XRPL Community Magazine

Issue #5

DeFi Expectations

XRP LEDGER

The Power of Choice, Why Decentralization Strengthens XRPL

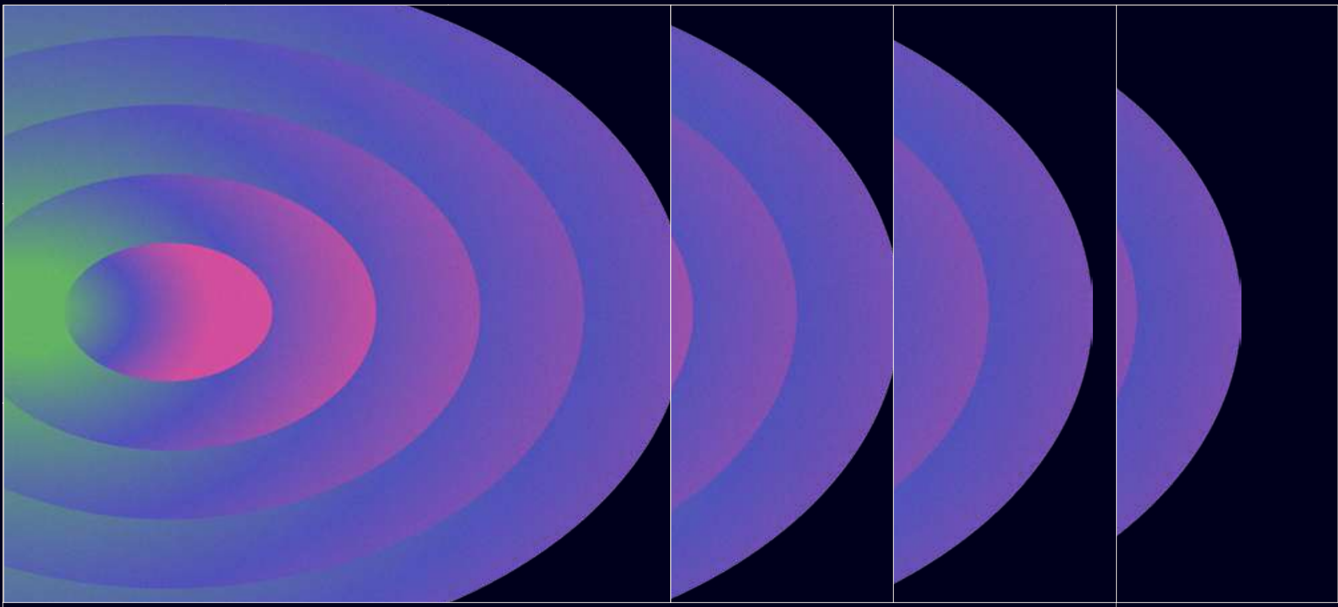
Foreword by Luc Bocahut

Decentralization is at the heart of what we do at XRPL Commons. To us, it means resilience—creating alternatives through diverse perspectives. As we enter a new chapter in the XRPL governance with the formation of the XRPL Foundation, we see the ecosystem maturing. This moment presents a unique opportunity to elevate different voices, foster coordination, and create a safe space for discussion by giving everyone a chance to contribute. We are excited about a future where decentralization isn't just a principle but a tangible force driving innovation and inclusion.

We believe in choice. For instance in wallets, where interoperability allows users to interact seamlessly, or at the protocol level, where multiple implementations of the same standard prevent centralization.

In some ways, decentralization is like competition in capitalism, where different players compete, and the best ideas or solutions emerge. But in the blockchain space, the goal isn't for one winner to take over—it's for many actors to coexist. If everything merged into a single perspective, it would actually create fragility, making the system more vulnerable rather than stronger.

A great example of this is Decentralized Finance (DeFi), which reimagines the financial world by allowing participants of all sizes and locations to compete on equal footing. Reinventing finance isn't just about adopting the best parts of traditional systems, it's also about fixing their flaws. By fostering a more open and fair financial landscape, we create new opportunities that empower individuals over institutions.



At XRPL Commons, our philosophy is to build tools that empower the entire community, not just ourselves. We create open-source solutions, document them thoroughly, and design them for others to build upon. Glow, our retroactive funding program, is an example of our commitment to alternative funding beyond traditional grants. By expanding funding options, we create a more inclusive and dynamic ecosystem, and we'd love to see even more funding models emerge from a diverse range of participants.

Looking ahead, we see a multi-chain world as an inevitable and positive outcome—one that provides more choices and fosters greater adoption. To support this, we are launching a research initiative on interoperability. Making blockchain more accessible means abstracting its complexities while preserving the values of open-source technology. The easier it is for developers and users to interact across different networks, the more value we can unlock. This is how we expand the ecosystem and bring in new participants who may not have considered blockchain before.
Decentralization isn't just about technology—it's about people. A truly decentralized ecosystem nurtures a sense of belonging. One way we are materializing this vision is through an XRP profile, which evolves as users interact with the ecosystem. Initially linked to News, Maps, and Glow, it will eventually integrate with all the applications we develop, creating an open and inclusive system for all participants. By strengthening this sense of identity and connection, we help turn the XRP Ledger into more than just a network—it becomes a thriving, interconnected community.

By embracing decentralization in governance, finance, technology, and community building, we lay the foundation for a stronger, more resilient XRPL ecosystem. XRPL Commons is here to champion this evolution, ensuring that every voice has a place and every innovation has a chance to flourish. The opportunities before us are vast, and if we do this right, we can unlock a future where blockchain technology empowers individuals, fosters creativity, and builds a more open and interconnected world. This is the moment to shape what's next, and we are excited to be at the forefront of this transformation.

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THE GAME IS ON

INTRODUCTION TO DEFI AND THE XRP LEDGER

Co-written by prominent members of the XRPL community, we have created a fully decentralized experimental article – one that introduces you to the world of DeFi on the XRP Ledger. Inspired by blockchain principles, contributors could only add to what was previously written—without edits or revisions—creating an immutable chain of paragraphs.

Your challenge? Assemble the complete article by finding and piecing together 16 hidden excerpts scattered throughout the magazine. Read carefully—every detail counts. Good luck!

→ **Start your journey on page 17!**

IN THE WORLD OF COMMONS

UPDATES FROM XRPL COMMONS

WHAT'S YOUR PERSONAL MISSION WITHIN THE XRPL ECOSYSTEM?

↳ To give voice & empower diverse groups to participate in the XRPL Community.

↳ Facilitate education and raise awareness about the potential of this technology to create better social impact.

↳ Explore, build, launch projects on new use cases.

