



Agenda

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- 01 About Ripple/Challenge Overview
 - 02 XRP Ledger Overview
 - 03 XRPL Ecosystem
 - 04 How to build in the Ecosystem
 - 05 Getting involved with XRPL
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About Ripple



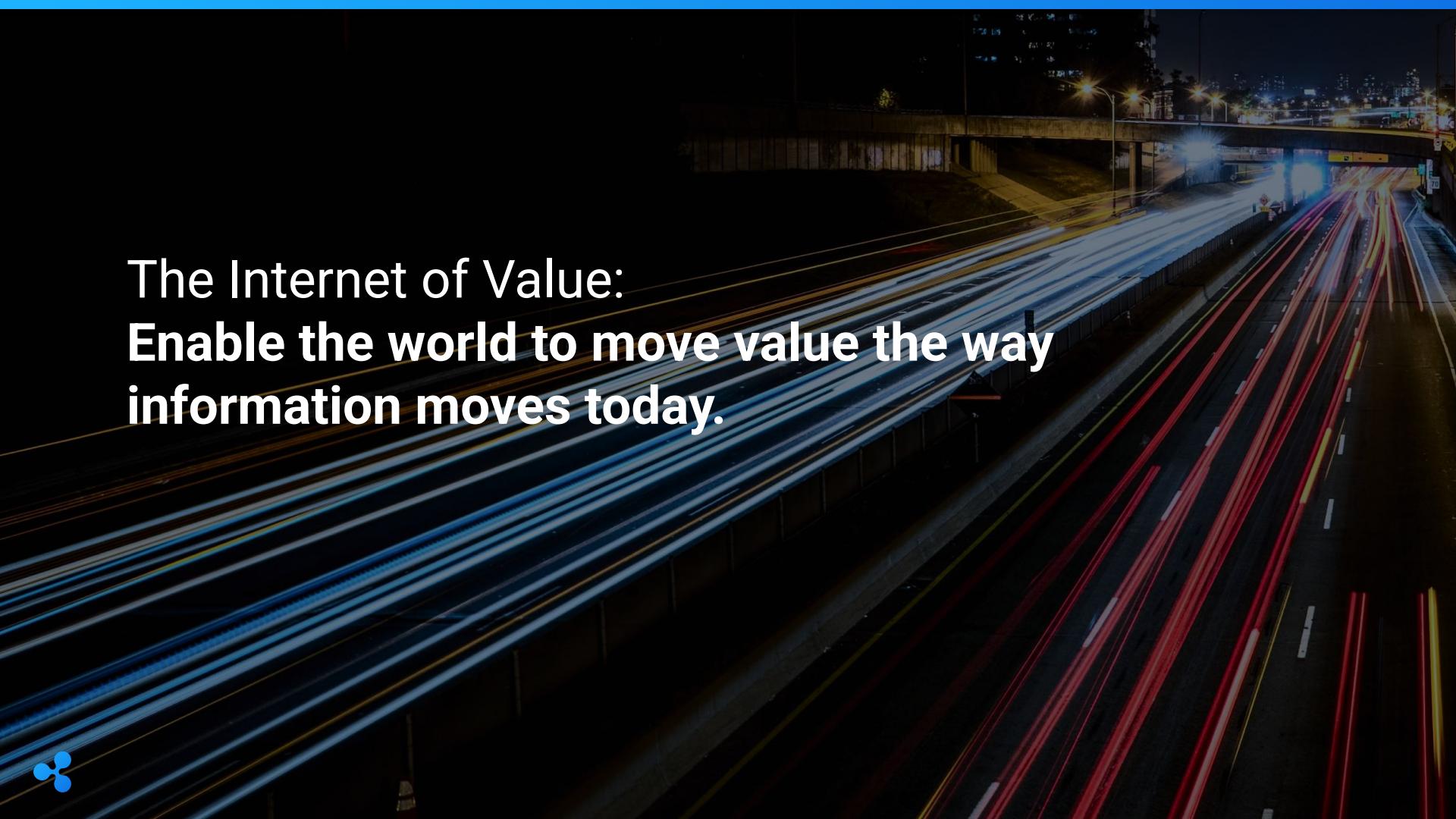
Our Company

~1000 employees in 15 global offices working to achieve our vision of enabling the world to move value like information moves today:

the Internet of Value

We're on a **mission** to build breakthrough blockchain and crypto solutions for a world without economic borders





The Internet of Value:
**Enable the world to move value the way
information moves today.**



Ripple's Lines of Business

Ripple Payments

Enable secure, transparent, cost-effective cross-border payments that settle in real-time

Metaco Custody

Enable the regulated financial industry to scale their adoption of distributed ledger technology and introduce blockchain-enabled products and services to their customers.

RippleX

An “innovation arm” of Ripple that contributes to the XRP Ledger and developer community



TartanHacks 2025

Challenge

- Develop applications that leverage the **XRPL**, its new **EVM Sidechain**, or **RLUSD** to create impactful solutions across various domains. These applications could range from crypto-related or TradFi cross-border payments to non-financial use cases such as identity management, supply chain tracking, and more.
- Additionally, explore opportunities in emerging fields like regulatory technology (RegTech), sustainable finance, and risk management. The XRPL's efficiency combined with the programmability of the EVM Sidechain provides a powerful foundation for delivering innovative, scalable, and cost-effective fintech solutions



Challenge Prizes

- First Place: \$2500 (USD or XRP)
 - This prize goes to the team who creates the most **novel project** or proof of concept; the most fundamentally new application of the XRPL
- Second Place: \$1500 (USD or XRP)



Quick Start Resources





XRP Ledger

Built for Business

The differences between XRP Ledger, XRP, and Ripple



Layer-1 Blockchain

The XRP Ledger is a decentralized public blockchain that is open-source and powered by a global developer community.

Companies, institutions, developers and individuals around the world use the XRP Ledger for use cases across, tokenization, payments, stablecoins, CBDCs, and more.



Native Digital Asset

XRP is the native digital asset (token) of XRPL, similar to ETH for Ethereum or BTC for Bitcoin.

The primary utility of XRP is to facilitate transactions on the network.

XRP also serves to protect the ledger from spam, and to bridge currencies in the XRP Ledger's DEX.



