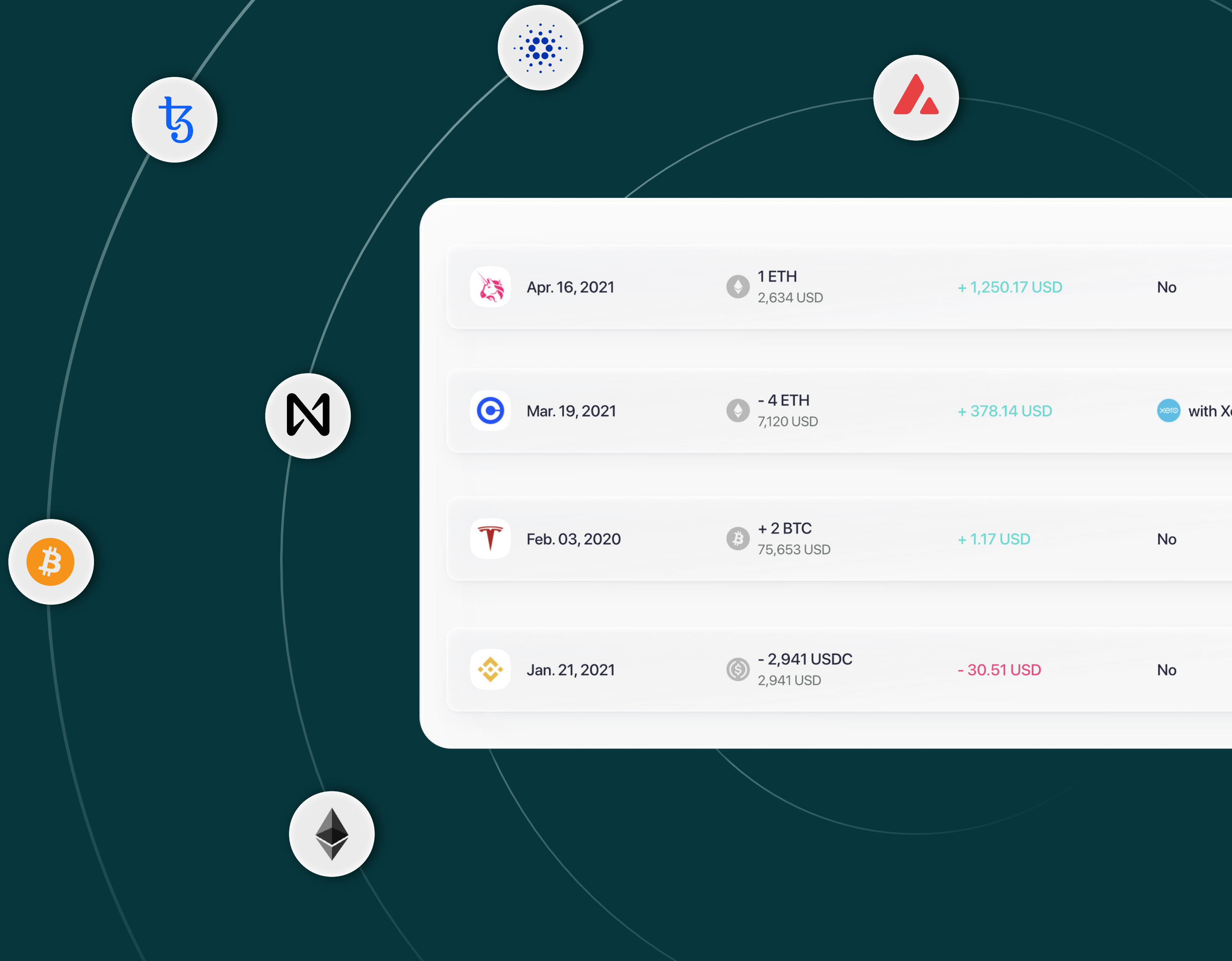cryptio

Crypto Enterprises, Institutions, and DAOs

How to set up
your back-office for
accounting and reporting

	Apr. 16, 2021	1 ETH 2,634 USD	+ 1,250.17 USD	No
	Mar. 19, 2021	- 4 ETH 7,120 USD	+ 378.14 USD	with Xe
	Feb. 03, 2020	+ 2 BTC 75,653 USD	+ 1.17 USD	No
	Jan. 21, 2021	- 2,941 USDC 2,941 USD	- 30.51 USD	No

Gnosis Safe   Request   CONSENSYS mesh   cryptio

Table of contents

Your back-office should not be an afterthought

Crypto-native enterprises, dApps, and DAOs face the essential task of setting up their back-office infrastructure. Regulatory concerns aside, building a back-office is a huge **technical and operational** challenge.

Having set up the accounting infrastructure for leading crypto enterprises like ConsenSys, Aave, Nansen, and The Sandbox, we decided to create the **best-practice playbook** for building a crypto back-office.

Whether you're a crypto native business, layer-1 chain, dApp, private corporation, or public financial institution, this playbook will help you improve your accountability, transparency, and compliance. But before we dive into the details, it is important to understand what a robust back-office looks like.