DESCRIBE XRPL COMMONS IN THREE WORDS

meaningful, visionary, fun

inspiring, human, futuristic

enabler of people, unlocker of potential

welcoming, cheerful, caring

Innovative, techy, open-source

This is XRPL

WHAT'S ONE THING YOU'D TELL A NEWCOMER ABOUT XRPL COMMONS?

We are here to help you grow.

People will forget what you did, People will forget what you said, but people will remember how you made them feel.

Not all work environments are high-pressured and stressful. Here, the engagement is easy, and motivation comes naturally.

Find the little red door!

Climbing the Everest starts with a few little steps.

- Simplify onboarding, elevate meaningful projects.
- Hosting communities with excellence.
- Solve hard problems using XRPL.

L Commons

XRPL COMMONS IN LONDON: JANUARY 2025 HIGHLIGHTS

Cassie Hirsh

We started 2025 off in London with a series of firsts for XRPL Commons, hosting three key events aimed at forging new partnerships and bringing the broader XRPL community closer together. From exploring the future of decentralized finance with industry leaders to engaging with academic researchers and hosting our first-ever XRPL Meetup in London, these gatherings laid the foundation for meaningful collaboration and growth within the XRPL ecosystem. Here's a recap of our time in London:

XRPL EXECUTIVE ROUND TABLE: INSTITUTIONAL DEFI

We kicked off the week with an executive round table breakfast titled "Deploying Institutional DeFi – The Road to Real-World Integration." This gathering brought together corporate leaders and financial executives to discuss the operational applications of deploying DeFi within institutional frameworks.

Main topics included:

- The basics of Institutional DeFi
- Practical applications and real-world use cases
- Strategies for implementation and operational considerations

We had a fantastic lineup of speakers, including Odelia Torteman from XRPL Commons, Eric van Miltenburg from Ripple, and representatives from our partners Bain & Company and Archax. Each speaker shared valuable insights on how institutions can make the most of DeFi.

Key takeaways included:

- Combining decentralized protocols with regulatory compliance
- The need for strategic integration and clear business cases
- Balancing innovation with risk management and cybersecurity

The discussions highlighted some of the key benefits and use cases Institutional DeFi can provide to corporate and institutional players, and its impact on traditional finance, in creating new opportunities for growth. This round table was an important step in advancing conversations about what's possible in finance.

EDUCATIONAL GATHERING AT UNIVERSITY COLLEGE LONDON

Our visit to University College London (UCL) was truly inspiring. The XRPL Commons team attended a session where

PhD students showcased their blockchain research, offering fresh insights into current challenges in the field.

Discussions focused on:

↳ Improving smart contract security
↳ Solutions for better blockchain interoperability
↳ How blockchain and artificial intelligence can work together

The students demonstrated innovative ideas that could lead to real-world advancements in blockchain technology. This meeting reinforced the importance of collaboration between academia and industry to drive meaningful innovation.

XRPL LONDON MEETUP: DEFI AND TOKENIZATION ON THE XRPL

On January 30, we wrapped up our London activities with an XRPL Meetup at the UCL School of Management, welcoming over 70 community members from startups, academia, and industry.

The evening began with an introduction to XRPL Commons, followed by a panel discussion on tokenization featuring Mitko Vlahov from Ripple, moderated by David Bchiri, President of XRPL Commons. Several startups from the XRPL ecosystem also presented their projects, including FriiPay, meCash, and Palisade.

This was our fifth XRPL Meetup, and it was a great success! Many community members traveled from different cities to connect face-to-face. A big thank you to our partners UCL CBT, Palisade, Ripple, the DLT Foundation, and Peerkat for their support.

LOOKING AHEAD

Our time in London underscored the power of collaboration among academia, industry leaders, and innovators in advancing blockchain technology. These events enhanced our mission to build a thriving XRPL ecosystem by connecting diverse stakeholders and fostering meaningful conversations.

Next Stops: Dublin, Brussels, and… Near You?

XRPL Meetups, organized in partnership with local ecosystem players, aim to establish sustainable XRPL Hubs—providing resources, networking, and collaboration opportunities for the community.

This community-driven initiative empowers local organizers to take the lead, with XRPL Commons supporting sustainability, diverse content, and inclusive participation.

We can help cover expenses such as venue, catering, and merchandise, as well as assist with logistics.

↳ Want to co-organize an XRPL Meetup in your city? Let's make it happen—reach out at meetup@xrpl-commons.org!

XRPL Commons at Paris Blockchain Week 2025

The publishing of XRPL Community Magazine's DeFi issue coincides with the start of Paris Blockchain Week. The weeklong event takes place on the backdrop of major momentum for Web3 spaces and business—on technological progress, policy, and rising blockchain adoption. Returning to the Carrousel du Louvre, just below the ramparts of the historic Louvre Museum, **Paris Blockchain Week is making its mark as one of the world's essential blockchain gatherings of its time.**

PBW's 2024 edition was the most attended yet and included keynote speakers such as Binance CEO Richard Teng, VC investor Tim Draper, Circle CEO Jeremy Allaire, and Ripple's own Brad Garlinghouse (in a talk moderated by Commons President David Bchiri). Also, a number of budding projects from XRPL Commons' Aquarium Residency got their first opportunity to showcase their solutions at a major blockchain event. Ripple's bustling pavilion was central to a 2024 edition that highlighted the expanding Web3 sector, with main topics around open finance, tech builders, corporate Web3, and enterprise blockchain.

For this year's conference, **AI and its intersection with blockchain** is of primary focus, namely with the introduction of AgentX↗, the first fully agent summit, designed to showcase the transformative power of AI and Decentralization (in collaboration with RAISE↗—a major AI conference in Paris). Leading up to PBW, XRPL Commons is running an online learning program around DeFi, tokenization, and the intersection of AI & Web3, culminating in the **Hack the Block hackathon.**

Among keynote speakers are eToro Co-Founder and CEO Yoni Assia, Solana President Lily Liu, Crypto.com President Eric Anziani, blockchain pioneer Silvio Micali, Ripple President Monica Long, and XRPL Commons' Odelia Torteman. Other key topics to be covered include ETFs, the ever-maturing DeFi sector, and Web3 gaming. In addition to XRPL Commons, Ripple is also returning as a major partner, ensuring electric energy at Europe's seminal blockchain summit.

"Paris Blockchain Week is the biggest event for the Web3 ecosystem in France. A global gathering for business, institutions, but also the community of developers—both veterans and newcomers. Lasting for a whole week, it's a rare opportunity to cover every facet of blockchain use, at the Carrousel du Louvre, and at our many side events. We cherish everyone's presence in Paris and taking on the role as 'connector' between blockchain actors."