Technology Company

Ripple is a technology company that builds blockchain and crypto solutions for businesses. Ripple's solutions use XRP and XRPL because they are fast, efficient, and reliable, making them the ideal duo for financial services use cases like payments. Ripple is also a holder of XRP.

Ripple is one of many developers building on and contributing to the XRP Ledger.

XRP Ledger (XRPL) launched in 2012 to address limitations of crypto and fiat currencies for financial use cases, specifically payments



Over a decade, XRPL has matured into one of the most robust layer-1 blockchains

100%

decentralized blockchain with 600+ nodes processing transactions and maintaining the ledger

100+

Proof-of-Association validators operated by universities, exchanges, businesses, & individuals

1750+

unique apps and exchanges on mainnet built by a diverse set of global developers

2.8B+

transactions processed representing over \$1T in value moved between counterparties

5M+

active XRP wallet holders around the world

\$30B+

market capitalization of XRP, making it the ~6th largest cryptocurrency

XRPL is intentionally designed to enable financial use cases

Fast, Cheap, Green

Carbon neutral blockchain settling transactions every **3-5 seconds** at fractions of a cent per transaction for mass market adoption

Institutional-Grade Functionality

Access complete blockchain functionality purposefully built for XRPL to **tokenize, trade, escrow, and move** financial assets

Aggregated Liquidity

Capital in AMM pools or order books is aggregated at the **core blockchain layer**, not fragmented across competing applications

Best-in-Class DEX Experience

Fully on-chain order books combined with AMM functionality create a **traditional finance trading experience built on decentralized technology**

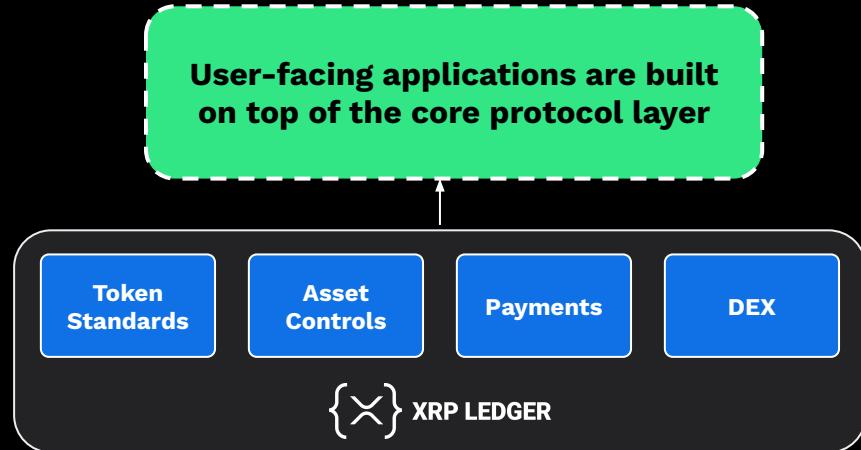
Built-in Compliance

Asset control features maintain uniform standards at the protocol layer and enable issuers to effectively control user access and safety

Interoperability

A secure cross-chain bridge and infrastructure partnerships facilitate liquidity and positive user experience extending beyond XRPL Mainnet

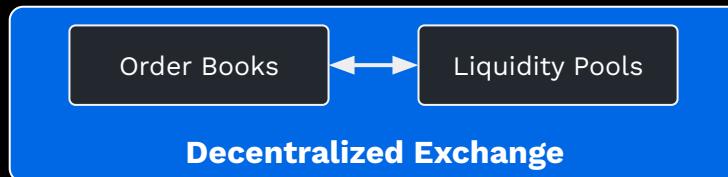
Institutional-grade financial capabilities are built in as native protocols



- Expansive functionalities are baked into the Layer 1 blockchain as native protocols rather than smart contracts at the application layer
- New protocols must go through a rigorous development, security audit, and decentralized review process to be adopted*
- Financial use cases include Asset-Backed tokenization, trading and market making, payments, and escrow
- Compliance controls include authorized accounts, spam prevention, clawback, and identity verification
- Functionality can be accessed via API calls

The native DEX aggregates all liquidity into one protocol to enable better capital efficiency of financial transactions

Breaking down walls of liquidity: One DEX that interconnects order books and liquidity pools for best price execution



Fully on-chain order books operate 24/7 with liquidity provided by market makers



All transactions settle atomically in 3-5 seconds and cost fractions of a cent in network fees



Matching engine employs XRP as a bridge currency and routes transactions across multiple currencies to ensure optimal price execution



Automated Market Maker (AMM) enhances liquidity for tokenized assets and provide yield generating opportunities

Compliance-enabling features directly integrate into institutional workstreams and requirements

Feature available today

Trustlines

Enable any user or asset holder to control who they accept funds from. Each transaction is required to be signed by the receiver, acting as a **form of spam prevention**.

Authorized Trustlines

A **KYC/Permissioning** tool that effectively gives issuers whitelisting capabilities. Create tokens that only authorized accounts can hold.

Freeze

An action that may allow issuers to meet regulatory requirements or enhance trust and safety, with the ability to **freeze assets** on a Trustline.

Clawback

A feature that further enhances the Freeze capability. Issuers will be able to "claw back" funds from a Trustline for integrity purposes.