A robust back-office will help you
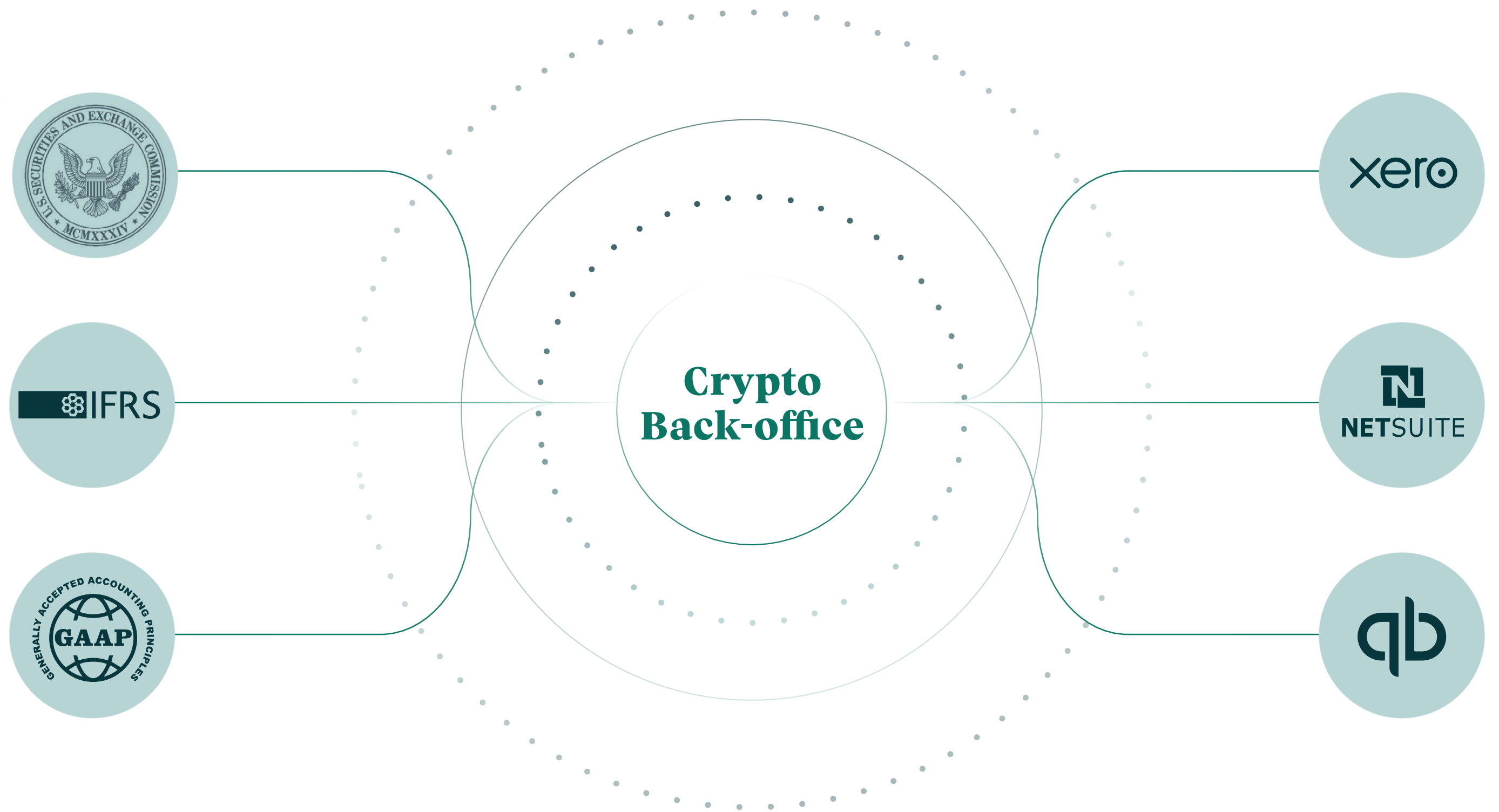
- Build and maintain GAAP and IFRS-grade crypto ledgers
- Reconcile your crypto activity with your fiat general ledger
- Generate Reports – Asset roll forwards, Impairments, P&L, and Balance Sheet

How to set up your back office

Depending on your use case, the accounting setup and treatment will differ. But the methodology set out below should help you systematically build the necessary back-office infrastructure:

Step 1
Build a map of your on-chain and off-chain crypto activity for each entity

Step 2
Transform your transaction history into a GAAP & IFRS-grade sub-ledger

Step 3
Reconcile your crypto sub-ledger with your general ledger

Step 4
Best practice reporting for your business use case and investors

Step 1

Build a complete picture of your crypto activity

It's useful to start with your independent on-chain activity as this is often when the technical challenges lie. Some of the important questions to answer are:

How many entities do we have?

For each entity, you will need to keep a separate set of books. This is necessary in order to file accounts and report on each entity. If your entities are located in different territories, this becomes even more important, as the treatment of crypto activity may vary across these regions. If you are a DAO with no centralized HQ, check whether there are overarching entities supporting the DAO (eg. Foundation).

Which layer-1 chains are you operating on?

List out all the wallet addresses you have on each layer-1 chain.
This list should cover all the 'access points' to your self-custody, on-chain crypto activity.