David Bchiri, XRPL Commons President

Go Further:

↳ Join the XRPL Commons developer workshops↗ leading up to Hack the Block!

ODELIA TORTEMAN

Meet the Team

Meet Odelia, Director of Corporate Adoption at XRPL Commons. With over a decade of expertise in digital finance, strategy, and venture investments, Odelia has led innovation at top institutions, including the World Bank investment arm—IFC, Deloitte, and the EU, among others. Recognized as one of The Marker Business Magazine's Top 40 Under 40, Odelia is also a PhD candidate specializing in CBDCs.

WHAT MOTIVATES YOU EVERY DAY?

Fintech & Digital Finance – What excites me most is how digital finance is unlocking new possibilities—automating processes and reimagining traditional financial services, products, value chains, and even assets. The impact is transformational, for developed economies and even more so for emerging markets, where financial inclusion and access to digital infrastructure can drive economic growth at an unprecedented scale.

Making an Impact – As the daughter of a physicist, I grew up believing that R&D and technology are at the very heart of progress, modernization, and digitization. Today, in my field of expertise, I have the privilege of playing a small role in this ongoing transformation.

Sports & Movement – I believe in the connection between body and mind. Having spent years as a classical ballet dancer and an athlete, movement has always been a core part of my life. It's a discipline, a mindset and a source of energy, balance, and focus.

WHY DID YOU JOIN COMMONS?

The Technology – The deeper I dive into XRPL's functionalities, the more I recognize its transformative potential.
It's built for corporate adoption, specifically for FSI.

The Team – Commons may be small, but it operates with the precision, agility, and determination of a team of barracudas. The energy, expertise, and collaborative spirit here are truly unmatched, making every challenge exciting!

Paris – Being half-French, joining Commons in Paris feels like a homecoming in many ways. Beyond its historic charm, Paris is rapidly emerging as a leading tech hub, making it the perfect place to be at the forefront of the blockchain and AI revolution.

WHAT IS YOUR MISSION AS CORPORATE ADOPTIONS DIRECTOR?

My mission is to bridge the gap between enterprises and blockchain innovation, ensuring that companies recognize and leverage the full potential of XRPL. This involves three key areas:

- **Raising awareness** regarding the tangible benefits of integrating XRPL into enterprises' business models
- **Guiding companies through adoption,** by providing the expertise and strategic direction to navigate each stage of the adoption process—from proof-of-concept to full-scale integration.
- **Maximizing blockchain's potential,** by focusing on designing real-world, market-relevant use cases, enhancing ledger functionalities, and developing key strategic partnerships driving meaningful innovation.

XRPL INSIDER

COMMUNITY PERSPECTIVES & INSIGHTS

XRPL IN NUMBERS

Reporting Period: Up to March 22, 2025

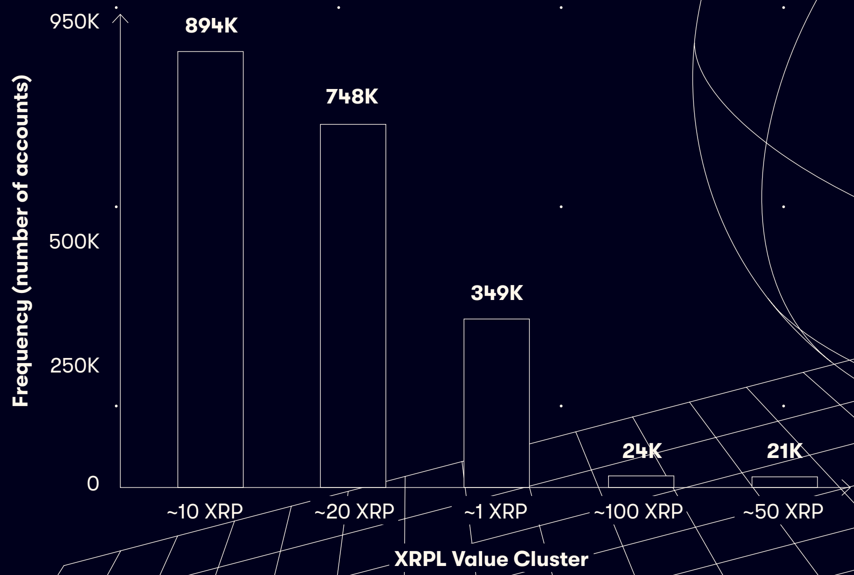
XRPL Activity Report by XPMarket

WALLETS

Total XRPL wallets: 6,211,181

Average XRPL wallet balance: 9,939 XRP

Median XRPL wallet balance: 20 XRP



DECENTRALIZED ARTICLE

VET

The XRPL's efficiency reduces counterparty risk for DeFi and lowers trust! It enables small payments globally to a vineyard in France or to the farmer in Nairobi, swapping tiny asset amounts, and if dissatisfied with rates or service, you stop. This minimizes losses and eliminates upfront commitments and therefore trust.

→ **Dive deeper into RLUSD on page 45,**
→ **or learn about DAOs on page 58!**

XRPL ECOSYSTEM

Total marketcap: $350M

Number of tokens: Almost 50k!

On-chain trading volume: $300M/month

Unique traders: 60k/month

Since December 2024, the crypto markets have undergone a turbulent phase, only to settle into a calmer consolidation once the memecoin mania subsided. Within the XRPL ecosystem, capital has shifted among projects, indicating a more measured, long-term outlook.

Notably, RLUSD has gained considerable traction, as market participants increasingly explore its use and integration across the network, both in terms of payments and as a liquidity hub.

NFTs

Number of NFTs: Almost 6 million!

All-time NFT Volume: $45.7 million

All-time broker revenue: $544,183

All-time issuer revenue: $2,037,597

AMM

Total Liquidity (AMM locked value):

↳ **Unfiltered:** 64M USD

↳ **Filtered:** 47M USD

Top 3 largest pools: XPM ($4.6M), MAG ($4.8M), RLUSD ($3.8M)

Number of AMM Pools: >18.5k

xpmarket

STATISTICS PROVIDED BY XPMARKET:

XPMarket is a comprehensive DeFi data analytics platform focused on the XRP Ledger ecosystem. It provides real-time insights, market data, and tools for tracking XRPL-based tokens, NFTs, and DeFi activities. By offering detailed analytics and an intuitive interface, XPMarket helps users navigate the XRPL ecosystem efficiently.

Check out XPMarket here!

All You Need to Know About: New XRPL Features and Amendments

Thomas Hussenet

Are you interested in recent developments in our ecosystem? Our tech team provides a comprehensive overview of the most recent amendments and technical updates.

