967 Paperwork Crisis
- Route Crypto Talk\_The history of money, from bartering to blockchain
- Route Crypto Talk\_Historical aspects

## Chapter 3 - Bitcoin Insights

- How does Bitcoin work?
- What gives Bitcoin its value?
- Bitcoin and money laundering
- What makes Bitcoin secure?
- Bitcoin as a financial instrument
- In-depth analysis\_Game theory in Bitcoin
- Route Crypto Talk\_Bitcoin Insights

## Chapter 4 - Halving, Bitcoin's monetary policy

- The concept of Halving
- How Halving Works
- The concept of Security Budget
- Halving and its impact on miners
- Halving and its impact on the price of Bitcoin
- Sustainability of the model and scenarios
- Route Crypto Talk\_Halving, Bitcoin's monetary policy

## Chapter 5 - Ethereum Insights

- How does Ethereum work?
- What is a Smart Contract?
- Use cases and applications
- What gives Ethereum its value?
- Ethereum 2.0
- Case Study\_The profitability of the Ethereum ecosystem
- Case Study\_Total Value Locked and Decentralized Applications
- Route Crypto Talk\_Ethereum Insight

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## Chapter 6 - Altcoins and Alternative Blockchains

- Beyond Bitcoin and Ethereum
- Alternative Blockchains
- Tokens
- Stablecoins
- Memecoins
- Route Crypto Talk\_Altcoins and Alternative Blockchains

## Chapter 7 - NFTs and the Metaverse

- What are NTFs?
- NFTs and Art
- NFTs and Gaming
- NFTs and Sports
- Metaverse
- Route Crypto Talk\_NFTs and the Metaverse

## Chapter 8 - DAOs: a new governance model

- The concept of Decentralized Autonomous Organizations
- How a DAO works
- The Regulatory Approach to the Concept of DAOs
- DAOs and public applications
- The Future of DAOs
- Decentralized Physical Infrastructure Network: Practical Applications and Relationships with DAOs
- Case Study\_MakerDAO, the decentralized stablecoin
- Case Study\_The Maker DAO Revolution
- Adaptation of DAOs to the market context
- Legal Infrastructure and Sustainability of DAOs
- Route Crypto Talk\_Decentralized Autonomous Organization

## Chapter 9 - Scalability and security

- The blockchain trilemma
- Block size and frequency
- Transaction costs on the blockchain
- Scalability Solutions on Bitcoin
- Ethereum Layer 2
- Other scalability solutions
- Scalability and Decentralization: a Complex Balance
- Blockchain Adaptability
- Scalability and Impacts on Sustainability
- Scalability and Interoperability
- Cross-chain bridges and standardization
- Implications and Developments of Interoperability
- Route Crypto Talk\_Scalability and security, a hurdle to adoption

## Chapter 10 - Self Custody and Security

- Introduction to Security
- Wallets
- Types of Wallets
- Public Key, Private Key, and Seed Phrase
- Online account protection
- Route Crypto Talk\_Self Custody and Security

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## Chapter 11 - Geopolitical aspects and false myths

- Stablecoins and Regulations
- Central Bank Digital Currencies
- Corporate Cryptocurrencies
- The role of the regulator
- Route Crypto Talk\_Geopolitical Aspects
- Bitcoin wastes too much energy
- Bitcoin is anonymous
- Bitcoin is a Ponzi Scheme
- Bitcoin is too expensive
- Bitcoin is not secure
- Route Crypto Talk\_False myths

## Chapter 12 - CBDCs: problem or solution?

- What are Central Bank Digital Currencies?
- The advantages of CBDCs
- The Risks of CBDCs
- Central Bank Activities on CBDCs
- Digital Euro
- Digital Swiss Franc
- Digital Pound
- Digital Dollar
- Route Crypto Talk\_Central Bank Digital Currencies: Problem or Solution?

## Chapter 13 - Blockchain in a nutshell

- Episode 1 - Blockchain and Cryptocurrencies
- Episode 2 - Public Keys and Private Keys
- Episode 3 - The Seed Phrase
- Episode 4 - Custodial and non-custodial wallets
- Episode 5 - Blocks and Transactions
- Episode 6 - Validator Nodes and Decentralization
- Episode 7 - The Concept of Double Spending
- Episode 8 - The concept of UTXO
- Episode 9 - The concept of Fork
- Episode 10 - Cryptography and Blockchain
- Episode 11 - The concept of hashing
- Episode 12 - The immutability of blockchain
- Episode 13 - Consensus Mechanisms
- Episode 14 - Miners and Proof of Work
- Episode 15 - The concept of Difficulty Adjustment
- Episode 16 - Validators and Proof of Stake
- Episode 17 - Tokens and Coins
- Episode 18 - Smart Contracts
- Episode 19 - Layer 1 and Layer 2
- Episode 20 - Public Blockchains and Private Blockchains