● Step 1
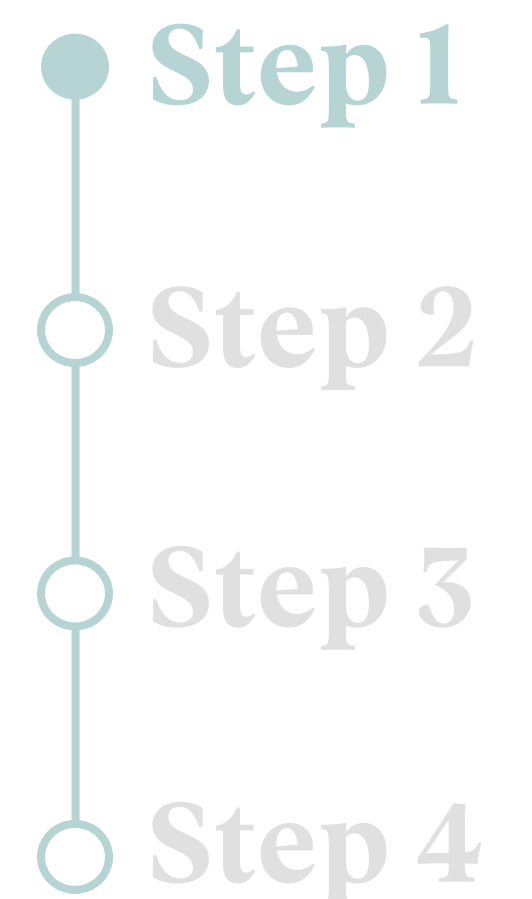
○ Step 2

○ Step 3

○ Step 4

Step 1

Step 2

Step 3

Step 4

Which layer-2 chains are you operating on?

The same thing needs to be done for all your layer-2 and sidechains wallets.

Which key smart contracts are you interacting with?

This list does not need to be exhaustive, but it is helpful to list the key smart contracts and dApps you regularly interact with. This will help you understand the most common types of transactions. Eg. Staking Rewards, LP supply, etc.

Are you bridging assets across chains?

It is useful to make a note of the key bridges you are using – these transactions are the entry and exit points from L1 chains. When you are labeling transactions down the line and assets seem to disappear, check whether they were bridged.

Self custody map

List all your wallets across all **Layer 1** protocols

bitcoin

Wallets

xPub Wallet: 3FZ...rRq2

Tip Wallet: 3RT...eiT1
ETC

Tezos

Wallets

NTF Wallet: 3FZ...rRq2

Hot Wallet: 3RT...eiT1
ETC

Parachains

Polkadot

Wallets

JS Wallet: 12zyq...wikQ
JS Wallet: 12slrm...rrqL
JS Wallet: 12skjh...psml

ETC
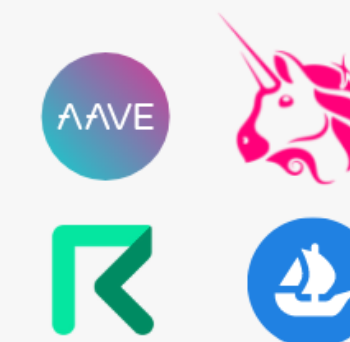
L1 dApp activity

L2 dApp activity

L2 & Sidechains

ethereum

Wallets

Treasury Wallet: 0x9c86c...9a7fad85
DAO Multi-Sig: 0x09981...ca7e7d01
Ops Wallet: 0x2c33d...b36cca7f

ETC

Once you have answered these questions, you will be able to put together a Self Custody Map. The most important part of this map is to make sure you list all your wallets, segregated by the L1 and L2 chains they are operating on.

Step 1

Step 2

Step 3

Step 4

Segregating the wallets by L1 and L2 chains will help keep track of the imports you need to make down the line. We will dive into this in the following section.

Note: If you have a wallet address on multiple chains (Eg. Ethereum, Polygon, and Fantom), they will count as multiple wallets. You will need to import transactions from each of those chains.