AMMClawback **(XLS-0073)–Activated by Date of Printing (27/03/2025)**
The AMMClawback amendment introduces a new transaction type, AMMClawback, allowing token issuers to claw back tokens from Automated Market Maker (AMM) pools. This enhancement ensures regulatory compliance by providing issuers with the ability to retrieve tokens from AMM pools under specific conditions.

NFTokenMintOffer **(XLS-0052)–Activated by Date of Printing (27/03/2025)**
The NFTokenMintOffer proposal enhances the minting capabilities of NFToken (XLS-20) on the XRP Ledger, streamlining the process for issuers and users alike and reducing the number of transactions required to mint and distribute NFTs.

On-Chain Credentials **(XLS-0070)–Open to Voting by Date of Printing (27/03/2025)**
The On-Chain Credentials amendment builds upon the XRPL's existing identity management framework by introducing a robust system for issuing, storing, and verifying credentials directly on the blockchain. This proposal aims to streamline processes within the XRPL ecosystem, particularly in financial transactions.

KEY FEATURES AND BENEFITS:

- **Credential Issuance and Management:** New ledger objects and transaction types enable the creation, acceptance, and deletion of credentials. Credentials are issued by trusted entities and accepted by users, ensuring validity and security.
- **Integration with Deposit Authorization:** The amendment extends the Deposit Authorization feature to support credential-based allowlisting, enhancing security and compliance for financial interactions.
- **Privacy and Compliance:** The use of DIDs ensures that private data is not stored on-chain, maintaining user privacy while enabling secure verification. The amendment complies with the W3C Verifiable Credentials specification, promoting interoperability and adherence to established standards.
- **Streamlined Financial Transactions:** Financial institutions can issue credentials attesting to a user's identity and compliance, reducing the burden of repeated KYC checks and enhancing the user experience.

↳ **New Trust-Based Applications:** The secure credential management system opens the door for innovative applications that rely on trust and verification, fostering a more integrated and versatile XRPL ecosystem.

By wrapping around DIDs and leveraging the strengths of decentralized identity management, the On-Chain Credentials amendment creates a robust and secure credential system on the XRP Ledger.

Multi-Purpose Tokens (XLS-0033d)–Open to Voting by Date of Printing (27/03/2025)

The Multi-Purpose Tokens (MPTs) proposal introduces a versatile token standard to the XRP Ledger, enhancing its capabilities for various tokenization use cases. It addresses the limitations of the current trust line system by offering a more efficient and flexible alternative.

KEY FEATURES AND BENEFITS:

↳ **Efficient Storage:** MPTs require significantly less storage space compared to trust lines, reducing the ledger's footprint and improving scalability.

↳ **Simplified Conceptual Model:** MPTs use a fixed-point balance representation, eliminating the complexities associated with floating-point math. The simplified model makes it easier for developers to reason about the system and reduces the risk of errors or value loss.

↳ **Versatile Use Cases:** MPTs can be used for a wide range of applications, including stablecoins, reputation points in online games, and other non-monetary use cases.

HOW IT WORKS:

↳ **MPTokenIssuance and MPToken Objects:** The proposal introduces new ledger objects to represent MPT issuances and individual token holdings. These objects track essential data such as the issuer, asset scale, and outstanding amounts.

↳ **Transactions:** Several new transactions are introduced to facilitate the creation, destruction, and management of MPTs.

↳ **Integration with Payment Engine:** MPTs will be integrated with the existing payment engine, allowing for seamless transactions between accounts holding MPTs.

By introducing Multi-Purpose Tokens, the XRP Ledger takes a significant step forward in enhancing its tokenization capabilities. This proposal not only addresses current limitations but also paves the way for innovative applications and use cases, fostering a more robust and versatile ecosystem.

"Open for voting"...What does that mean?

Each rippled version includes a list of known amendments and their implementation. UNL Validators vote on amendments, with a default vote set by the code if not specified. An amendment is enabled after maintaining over 80% support from trusted validators for two weeks. If support drops, the process resets. Amendments can gain and lose majority support multiple times before becoming permanent. Those removed from the code without activation are considered vetoed.

Check out Gihub for more info!

Proposal Spotlight: XLS-56d Introduces a Native Mechanism for Atomic/Batch Transactions

Ryan Molley, Crossmark Wallet

XLS-56d enhances the XRPL's functionality by enabling users to bundle multiple transactions into a single atomic operation, ensuring that either all transactions succeed or none are applied.

HOW IT WORKS

↳ **Batch Transaction Submission**
Users can submit a batch of up to eight inner transactions (e.g. payments, trustline updates) within a single Batch transaction, signed collectively or individually depending on the accounts involved.

↳ **Atomic Execution** The XRP Ledger processes the batch as a single unit—either all inner transactions are applied to the ledger, or the entire batch fails, preventing partial execution.

↳ **Signature Flexibility** It supports single signatures for batches from one account or multi-signatures when multiple accounts are involved, using a BatchSigners field similar to XRPL's existing multisign feature.

↳ **Ledger Integration** Inner transactions are committed separately to the ledger with their own metadata, but their success depends on the batch's overall validation method referred to as "Batch Mode".

PROPOSAL HIGHLIGHTS

↳ **Enhanced Efficiency** Enables complex operations like atomic swaps or multi-party agreements in a single step, reducing overhead and risk of partial failure.

↳ **Flexible Use Cases** Supports a variety of applications, from cross-account coordination to DeFi primitives, without altering existing transaction types.

↳ **Security Assurance** Maintains XRPL's integrity by ensuring atomicity and requiring proper authorization for all involved accounts.

↳ **Scalable Design** Limits batches to eight transactions to balance functionality with network performance, with room for future optimization.

COMMUNITY FEEDBACK

This proposal has been implemented in an open pull request and is currently awaiting a security audit. If the security audit is successful, the amendment will be submitted to the network for an open vote among the validators. In the meantime, developers, validators, and users are encouraged to review the amendment and provide feedback.

↳ Check out the full proposal here↗

« HOW I SET UP MY FIRST XRPL VALIDATOR »

Kristin Dack (Lady K)

Setting up a validator on the XRP Ledger was a goal of mine because I wanted to contribute to the network and participate instead of just talking about it, but figuring out where to start felt like a huge challenge. While I consider myself tech-savvy, my experience was limited to writing macros in Excel and basic computer troubleshooting—I had zero coding background. Reviewing online documentation was overwhelming, and setting up a node felt more like an abstract idea than an actual plan. I told myself, I'll figure that out eventually.