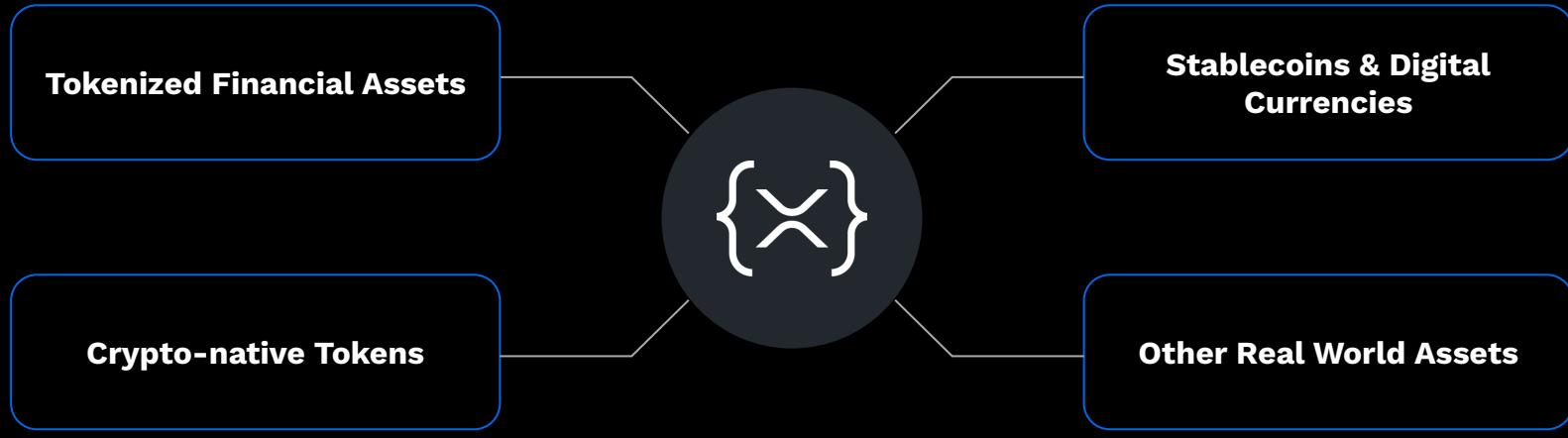
Feature anticipated soon

Decentralized Identity*

Embeds industry standard technology (W3C) as a native protocol for users to cryptographically verify themselves when subscribing to an offering

XRPL is positioned to become a trading hub across blockchain ecosystems

Ultra-low transaction fees and fast finality make XRPL the best source of cross-chain liquidity for any asset



Cross-chain interoperability is facilitated by integration with leading infrastructure providers

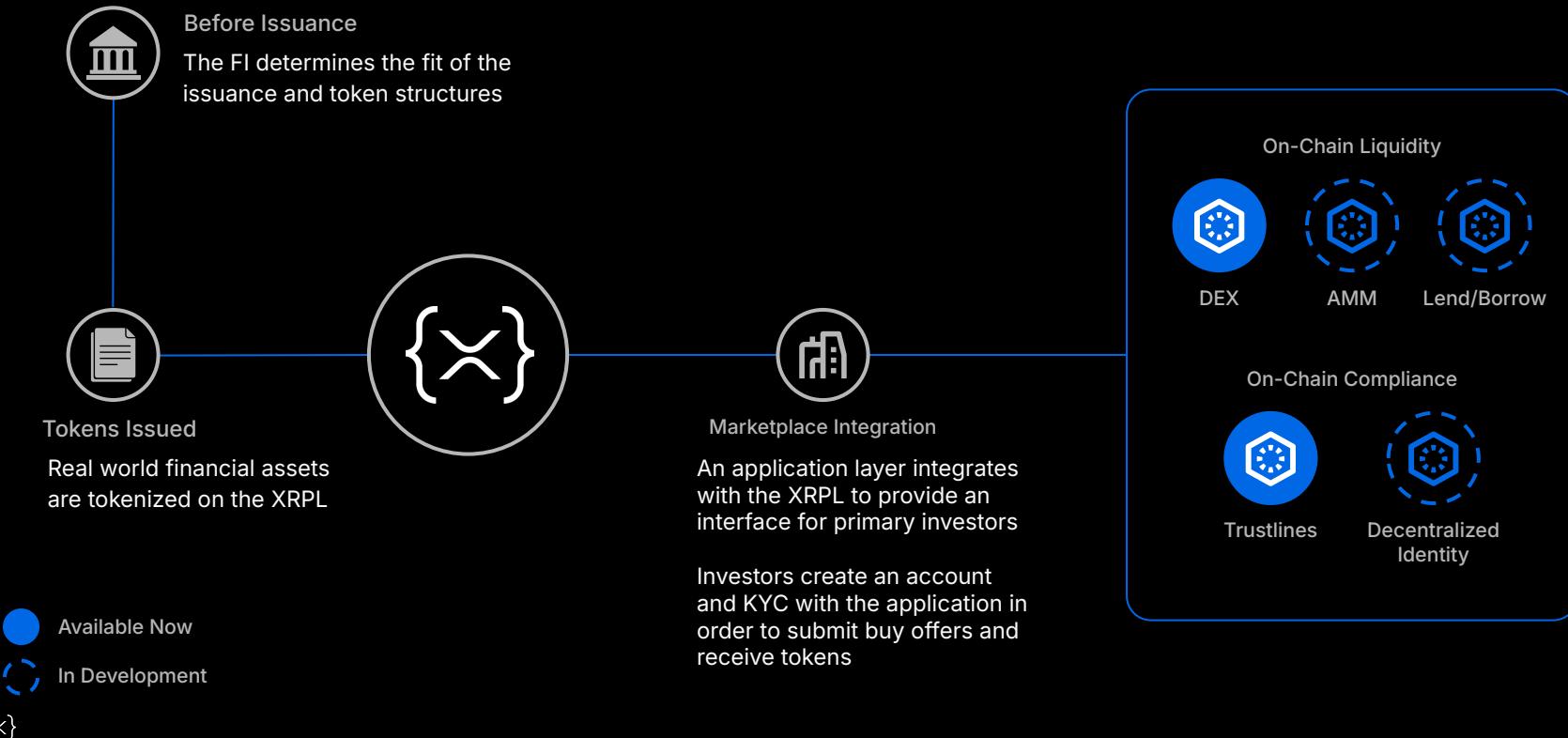


Axelar is a leading bridge protocol connected to over 50 blockchains.