If you are still in the process of designing your on-chain wallet setup, it is worth looking at the tooling such as MultiSig wallets and payments solutions.
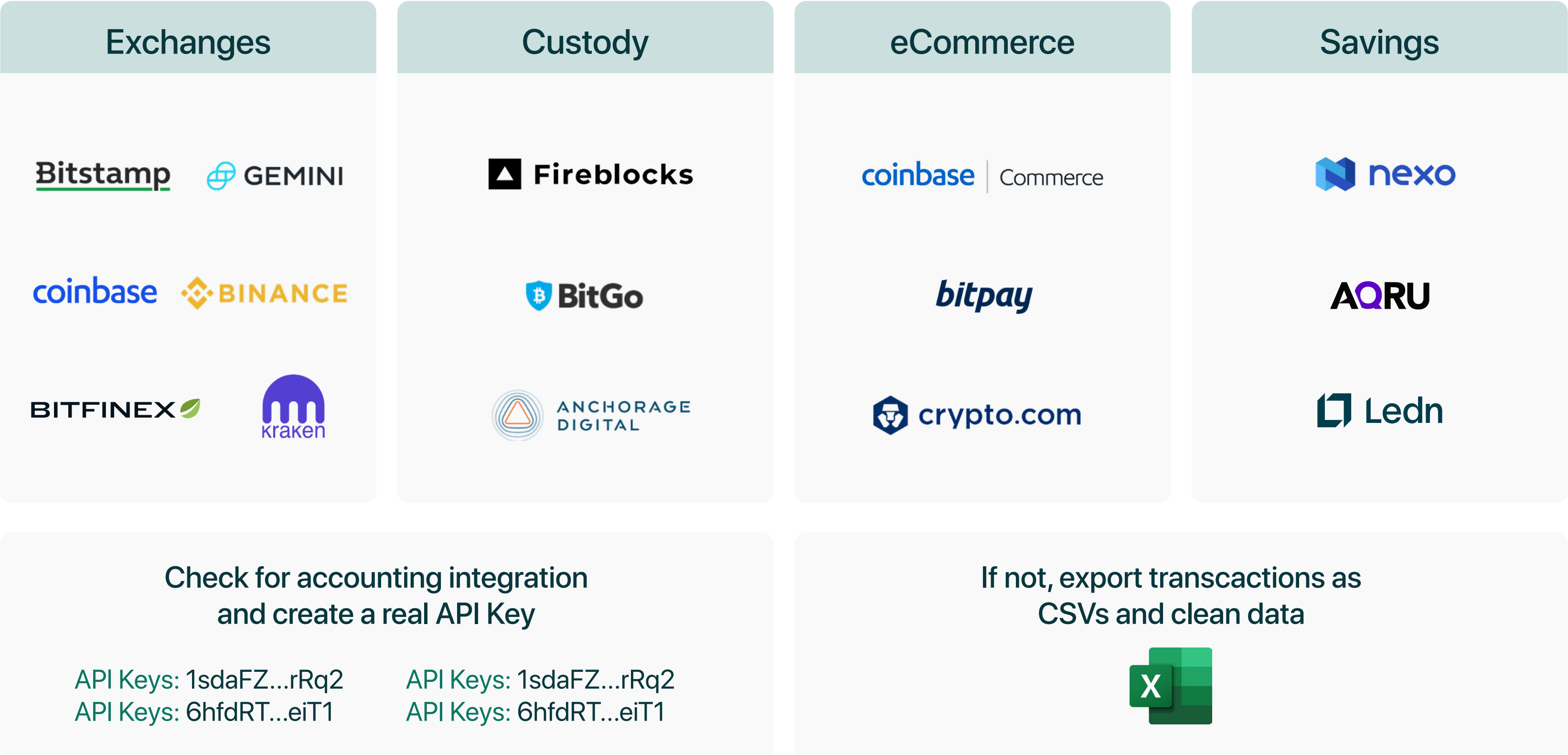
Gnosis Safe
An enterprise-ready wallet solution for managing your digital assets. A multi-signature setup ensures granular control of your assets.

Request Finance
Send and receive payments in 60+ cryptocurrencies and stablecoins, 10+ fiat currencies, and 10+ blockchains.

Third party custody map

Exchanges	Custody	eCommerce	Savings
Bitstamp ⬡ GEMINI	◣ **Fireblocks**	coinbase | Commerce	nexo
coinbase ◈ BINANCE	₿ **BitGo**	*bitpay*	AQRU
BITFINEX🍃 kraken	ANCHORAGE DIGITAL	crypto.com	Ledn

Check for accounting integration and create a real API Key

API Keys: 1sdaFZ...rRq2   API Keys: 1sdaFZ...rRq2
API Keys: 6hfdRT...eiT1   API Keys: 6hfdRT...eiT1

If not, export transcactions as CSVs and clean data

The same goes for your off-chain activity. Create a list of all your 3rd party accounts – exchanges, custody, OTC, eCommerce, and savings accounts. Anywhere that you are holding or transacting crypto needs to be accounted for.

After mapping out your crypto activity, comes the challenging task of importing all the transaction information from all your self custody and third-party sources.
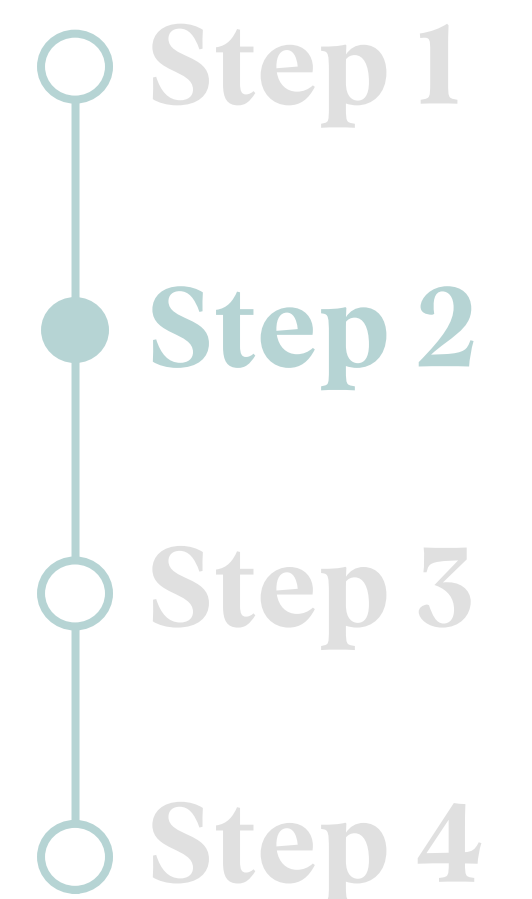
Step 2

## Transform your crypto activity into an enterprise-grade sub-ledger

Importing your transaction history from on-chain, self custody sources

Blockchains are public ledgers. However, organizing this public data in a way that's useful for accounting is be extremely difficult. Exporting transactions from block explorers such as Etherscan is error-prone (data quality is significantly worse for other Layer1 block explorers)– as block explorers often have inconsistencies and missing transaction data. This task becomes exponentially difficult if you have activity on multiple chains.