Then, Chris Dangerfield launched the XRPL Bootcamp course on Udemy in collaboration with XRPL Commons. Eager to expand my knowledge, I signed up. The first assignment was a simple "Hello, World" command prompt. Even downloading Visual Studio for the first time and understanding what a terminal was took some effort, but I successfully completed it. As the course progressed—from submitting transactions on the Testnet to building a wallet—I coded right alongside Chris. I encountered occasional errors, but I learned the fundamentals: downloading GitHub repositories, entering terminal commands, checking my work, and troubleshooting mistakes. By the end of the wallet build, I was already recognizing patterns and gaining confidence.

The final section of the course covered setting up a submission node and converting it into a validator. The process itself was straightforward: purchase the right hardware, set up the environment by opening necessary network ports, download the rippled software, and configure the domain. Converting to a validator required generating a key pair, entering a token ID, and optionally configuring a TOML file. However, the real challenge lay in the fact that every user has different hardware, operating systems, internet providers, and routers—making it impossible to provide a one-size-fits-all guide. Chris did an excellent job outlining the key steps, offering universal instructions where possible, and presenting a clear, step-by-step approach. Even though I struggled with tasks like opening ports, I always knew what needed to be done and worked through each step until my validator was fully operational.

I documented my journey on X (formerly Twitter), which proved invaluable. The community was incredibly responsive, offering suggestions that helped me troubleshoot and refine my setup.

In the end, I learned far more than I expected—not just about validators, but also about coding, networking, and the XRP Ledger itself. Completing the course and successfully setting up my validator gave me a sense of accomplishment that I wouldn't have achieved by just reading documentation. Most importantly, it was fun! Seeing something I built up and running was incredibly rewarding. Now, I actively contribute to the XRP Ledger and have a much deeper understanding of the network than when I first started.

ZOOMING IN ON AFRICA: DEFI'S GREAT FRONTIER

Simon Luling

Speaking with its entrepreneurs and Web3 builders, one cannot help but see opportunity in Africa–possibly the World's greatest–for DeFi growth.

STATE OF AFFAIRS

Africa is witnessing one of the fastest adoptions of cryptocurrency and Web3 solutions around the World, with Nigeria leading the way↗–second only to India↗ in terms of global adoption.
Nevertheless, this pan-African current for blockchain adoption is held back by their respective state policies, with each government maintaining a delicate regulatory DeFi tango, trying to ensure its stake in the new economy. Yet on the backdrop of oft-restrictive measures (in Africa and elsewhere), some governmental progress comes to light:

Nigeria The Securities and Exchange Commissions passed its first regulations on digital assets↗ in 2022, allowing issuance and custody of assets compliant with national and regional financial norms.

Botswana The Central Bank has given a positive assessment↗ of cryptocurrency and previous President Mogweetsi Masisi has endorsed blockchain technology↗ for the diamond production sector, to track processes and ensure ethical mining practices.

Morocco After a six-year ban on crypto, the Moroccan Central Bank is preparing a legal framework↗ to allow for acquisition and trading.

Kenya The Government is leading a proactive policy to integrate↗ Web3 markets–adopting a fiscal mechanism on cryptocurrency, and tokenization of its financial assets.

PROGRAMMER'S VIEW

Blockchain usage could not thrive without a builder community at its base–and Africa does not appear dependent on programmers elsewhere. "Driven by learning programs, developer boot camps, and hackathons, Africa has one of the fastest-growing Web3 developer ecosystems," says Aroh Sunday–Nigerian software engineer and former Aquarium resident. Part of his experience was built on interactions with programming communities, such as BNUG↗ in Nigeria, or continent-wide Africa Blockchain Alliance↗ and Celo Africa↗.
Crypto-wallet provider Trust Wallet↗ has also built on this momentum, spearheading local initiatives for devs and users. Trust Wallet's recent XRPL integration↗ "allows users in Africa to manage a broader range of assets, directly from their mobile devices, " mentions CEO Eowyn Chen. It will further encourage XRPL development with builders on the continent, making progress in addressing the African markets' pain points.
Not that this organic growth is free of hurdles primarily from the ongoing regulatory ambiguity. Sunday mentions that, "Unclear policies make it difficult for developers to build and scale Web3 solutions locally.

DECENTRALIZED ARTICLE

KRIPPENREITER

With the ability for anyone to tokenize any asset imaginable on-chain, the idea was born to reimagine the so-called LETS (Local Exchange Trading System). In doing so, the XRPL provides a bridge between the various decentralized tokenizations of the community and aggregates all liquidity for all types of assets natively on-chain.

→ To continue exploring tokenization, go to page 45.
→ If instead, you're more interested in exploring DAOs go to page 59!

Subsequently, the best developers are quickly recruited by global firms, compromising local Web3 project scalability."

TOO GOOD A USE CASE

Driven by Africa's young, connected population. "DeFi provides a gateway to financial services without requiring traditional banking infrastructure. This opens doors to lending, borrowing, and earning opportunities through crypto platforms. Africa, with Nigeria and Kenya at the forefront, has thus become the World leader in P2P crypto adoption, bypassing costly traditional financial services." observes Chen.
"Web3 solutions create financial inclusion—we see it in Nigeria, where over 60 million are unbanked↗, " adds Sunday.
Arguably, the aspects of cross-border transactions and bypassing traditional finance, are where Africa's revolution lies.
"Tight governmental control of foreign exchange, and US Dollar scarcity across the continent, limits the ability for cross border payments. Add the chronic absence of African FIAT currencies on international payment solution providers, such as PayPal or Stripe, you see that Africans never really had access to the World's TradFi rails, " observes former Aquarium resident Modupe Diayolu. "With the introduction of blockchain these last years, we see African businesses and individuals using cryptocurrency as a store of value, a way to settle trade and transactions at a local level, and ultimately, join the global economy."
Modupe is working on the very issue. Using the XRP Ledger, her solution, meCash, provides on-and-off rails for cross-border transactions, used by SMEs, constrained on or cut off entirely from global trade : "An African NGO can now receive international financial support in minutes. A French-speaking resident of Benin or Senegal can provide their services—be it software engineering or French lessons—and be justly paid for it through a Web3 channel ; this was impossible until now." If the progress continues apace, and governments keep up, Africa may become a leader hub of the Web3 world.

Farm to Token

As the last continent with a rural-majority population, African DeFi has scalable potential for its oft-overlooked agricultural sector. Some worthy initiatives:

↳ Tech-Driven Solutions for Rural African Farmers↗–tokenizing Ghanaian farm activity for Commodity Exchange. Led by NYU professors Yaw Nyarko and Raša Karapandza. Earned the 2024 Falling Walls Reward.

↳ AgriDex International↗–A real world asset marketplace for the agricultural industry, backed by Solana. Numerous active use cases of token-based trade between African farmers and international clients.

↳ AgriLedger↗–Harnessing blockchain for traceability in the food supply chain, ensuring sustainability, fair trade, and overall transparency. Active in 12 African countries and a few others in Asia and the Americas.