Squid Router's integration can facilitate cross-chain swaps on the XRPL's DEX

XRP Ledger as the Tokenization and Liquidity Engine for Institutions



XRPL Ecosystem Today

Some of the contributors building tools and infrastructure, making developer and end user adoption seamless

Wallets and Custody



Infrastructure and Tools



Marketplaces and DEXs



On/Off Ramps



Core Ledger & Interoperability



3 Cool Projects to Check Out

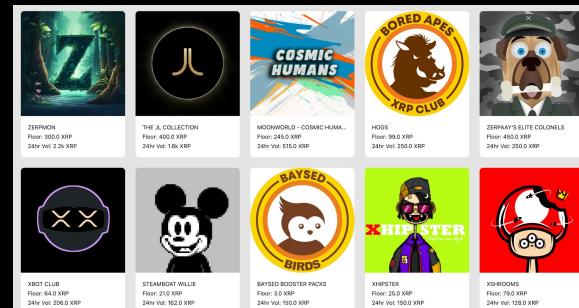


AMM and Token launchpad

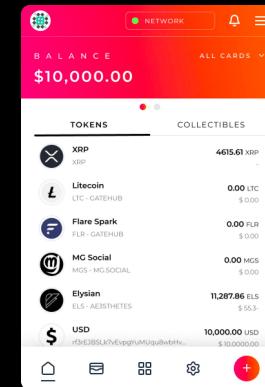
The screenshot shows the First Ledger platform's user interface. At the top, there are navigation links for "Tokens", "Leaderboards", "Docs", "Telegram", and a "Connect" button. Below this is a "Welcome to First Ledger" section featuring a cartoon character and a brief description: "The fastest way to trade assets on the XRP Ledger. You will just need a Telegram account to get started. Click connect to create your first wallet." There are three buttons: "Video", "Documentation", and "Create a Token". The main area displays a table of tokens with columns for "All", "Features", "Launch style", and "Created". The table includes rows for "SRPMP", "SARMY", "SSLT", and "SPHNIX", each with their respective XRP price, volume, and other metrics. At the bottom, there is a "Create a Token" form with fields for "Name", "Symbol", "Type", "Decimals", "Supply", "Price", "Min Price", "Max Price", "Min Vol", "Max Vol", "Launch Style", and "Description".

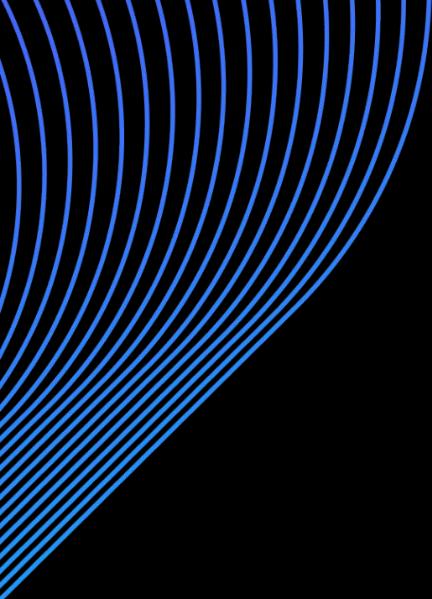


A cozy NFT marketplace
for the XRP Ledger



Browser-based wallet
designed to function on
XRPL mainnet and the
upcoming EVM sidechain





**Okay, so what can I
build with?**

Protocol contributors are building a full suite of institutional-grade capabilities to expand DeFi use cases on XRPL

● Live

Tokenization/Trading

World's first DEX that has fully on-chain order books and a protocol native AMM

● Live

NFTs

Simple APIs for the creation and management of NFTs, no smart contracts needed

● Upcoming Proposal

EVM Sidechain

Bringing full programmability to the XRPL in familiar EVM environments

● In voting

Decentralized Identity

Interoperable global standard to enable identity management for compliance, authentication, & access management

● Live

Oracles

Native support for price oracles, enabling data providers to efficiently store and refresh asset price data

● In Development

Lend / Borrow

Protocol native lending and borrowing functionality without needing smart contracts



Source: Ripple Open Source Projects, <https://hooks.xrpl.org/>

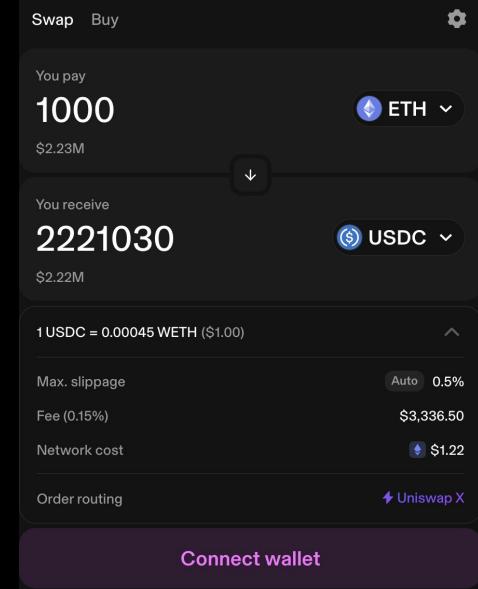
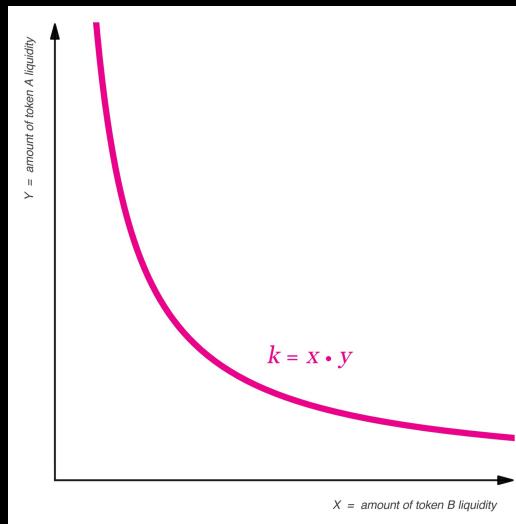