Cryptio Ionic marked a huge technical innovation in parsing, indexing, and processing **on-chain** data for accounting and reporting. We are running our nodes and have built **proprietary indexers that** are able to transform opaque blockchain data into ledgers ready for accounting and reporting. We are not reliant on public block-explorers like Etherscan and have built direct connections to the native chains.

Step 1

Step 2

Step 3

Step 4

Transforming on-chain data into auditable ledgers

Step 1
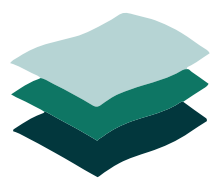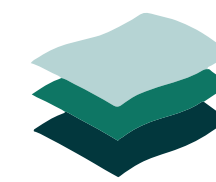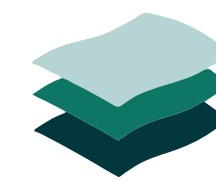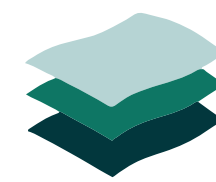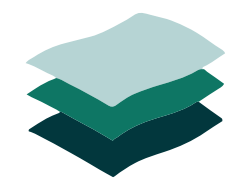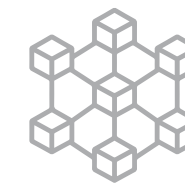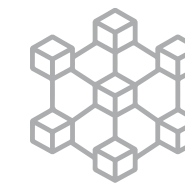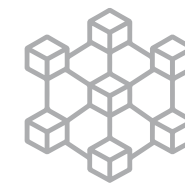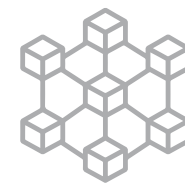
Step 2

Step 3

Step 4

🦄	Apr. 16, 2021	Ⓔ 1 ETH 2,634 USD	+1,250.17 USD	No	Liquidity
Ⓒ	Mar. 19, 2021	Ⓔ -4 ETH 7,120 USD	+1378.14 USD	xero with Xero	Marketing
T	Feb. 03, 2020	Ⓑ +2 BTC 75,635 USD	+1.17 USD	No	Refund

Step 1

Step 2

Step 3

Step 4

Cryptio has also **partnered with L1 foundations** such as Cardano, Tezos, NEAR, Filecoin, and more. Thousands of applications are being built on top of these foundational blockchains, especially in the DeFi and NFT space. We are building the accounting and reporting infrastructure in tandem with this rapidly growing ecosystem.

**Importing your transaction history from
3rd party custody sources:**

You can pull transaction data from 3rd party sources via CSVs or using their API read-only keys. The data quality and accuracy in these instances depend on the quality of their API and database.

Cryptio streamlines this whole process and enables you to import all your on and off-chain data in real-time. It also empowers you with a suite of accounting and reporting tools to categorize and organize that data, transforming it into an enterprise-grade sub-ledger.
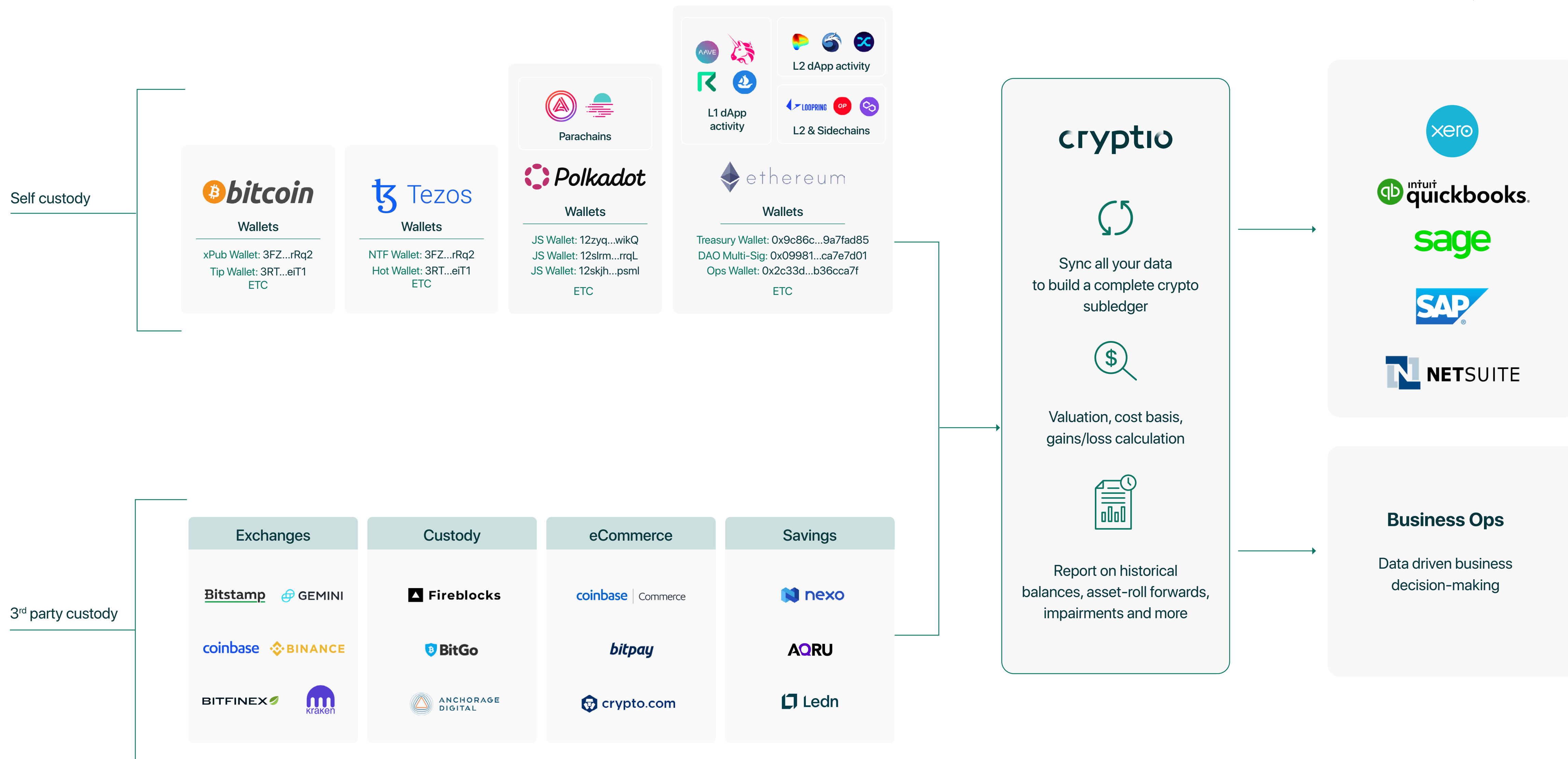
Organizing your transactions