DEFI 101

THE BEGINNER'S GUIDE TO DEFI ON THE XRP LEDGER

DEFI 101

THE BEGINNER'S GUIDE TO DEFI ON THE XRP LEDGER

DeFi Projects on the XRP Ledger

One of the most developed sectors within the XRPL ecosystem, these DeFi projects propose diverse solutions to acquire, trade and grow crypto, tokenized assets and even FIAT.

Orchestra Finance	**Orchestra Finance** Front end solution for XRPL's Automated Market Maker Feature	Novatti	**Novatti** B2B payment service provider using XRPL stablecoin on DeFi and Fiat transactions
LoanSnap	**Loansnap** Company using DeFi protocols to facilitate and reduce costs on mortgage loans	Betterment	**Betterment** Automated investment solution, earning around 4.75% APY
bcremit	**BCremit** Seamless money transfer solution for the Philippines	Stayk.fi	**Stayk.fi** Non-custodial reward solution for communities holding XRPL tokens
wirex	**Wirex** Crypto-earning solution on bank card transactions	Transfero	**Transfero** Crypto banking as a service for Latin America
poof	**Poof** Self-custody financial infrastructure for crypto payment processing	cf	**conFIEL** XRPL-built, retail-CBDC and digital certification manager for Mexican Central Bank
DalliPay	**DalliPay** Interoperability between XRPL payments and ISO 20022 (financial data interchange)	ChatXRP	**ChatXRP** AI-powered chat app to facilitate access to XRPL's Web3 services
FLUIDEFI	**FLUIDEFI** AI-enriched solution bridging traditional institutions to partake in DeFi protocols	Tugela	**Tugela** AI-powered talent liquidity pool connecting African freelancers to global markets

↳ Check out our growing XRPL Ecosystem Map for the full list of DeFi projects on the XRPL!

PeerHive Blockchain-based decentralized lending platform	**D3 LABS** Programmable asset infrastructure for real-time value transfer, in Southeast Asia
Anodos Finance User-friendly onchain finance solution on the XRPL	**Moai finance** Multi-chain, cross-chain DEX aggregator for XRPL and adjacent side-chains
Fractions Ownership "fractionalizer" for movement of small tokenized units of value	**meCash** Cross border payments emissions for SMEs in emerging markets
FriiPay Cross-Platform payment gateway, integrating Web3 with existing Web2 payment infrastructures	**Crossmark** Crossmark is a browser extension, cross-chain wallet interacting with the XRPL
First Ledger Meme platform and Telegram-based wallet on the XRPL	**Xaman** Non-custodial Web3 wallet on the XRPL
GemWallet Browser-based web extension for web3 transactions and interactions on the XRPL	**Girin Wallet** Social login-based wallet for XRP Ledger and The Root Network

INTEROPERABILITY IN THE XRPL ECOSYSTEM: THE FUTURE OF CROSS-CHAIN INNOVATION

Danella Draper (CryptoQueen)

THE CRITICAL ROLE OF INTEROPERABILITY IN BLOCKCHAIN

In blockchain's evolving landscape, interoperability is key to shaping the future of DeFi, tokenization, and cross-chain connectivity. Traditionally, blockchains operated in isolation, limiting asset transfers and data exchange.

The XRP Ledger stands out for its efficiency, low fees, and scalability. However, to maximize the potential of tokenized real-world assets (RWAs), stablecoins, and dApps, XRPL must integrate with the broader blockchain ecosystem.

Interoperability unlocks liquidity, drives innovation, and enhances real-world adoption, positioning XRP Ledger as a leading force in multi-chain finance and tokenized ecosystems.

BRIDGING DIGITAL ASSETS AND REAL-WORLD TRANSACTIONS WITH MULTI-CHAIN SOLUTIONS

Blockchain interconnectivity extends beyond simple asset transfers. Multi-chain integration, stablecoins, and smart contract innovations like Hooks are essential in bridging digital assets with real-world use cases.

For the XRPL, this means:

- ↳ Enabling seamless movement of tokenized assets between XRPL and other blockchains.
- ↳ Integrating stablecoins for cross-border transactions, enhancing financial inclusion.
- ↳ Utilizing smart contract functionality to automate transactions, lending, and payments.
- ↳ Expanding RWAs, gaming, NFT, and metaverse economies.

As the blockchain space matures, multi-chain connectivity will be crucial for onboarding users, enterprises, and institutional finance into Web3.

EXPANDING XRPL'S REACH IN MULTI-CHAIN FINANCE

The future integration of Axelar, a cross-chain messaging protocol, significantly boosts the XRP Ledger by linking it to over 60 blockchains, including Ethereum-compatible chains through the XRPL EVM Sidechain. With Axelar's tools, XRPL evolves from a payments-focused network into a versatile financial hub. Developers can create cross-chain apps, improving scalability and innovation, while tokenized assets gain liquidity and new opportunities across multiple blockchains.

Read further!
www.axelar.network/institutional-interoperability ↗

About the Author

Danella, known as Crypto Queen, is a blockchain educator, community builder, and communicator across ecosystems. She has become a leading voice in cross-chain interoperability, actively contributing to the growth of Web3 through hosting X Spaces, conferences, and multi-chain initiatives.

STABLECOIN ISSUANCE AND INTEROPERATION

Financial institutions can issue stablecoins on XRP Ledger, enabling cross-chain interoperability for payments and trading on the XRPL DEX. Stablecoins can interact with external networks, through bridges and third-party solutions, expanding their utility for both domestic and international transactions.

GEN3 GAMES DRIVING MULTICHAIN GAMING

Gen3 Games is revolutionizing blockchain gaming, creating immersive on-chain economies. Their flagship game, Zerpmon, combines monster-taming and trading card strategy, granting true ownership of in-game assets that can be traded across platforms. Zerpmon's tokens and DeFi mechanics unlock new revenue streams, highlighting XRPL's role in Web3 gaming innovation.
Beyond finance, network synergy is revolutionizing the gaming industry by enabling cross-chain economies and digital asset ownership. Gaming projects like Zerpmon allow users to:

↳ Trade and transfer NFT-based characters and assets between XRPL, the Root Network, and other gaming blockchains.
↳ Use blockchain-based tokens in multiple gaming environments.
↳ Integrate DeFi mechanics, creating new revenue streams in the play-to-earn ecosystem.

A PROPOSED VISION FOR XRP LEDGER PROGRAMMABILITY

Mayukha Vadari, along with others from the RippleX Developers Extensibility Team, has proposed a vision for XRP Ledger programmability, introducing Smart Features and Smart Contracts to enhance flexibility for DeFi and interoperability. The XRPL EVM Sidechain ensures interoperability with Ethereum, broadening developer adoption. The vision of programmability and automation is to be introduced via XLS-100d and XLS-101d in the proposal.