The Dex AMM/CLOB

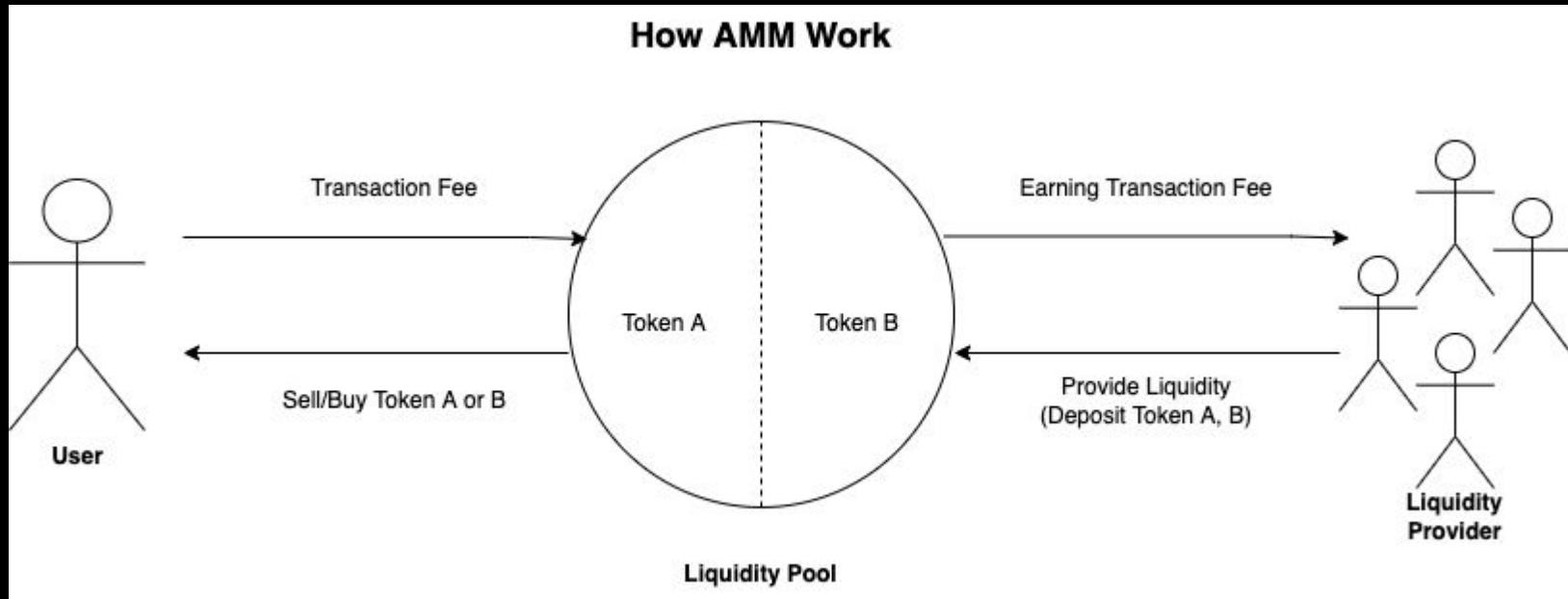
What is an Automated Market Maker

An AMM is a type of DEX that pools liquidity from users and prices the assets using an algorithm, most commonly a constant product formula.

Instead of dedicated market makers providing liquidity at specific price points in an orderbook, an AMM uses its algorithm to provide liquidity between two assets in a liquidity pool.



Liquidity Pool



Central Limit Order Books (CLOBs) Explained

- **Order Matching**
 - Buyers and sellers submit orders
 - Orders are matched based on price and time priority
- **Price Discovery**
 - Continuous two-way auction
 - Best bid and ask prices visible to all
- **Liquidity Depth**
 - Multiple price levels
 - Quantity available at each price

Central Limit Order Books (CLOB)



Market capabilities: Central Limit Order Book vs Automated Market Maker

	CLOB	AMM
Trading structure	Requires traditional order books of buy and sell offers	Trading happens automatically using pools of available tokens and an algorithm
Liquidity supply structure	Strategic liquidity suppliers actively compete with each other – the costs and benefits of supplying liquidity are individual to each liquidity supplier	Liquidity suppliers pool assets, typically via smart contracts. Benefits and costs are mutualized: Liquidity suppliers are not in competition
Price impact	Liquidity suppliers choose the price impact that maximizes their preferences	The transaction price is determined by the bonding curve and is perfectly predictable given the size of the liquidity pool
Liquidity Providers	Experienced or professional market makers provide liquidity in size	Market making and liquidity provisioning can occur at smaller increments
UX/UI	More complex UI for end trader	Simple UI for end trader

XRPL AMM (XLS-30)

Like other AMMs, XLS-30...

- uses the constant product formula (similar to Uniswap v2). This is an algorithm to provide liquidity between two assets in a liquidity pool
- is useful for providing liquidity for long-tail assets
- enables token holders to earn yield by providing liquidity
- enables a simple end-user experience
- ...but the similarities stop here. XLS-30 has unique differentiators

XRPL AMM Differentiators

01

Protocol Native

Developers can utilize native AMM functionality without the need to manage their own smart contract design

02

Continuous Auction Mechanism

Reduces impermanent loss by incentivizing arbitrageurs to bid for price discrepancies at near-zero fees. LP's keep more of the fees earned from a trading pool

03

Central Limit Order Book Integration

Price optimization determines whether swapping within a liquidity pool or via the central limit order book provides the best price and executes accordingly

04

Single-Sided Liquidity Provision

Anyone can easily participate as a liquidity provider (LP) as only a single asset is required to contribute to a pool

XRPL AMM Differentiators

XRPL AMM



Protocol Native Build

- Aggregated Liquidity Pools - One protocol that shares liquidity regardless of how many user facing applications are built on top of it.
- Secure - All protocols undergo extensive testing and review, and must be approved by >80% of UNL Validators that secure the underlying XRPL.



Central Limit Order Book Integration

- The AMM integrates with existing order books to form a unified DEX. The matching engine optimizes for best price across liquidity pools and order books and executes accordingly.



Continuous Auction Mechanism

- Reduces impermanent loss by incentivizing arbitrageurs to bid for price discrepancies at near-zero fees. LP's keep more of the fees earned from a trading pool.

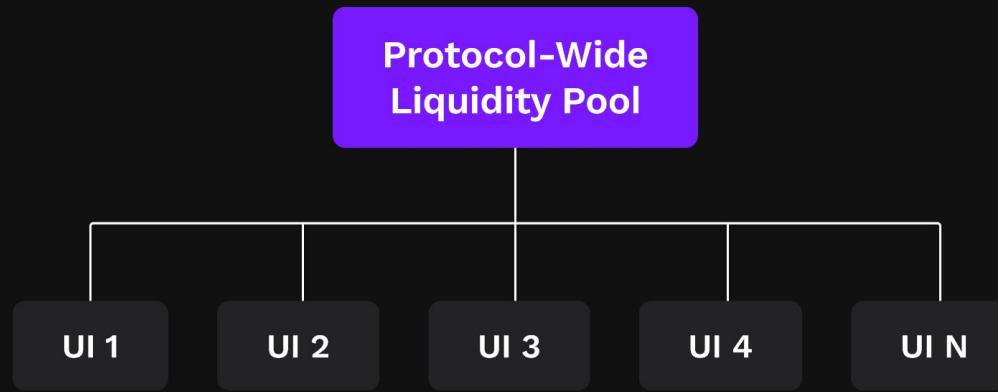


Streamlined UX for Liquidity Providers

- Single-sided liquidity provision enables anyone to easily participate as an LP by contributing a single asset to a pool.
- A built-in voting mechanism provides LPs the opportunity to exercise control over pool trading fees.