Step 1

Step 2

Step 3

Step 4

Arrange your transactions across all sources chronologically

Separate the gas fees and 3rd party fees as unique transaction movements
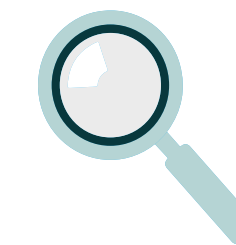
Identify your contacts and counterparties

Calculate the cost basis (First-in-first-out / WAC) based on the rules in your jurisdiction

Calculate your realized gains and losses for each transaction

Label all your transactions (in a way that can help associate these transactions with your general chart of accounts)

You can automate the bulk of this work in Cryptio to produce a complete crypto sub-ledger.

Transactions

Update cost basis   Invoices   1 Filter activated   Reset

▼ Date	From	Incoming	Outgoing	Fees	Cost basis	Gains/Losses	Source	Label	Sync
11/19/2021 9:57:29 PM	From: 0x3cd75...dc49699 To: ETH hot wallet	+0.3295 ETH $1.4k			Deposit	-	ETH hot wallet	Salary	
11/19/2021 9:05:52 PM	To: Coinbase Pro	+0.0969 ETH $412.74			Deposit	-	Coinbase Pro	Supply	
09/20/2021 12:42:45 AM	From: ETH hot wallet To: OpenSea		-0.44 ETH $1.5k	0.0132 ETH $43.84	$1.8k	↙ $ 270.2	ETH hot wallet	NFT Purchase	
09/17/2021 10:28:19 AM	From: OpenSea To: ETH hot wallet	+0.2775 ETH $977.46			Deposit	-	ETH hot wallet	NFT Sale	
09/14/2021 10:51:55 PM	From: Binance Spot	+928 REN $733.14	-732.9344 USDT $733.14	0.0014 BNB $0.55	$733.39	↗ $ 0.3	Binance Spot	Swap	

Step 1

Step 2

Step 3

Step 4

This crypto sub-ledger serves as the **database of truth** for all your realized crypto activity. This database can be leveraged for reporting, analysis, and of course accounting. It also helps you bridge the gap between the blockchain and your current accounting system.

Note: Bypassing the process of building a crypto sub-ledger and importing your crypto transactions directly into a (fiat+crypto) general ledger will deprive you of the crypto-native reports and insights. This is will also be an incredibly manual and error-prone process as fiat accounting systems aren't built to manage crypto-native transactions.

Step 3

Reconciling your crypto sub-ledger with your general ledger

Mapping your crypto activity to your chart-of-accounts

After you have created your crypto sub-ledger and labeled the transactions, you will need to reconcile these transactions with your fiat general ledger. This involves preparing your Chart of Accounts and mapping it with the labels in your crypto sub-ledger. This is the last step before you export your data into your fiat accounting system.

Your chart of accounts (COA) is an index of all the financial accounts in the books of a company. It is a list of all accounts (Bank, Payroll, Marketing...) impacted by the company's activity during a specific accounting period, broken down into subcategories.

How to prepare your chart of accounts?