DECENTRALIZED ARTICLE

AANCHAL MALHOTRA

To achieve widespread DeFi adoption, building user trust is paramount. This means delivering scalable infrastructure, ensuring robust privacy, and adherence to evolving regulatory frameworks. Cryptographic primitives like Zero-Knowledge proofs are instrumental to achieving these critical objectives, thereby fostering a more inclusive and trustworthy financial ecosystem.

→ **What do a student in Tokyo and a farmer in Nairobi have in common? Find out on page 48**

Read further!
https://dev.to/ripplexdev/a-proposed-vision-for-xrp-ledger-programmability-1gdj

THE PATH TO A TRULY INTEROPERABLE BLOCKCHAIN FUTURE

The future of Web3 depends on blockchains working together, not in isolation. Interoperability is no longer just a technical challenge—it is a strategic necessity for the widespread adoption of blockchain technology. The XRP Ledger, alongside emerging multi-chain solutions and enterprise integrations, is laying the groundwork for a decentralized, user-centric financial system.
The next wave of blockchain adoption will be driven by real-world use cases, where cross-chain connectivity, regulatory compliance, and seamless user experience are paramount. As industries embrace decentralized systems, the demand for scalable, interoperable solutions will continue to grow.

Meet the Aquarium Residents

Cohort #4: DeFi Solutions

One of the most advanced cohorts yet, the DeFi-focused residents showcased a wide array of DeFi use cases across sectors and geographies.

PANOS MEKRAS, ANODOS FINANCE

Give us the elevator pitch!

↳ Anodos is building a one-stop shop for onchain finance, using blockchain technology to help users manage, spend, and grow their money and assets in a new, secure, and non-custodial way. We enable individuals and businesses to effortlessly engage with and benefit from the transformative potential of decentralized finance.

What pain points is it trying to solve?

↳ Anodos addresses the complexity of traditional finance and the barriers to entry in the world of crypto and decentralized finance by providing tools that simplify the process, offering clear, easy steps for users to engage with our services. Additionally, we tackle the concerns around security and trust by leveraging blockchain's decentralized nature, ensuring funds are not at risk at a single point of failure. Our goal is to blend Web2 and Web3 so seamlessly that users won't even notice they are using blockchain technology for finance or any other purpose.

How are you using blockchain technology and the XRP Ledger?

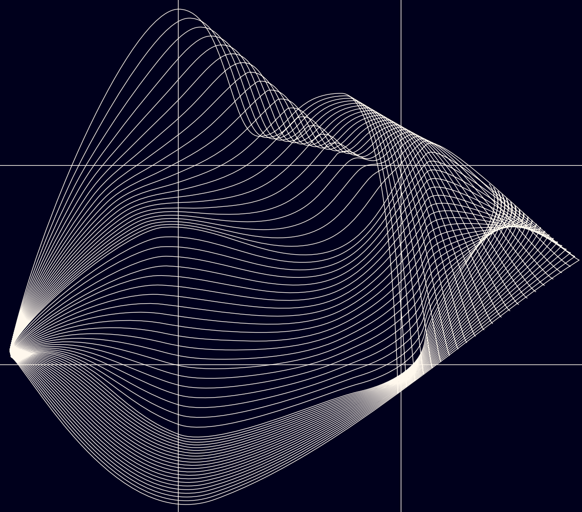
↳ We use the XRP Ledger to facilitate secure, fast, and low-cost on-chain finance, enhancing the user experience significantly. This ensures that financial operations are transparent, decentralized, and accessible, aligning with our goal of making finance simple and empowering for everyone. Our long-standing experience within the XRPL ecosystem allows us to leverage these capabilities for maximum user benefit.

Why did you join the Aquarium residency?

↳ I joined the Aquarium residency to further develop Anodos within a community of innovators, gaining insights and mentorship to refine our approach to on-chain finance, as well as connect with other builders.

What's next for your project?

↳ Looking ahead, we plan to expand our suite of solutions by introducing innovative features like passkey-based wallets for enhanced security and seamless onboarding to the XRPL, to add efficient on/off-ramping, and cross-chain swaps connected to XRPL. Additionally, our next product will be Paridim—my main focus during the Aquarium, which will serve as a platform for businesses to reduce costs and boost efficiency in onchain treasury management.



AROH SUNDAY, RYTU

Give us the elevator pitch!

↳ RYTU (Right-to-Use) is a decentralized, borderless marketplace designed to empower creators by enabling seamless licensing and sale of digital content rights through blockchain technology. The platform enables creators to issue NFTs representing usage rights while offering flexible terms and automated royalty distribution to collaborators and stakeholders—all lowering the barriers for content creators to participate in the global digital economy.

What pain points is it trying to solve?

↳ RYTU addresses all inefficiencies in the current digital content economy, such as delayed payments, disputes over intellectual property (IP) ownership and unmonitored IP usage, opaque licensing due to lack of smart contract-based agreements, high transaction costs, and the lack of verifiable ownership.

How are you using blockchain technology and the XRP Ledger?

↳ Beyond unbeatable transaction speed and cost, RYTU leverages the XRP Ledger for immutable content provenance, hashing content, and licensing on-chain to verify authenticity and monitor IP usage. RYTU also deploys Automated Royalties, for transparent royalty distribution to all stakeholders in real time. Finally, RYTU issues NFTs linked to digital usage rights, ensuring regional compliance and traceability.

Why did you join the Aquarium residency?

↳ The Aquarium residency provides unparalleled access to mentorship, resources, and the XRPL community of developers and innovators. Participating allows RYTU to refine its integrations, accelerate feature development, and receive strategic support to scale globally while strengthening community engagement.

What's next for your project?

↳ RYTU's focus is on launching its decentralized marketplace, featuring NFT-based licensing, AI-driven monitoring, automated royalties, and gamification. Upcoming milestones include implementing Dutch auctions, onboarding early adopters, forging creator partnerships, and expanding global access via XRPL-powered cross-border payments. We aim to become the go-to marketplace for ethical and efficient digital rights management.

In the Words of Guillermo, Founder of RiverPulse

a decentralized water quality monitoring platform.

«We joined the Aquarium residency to refine our community-driven, water data collection method, and align it with best practices in blockchain technology while building connections with like-minded innovators. The residency provides us with a platform to bring our vision to life, helping us scale our impact globally. This industry, which I consider a rare intersection of finance, tech, and economics, is surging in Paris with talent, investments, and opportunities—all out of one of the most beautiful cities in the world.»