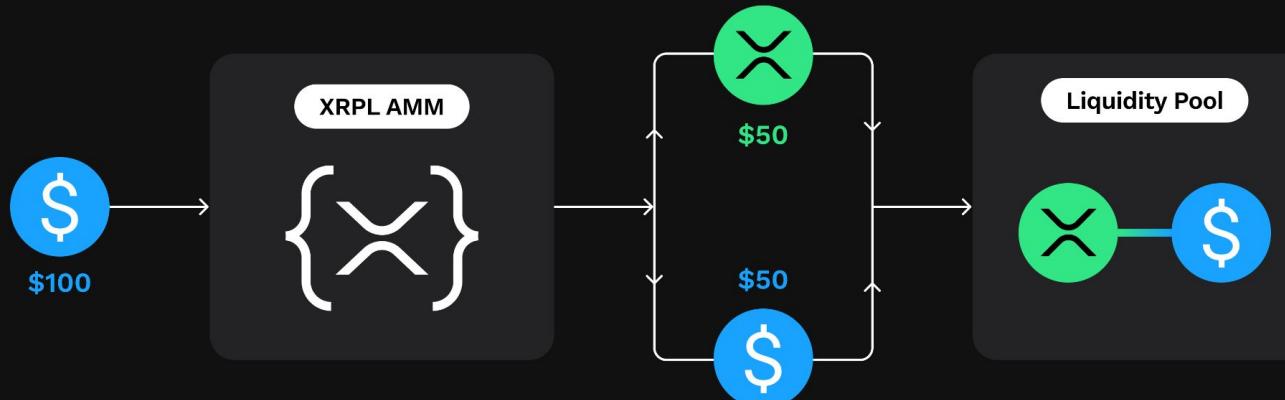
XRPL AMM Differentiators

**Liquidity is Aggregated
at the Protocol Layer**



XRPL AMM Differentiators

Single-Sided Liquidity Provision



{ } XRP LEDGER

2024

Why is that interesting?

How developers can take advantage of new AMM innovations on XRPL

Create new financial applications

Create user interfaces that serve traders and liquidity providers

Enable LP's to easily participate in pool governance using the 'AMMVote' transaction type

Integrate AMM functionality into an app

Bring simple swap functionalities to improve user experience for various asset types

Projects tied to illiquid tokens can create liquidity pools instead of tracking an order book

NFTs

In 2022, the community adopted a native NFT standard, making NFTs on XRPL more secure, scalable and cost-effective than other chains



Mint

Create non-fungible tokens on the XRP Ledger through a simple transaction



Trade

Create offers to buy or sell NFTs on marketplaces, storefronts, or even directly on the XRP Ledger



Monetize

Built-in royalties for NFT issuers upon every secondary sale



Display

Extensive metadata, including titles, descriptions, and images with hosting options such as HTTP, IPFS, and more



Programmability

XRP Ledger & its native NFTs offer deep optionality, including tradability, burnability, payment types, and more



Build

Robust APIs, libraries, and tooling to enable powerful NFT use cases without complex and costly smart contracts

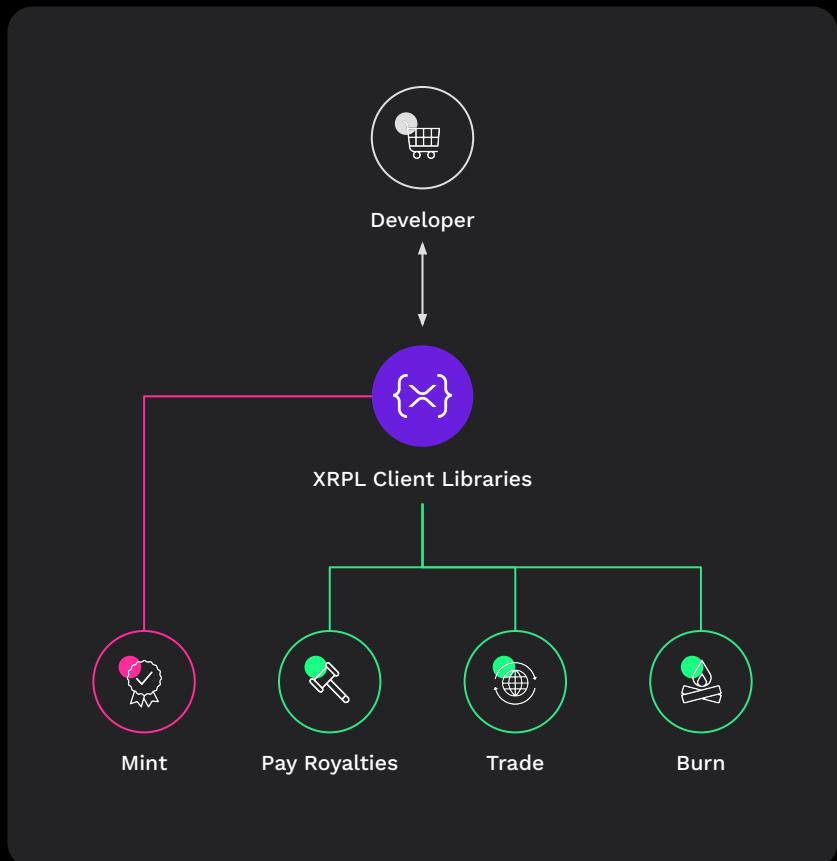
Non-Fungible Tokens made simple

Single API

No need to stitch together disparate systems or spend months integrating complex technology - simply connect into XRPL through a single API