You need to **create specific accounts** for your crypto activity for example:
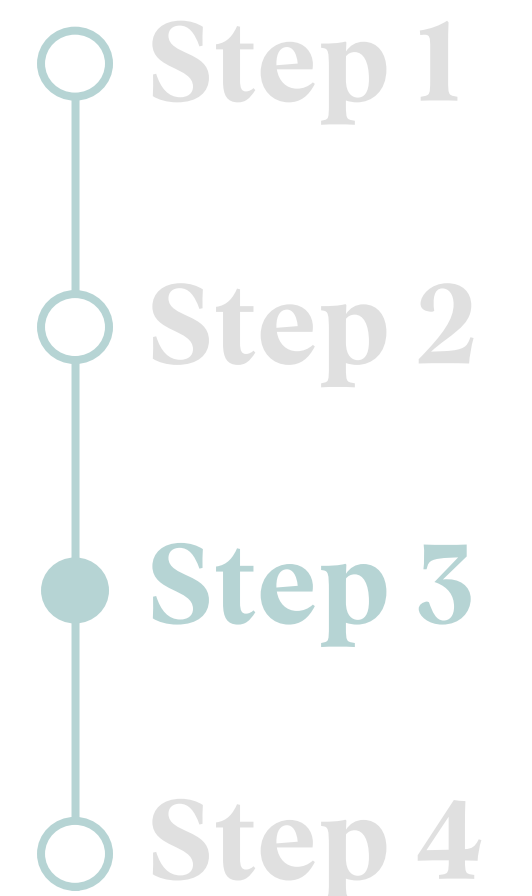
Step 1

Step 2

Step 3

Step 4

Here's an example of a crypto-focused Chart of Accounts

	A	B	C	D
1	code	name	type	description
2	201	ETH	asset	Ethereum asset account
3	202	USDC	asset	Tether USD stable coin asset account
4	203	DAI	asset	MakerDao USD stable coin asset account
5	401	Staking Rewards	income	Interest income account for staking activity
6	501	Payroll	expense	Employee wages
7	601	Transaction Fees	expense	Blockchain fees account
8	602	Realised Gains/Loss	expense	Realised Crypto Gains/Losses

Default accounts:

• **Realized Gains/Losses** expense account

• **Transaction Fees** expense account

Asset accounts:

• Individual asset accounts per asset

• e.g. ETH will need to be mapped to an Ethereum current asset account

• These are all **Balance Sheet** accounts

Income/Expense accounts:

• For all incomes and Expenses (Sales, Interest, Marketing, Payroll, etc.)

• Ensure you have all the right **Profit & Loss accounts** necessary

Step 1

Step 2

Step 3

Step 4

Once you have prepared your COA, you will need to map your crypto transactions to these accounts. This can be automated with Cryptio as it directly integrates with your fiat accounting software. Reconciled journal entries and records of your transactions are automatically synced.

Chart of accounts

Balanced Journal Entries
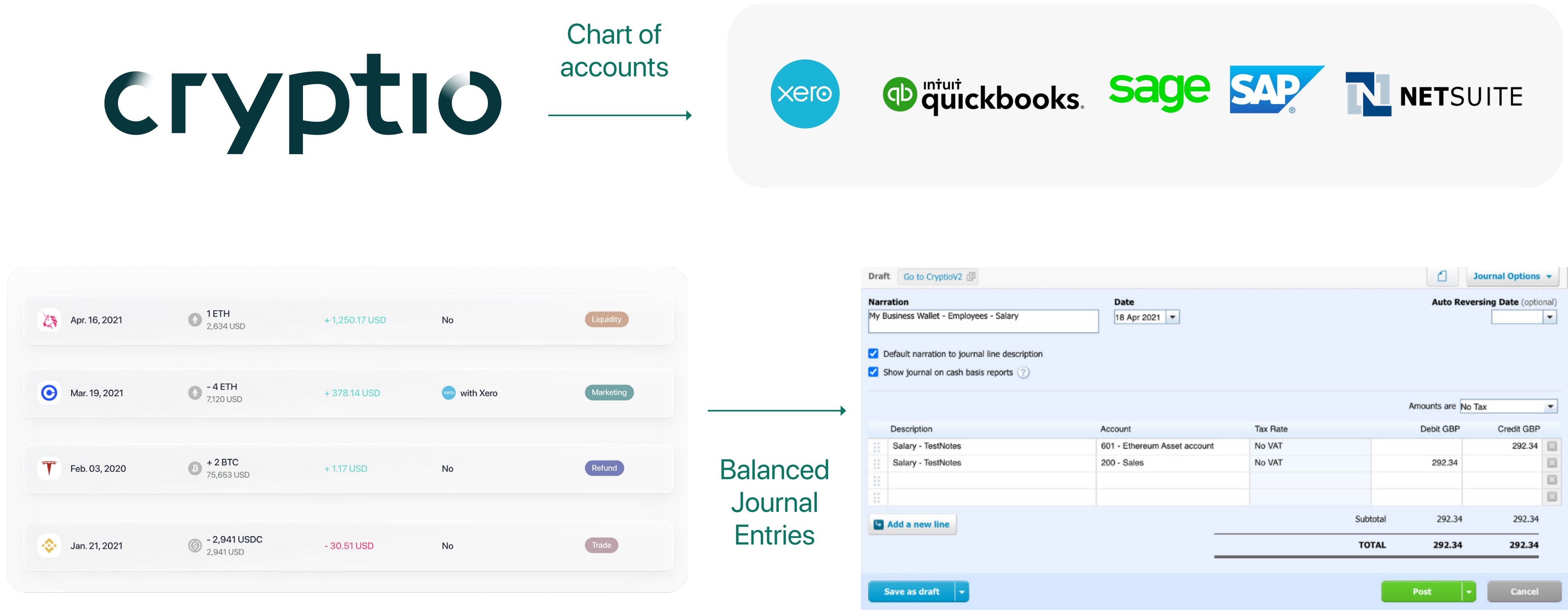
Step 1

Step 2

Step 3

Step 4

All your realized crypto activity will be reconciled in your ERP accounting system (Xero, Quickbooks, Netsuite) alongside any fiat activity you may have. You can then generate your P&L and Balance Sheet.