Minimal Code Required

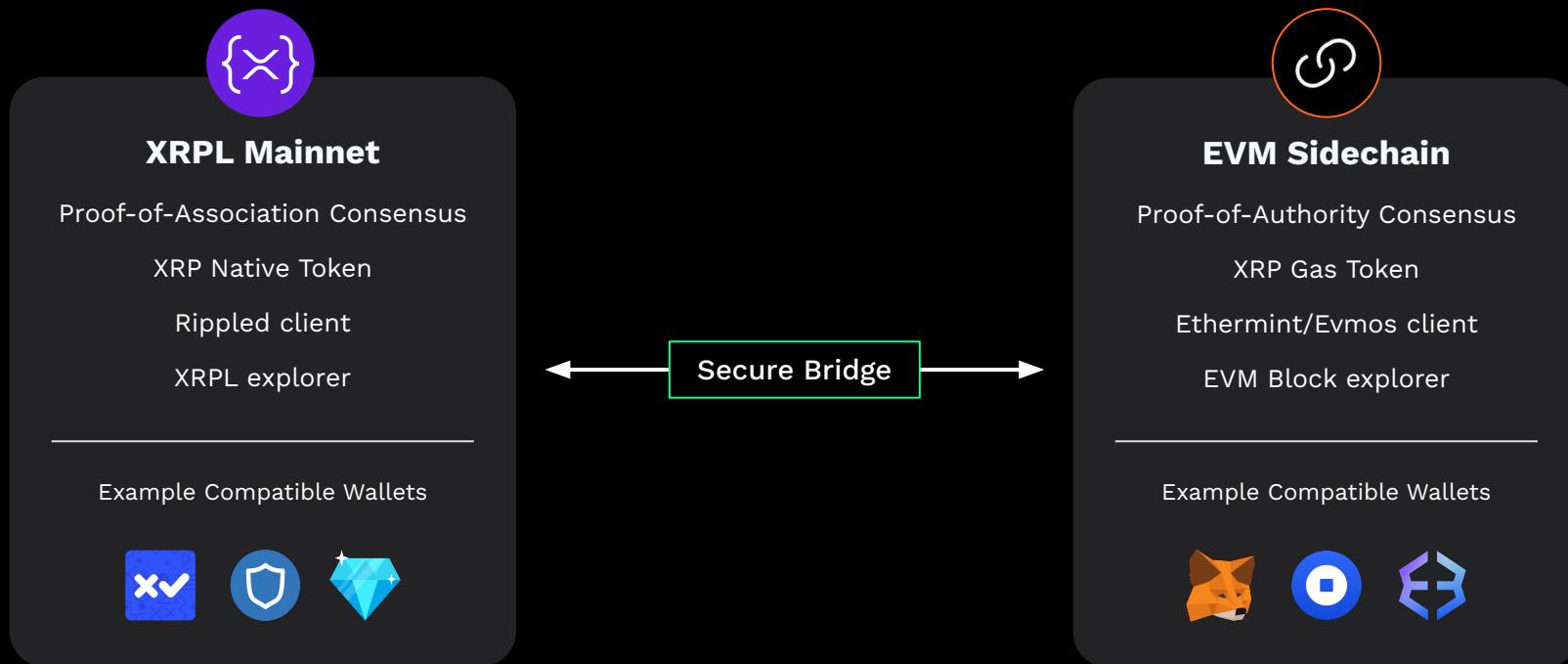
Astonishingly simple, you can get up and running on the XRP Ledger in as little as few lines of code using familiar programming languages (JS, Python, Java)



EVM Sidechain

What is it?

The EVM Sidechain enables the ability to interact or deploy smart contracts written in Solidity with a secure bridge to XRPL Mainnet



Why is that interesting?

EVM apps can now access and benefit from the XRPL ecosystem

01

Bridge to the XRPL ecosystem

Any Solidity app written for Ethereum / EVM can access liquidity and user base of XRPL Mainnet



02

Optimized for DeFi

Secure bridges, enhanced scalability and fast transaction finality makes the EVM optimized for financial use cases, like DeFi and payments



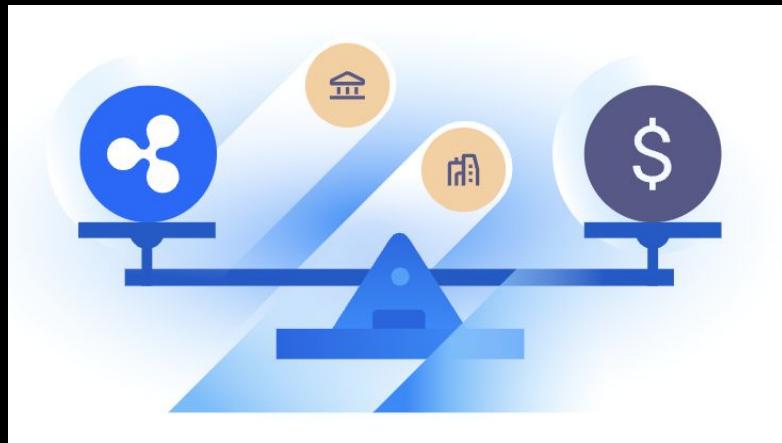
03

Easy to Build

Build using familiar Ethereum-based tools, wallets, explorers, and apps like MetaMast, Remix, and Truffle



RLUSD Stablecoin



Background of RLUSD

- **What is RLUSD?**
 - RLUSD is Ripple's new stablecoin pegged 1:1 to the U.S. dollar.
 - It's issued on both the XRP Ledger and Ethereum
- **How safe is it?**
 - Every RLUSD token is fully backed by cash and cash equivalents (U.S. dollar deposits, U.S. government bonds, etc.), ensuring it remains at \$1.
 - The stablecoin has received regulatory approval from the New York Department of Financial Services (NYDFS)
- **Why does it matters?**
 - Very few stablecoins with regulatory clarity
 - Launching on both Ethereum and XRPL allows developers to leverage each chain's unique strengths

Integrating RLUSD

- **Docs**
 - Detailed documentation including integration guides, API references, and smart contract details—is available at Ripple’s Stablecoin Docs at docs.ripple.com/stablecoin.
- **Testnet access**
 - For development and testing, get free test RLUSD tokens via the faucet at tryrlusd.com. This faucet supports tokens on both the Sepolia testnet (for Ethereum) and the XRPL testnet.