This structure, allows you to have oversight of your crypto sub-ledger while leaving the fiat reconciliation to your accountant. If you are looking for an accounting partner familiar with crypto accounting – get in touch! We'd be happy to connect you with an accounting partner in your region.

Step 4

Best practice reporting for your business and investors

An effective back-office setup should enable you to generate critical business reports on-demand. Here are six key reports you should be able to generate:

Ledger entries report

the universal way to share accounting data.
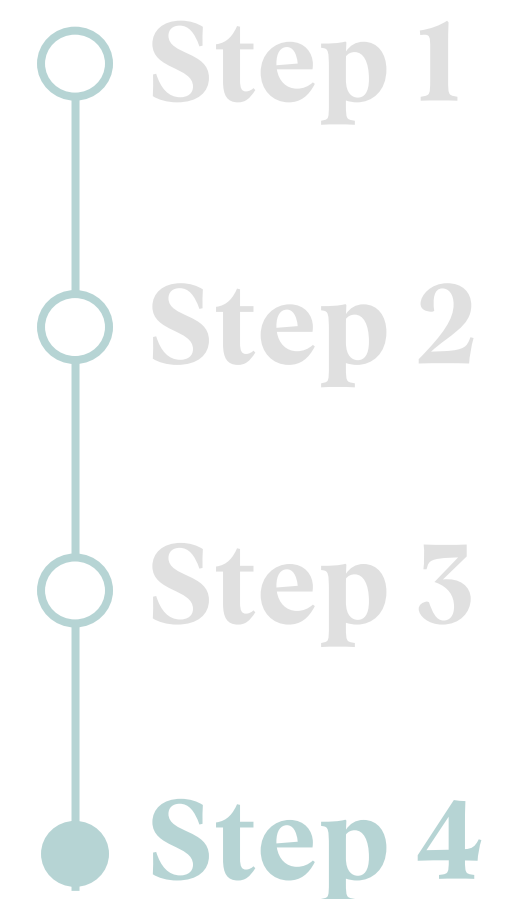
Cost basis report

all realized gains and losses, crucial for declaring your taxes.

Unrealized gains and losses

track your current positions and report on treasury status.

Historical balances reports

track past activity for accounting and audit purposes. These reports should be customizable by asset, wallets, daily balances, and labels.

Step 1

Step 2

Step 3

Step 4

Step 1

Step 2

Step 3

Step 4

Asset roll forwards

Start and end balances for crypto holdings, together with valuation movements for the period, and any new asset acquisitions and disposals that occurred during the period

Impairments testing and reporting

As per GAAP guidelines, any company with crypto holdings is required to record unrealized losses for intangible assets as 'impairments'. This means that if the price of the crypto asset value dips during the financial reporting term-end, the business has to report that impairment as an *operating loss* on their P&L. Your back-office solution must enable the generation of impairment-adjusted reports.

Step 1

Step 2

Step 3

Step 4

Enterprise-grade accounting and reporting with Cryptio

Need help building your crypto back office?

Cryptio is a complete back-office software platform that delivers financial integrity & accountability for businesses in crypto.

Direct connections
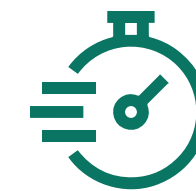
with *Institutional* custody solutions, exchanges, chains, and accounting systems like Xero & Netsuite.

Speed

Automated labeling, valuations, cost basis, realized & unrealized gains reporting, and chart of accounts mapping.

Certainty

Transform on-chain crypto activity (including DeFi & NFTs) into auditable records for accounting, treasury, and tax filings with confidence.

Enterprise Success Program

Quick-start onboarding & training

World-class post-sale support

Expert-Led Implementation

- Expert lead technical setup & onboarding
- Assisted data integration and imports
- Consulting on chart-of-accounts setup

Training

- Scheduled live group trainings led by our Customer Success team
- On-Demand learning via the Cryptio Knowledge Base

CSM

- Regular check-ins by your customer success manager
- Best practice guidance for your use case
- Annual business review

Support

- Dedicated Support Exec
- Live chat support
- Partner access
- Knowledge base

Get started with

cryptio

Get in touch with our team and book a call

Sign up for a free trial, get started with Cryptio Ionic

Book a demo

Free trial

Authors

Antoine Scalia
CEO & Founder, Cryptio

Hemant Pandit
Head of Marketing, Cryptio

Contributing Partners

Gnosis Safe
MultiSig Wallet Partner

Request
Payments Solution Partner

CONSENSYS
mesh
Network Partner