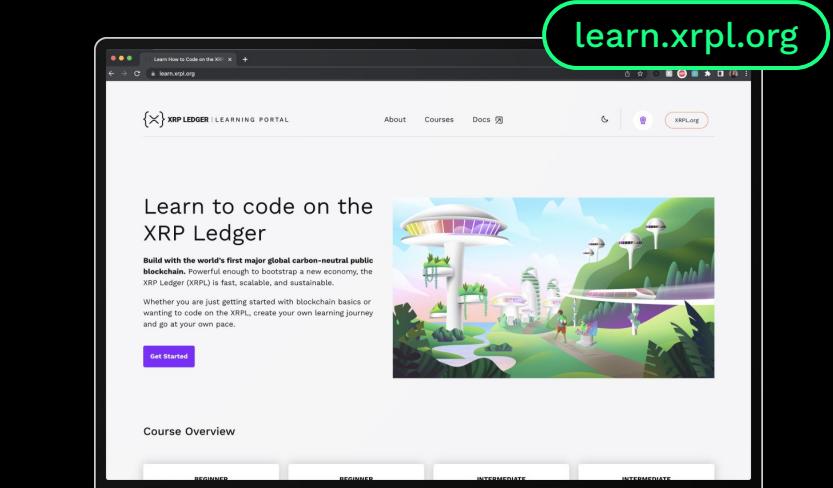
How to Get Involved with XRPL

Documentation and learning



A screenshot of the xrpl.org Documentation page. The page has a dark background with purple abstract shapes on the left. At the top, there's a navigation bar with links for 'About', 'Docs', 'Community', and a search bar. Below the navigation, the title 'XRP Ledger Documentation' is displayed. The main heading is 'What Would You Like to Learn?'. Underneath, there are two sections: 'Browse By Popular Topics' and 'Browse By Label'. The 'Popular Topics' section lists items like 'Send XRP', 'Reserves', 'XRP Faucets', etc. The 'Label' section shows categories with small circular icons: Accounts, Blockchain, Checks, Core Server, Cross-Currency, Data Retention, Decentralized Exchange, Development, Escrow, Fees, Non-fungible Tokens, NFTs, Payment Channels, Payments, Smart Contracts, Security, Tokens, Transaction Sending, and XRP.

xrpl.org



A screenshot of the learn.xrpl.org Learning Portal page. The page has a white background with a green header bar at the top. The header includes the 'XRPL' logo, 'About', 'Courses', 'Docs', and a user icon. Below the header, the title 'Learn How to Code on the XRPL' is shown, followed by 'LEARNING PORTAL'. A large heading says 'Learn to code on the XRP Ledger'. Below it, a paragraph explains the purpose: 'Build with the world's first major global carbon-neutral public blockchain. Powerful enough to bootstrap a new economy, the XRP Ledger (XRPL) is fast, scalable, and sustainable.' A 'Get Started' button is visible. To the right, there's a colorful illustration of a futuristic city with flying cars and greenery. At the bottom, there's a 'Course Overview' section with four tabs labeled 'BEGINNER', 'INTERMEDIATE', 'INTERMEDIATE', and 'INTERMEDIATE'.

learn.xrpl.org

Source of all XRPL documentation

Learn the basics of coding on XRPL

Developer Discord: XRP Ledger Developers

Join the conversation

- 7k+ global members
- Monthly developer “AMA” series
- Organized by community functions and technologies
- Dedicated French, Spanish, Portuguese, German, and Japanese language channels



xrpldevs.org



Funding to work on your next XRPL project

- The XRPL Grants program was founded in May 2021 to support and encourage the development of new software projects on XRPL and help foster the growing XRPL developer community
- Project grants range from \$10k to \$200k
- Multiple “waves” open throughout the year

\$14M⁺

in funding has
been awarded

140⁺

Teams awarded
globally

28⁺

Countries
represented

xrplgrants.org

Application Timeline

XRPL Grants only accepts applications.
Each Wave is given a particular focus
for you to submit projects that fit in.
We will also consider projects outside
the focus area if they benefit the XRPL community.

[Apply Now](#)

WAVE 6 *Web3 and Finance*

April 25 Application Opens June 16 Application Closes July Applications Reviewed August Finalist Interviews

Awarding Process



STEP 1
Create an initial prototype and submit your application



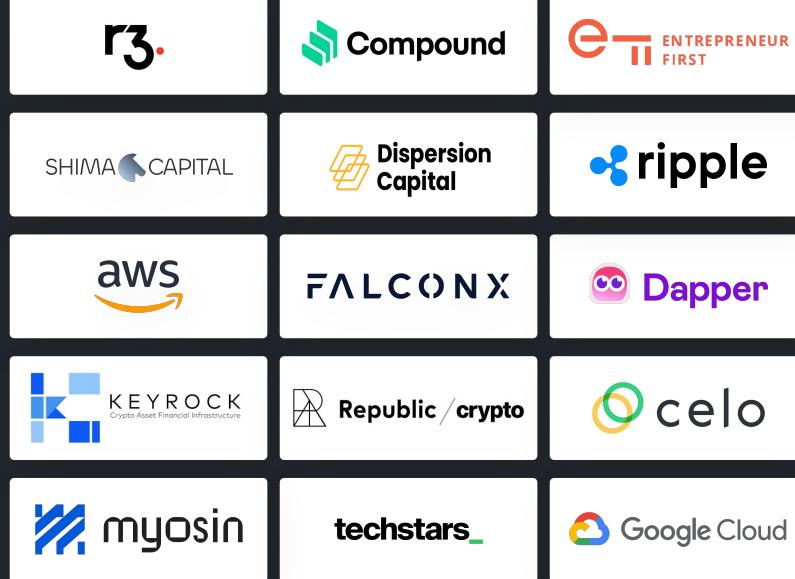
STEP 2
Applications are reviewed by an expert panel of judges



STEP 3
Finalists

XRPL Accelerator

A program for entrepreneurs to scale their projects into thriving businesses



Growing network of mentors

Participate in the XRPL community around the world



Apex XRPL Dev Summit

The annual event returns
June 10-12, 2025
Singapore



XRPL Commons

A Paris-based non-profit association focused on educating and empowering the global XRP Ledger community



Community Events

Meetups, hackathons, XRPL Zone, and other events hosted by the XRPL Community

Quick Start Resources