↳ Apply↗ to the next Aquarium Cohort

MODUPE DIYAOLU, MECASH

Give us the elevator pitch!
↳ MeCash is a cross-border payments emissions business targeted at emerging market SMEs. The idea is to deliver low-cost, fast, and regulatory-compliant settlements for businesses on blockchain rails.

What pain points is it trying to solve?
↳ TradFi for cross-border payments is very expensive and very slow. The problem is particularly acute in emerging markets, lacking access to the established payment solutions, thus incurring additional costs and forcing activity on unregulated rails. So with blockchain, for the very first time, we can connect emerging markets with the rest of developed markets.

How are you using blockchain technology and the XRP Ledger?
↳ We provide on-and-off rails for cross-border transactions. SMEs in, say, Africa or Latin America can send or receive cross-border funds, by converting fiat to XRP (on-ramp), transferred, and converted back to the local currency or US Dollars (off-ramp). This is all done within minutes, powered by MeCash. So the customer interacts with our blockchain rail the same way they would with a TradFi solution today.

Why did you join the Aquarium residency?
↳ I joined the Aquarium 15 months into building MeCash. I felt it was important as it is driven by the XRP Ledger–creating our first on-chain mechanism. And doing so working with developers and people interested in the many blockchain use cases. The quality of the other cohort members and builders helped me to focus, and better understand the gaps we needed to bridge, and made for an amazing opportunity to grow.

What's next for your project?
↳ I am pleased to share that we are on the tail end of closing our seed investment round—including an investor who got on board after hearing my pitch at Demo Day at XRPL Commons! We are also at the pre-scale phase of our solution. We are currently live in one country and expect to operate in four countries by the end of 2025.

SL

THE PATH TO DEFI SUCCESS: PERSPECTIVES FROM ATKA

Simon Luling

See More:
↳ Atka official website ↗.
↳ Funding and accompanying web3 startups webinar ↗ (in French)

The emerging DeFi sector has been subject to ever-shifting rules, infrastructures, and market paradigms. Yet the DeFi-driven incubator Atka, co-founded by Gabriel Rebibo, has built a consistent reputation in Europe's web3 space.

Gabriel Rebibo joins us following a mentorship session he led for the Aquarium Residency's DeFi cohort. He is in a good position to be a mentor, having entered Europe's DeFi ecosystem in its infancy and playing a central role in shaping many DeFi success stories, both for startups and corporate frameworks. This includes incubating 8 projects in the last two years and raising $40M from Web3 investors since Atka's founding.

FROM TRADFI TO DEFI

Gabriel Rebibo acquiesces that he entered the blockchain space by accident. Following a classic finance career start–studying at HEC (France's preeminent business school), working in investment banking, he arrived at a professional crossroads, to either continue on a traditional career path or enter new, innovative sectors. Gabriel's college friend William Piquard, who had been working in Hong Kong for cryptocurrency exchange Gatecoin, introduced him to the space, and they began addressing Europe's nascent Web3 ecosystem. Joined by programmer Pierre Laurent, they founded Atka in 2018.

At the time, a crypto bubble had burst ↗, and new players beyond East Asia and the United States started to enter the scene. In sum, a new market going through growing pains, yet with an increasingly accepted, and sought-out, tech infrastructure. Against this backdrop, Atka was initially created as a consulting firm, assisting corporates with blockchain integrations. One early case was the development of a crypto insurance product for AXA Next (the innovation branch of French insurance company AXA).

INCUBATING AN INCUBATOR

While providing DeFi consulting services to this day, COVID saw Atka foster its core purpose: incubating promising DeFi projects. They developed this track to see the many promising DeFi ideas take shape and become an integral part of their success. To optimize their focus, Atka's incubator cohorts are characteristically small. While the website states there are "up to five projects" per round, typically the number of participating projects is limited to three.

Gabriel and his team realized this early on, "It's a rather artisanal process, as each

DECENTRALIZED ARTICLE

PANOS MEKRAS

Decentralized Finance (DeFi) refers to financial services on public blockchains, offering alternatives to traditional financial systems without intermediaries. XRPL pioneered DeFi by introducing a trustless, peer-to-peer payment system with XRP and the world's first decentralized exchange (DEX) in 2012, enabling direct trading of various assets on-chain, setting a precedent for DeFi trading platforms.

→ If you want to read more about DeFi and tokenization, go to page 21,
→ or hear about the role of infrastructure on page 25!

project has its own pace and needs. As we are covering a broad spectrum of DeFi-related projects, from Web3 infrastructure building to DeFi banking solutions to Web3 gaming, a standardized program would be counter-productive. After the initial weeks, each project finds its rhythm towards growth, and the experience becomes tailor-made."

Atka's third and final vertical lies in fundraising. Following the incubation period, projects are ready for seed-round investment. Atka generally commits to investing up to $250.000 in each project, as part of the incubation deal. However, the bulk of funding comes from Atka's impressive network of Web3 investors, including Ivan de Lastours–the Blockchain lead at Bpifrance (France's public investment bank), and Alexis Robert–general partner at Kima Ventures (Xavier Niel's investment fund).

Atka graduates include Mangrove↗ (DEX and liquidity protocol), Morpho↗ (Ethereum-built lending protocol; $3.04B TVL), and Playmakers↗ (user-generated content Web3 gaming). Crucially, all parties have convened on the backdrop of an intimate working rapport built with the Atka team: over six months for the startups, and years for the investor network.

MAKING A DEFI WINNER

So what makes for a successful blockchain-based project? "This might seem redundant, but the first criterion for success is a good, passionate team, with an agile learning curve, motivated to innovate," Rebibo says. "To give an example, we have witnessed two teams developing a similar project–one led by scholarly experts of the field, the other by students with a startup mindset. Ultimately, the student team went far beyond the vision. Implementation is key."

The regulatory impact around blockchain and cryptocurrency also comes into play, especially for DeFi projects. With over a decade of experience navigating this issue, the Atka team maintains level-headedness, viewing even presumably restrictive regulations as potentially reasonable measures. "Take the European Union's MiCA regulations," Rebibo points out. "All while setting up constraints over unchecked action on crypto markets, the regulatory framework is sustainable, and transparent across the EU. This is in contrast with the US market, where bullish and bearish behaviors might simply reflect statements from a politician or public figure."

Rebibo ultimately suggests keeping calm and carrying on: "In sum, budding blockchain projects cannot be overly concerned about changing regulations. Being overly prudent will slow down innovation, and robust innovation can adjust to shifting regulations. The best innovation will inform how regulation is crafted."

Crossmark's Ryan Molley

Zsofi Borsi

XRPL Wizard Q & A

How did you get involved with the XRPL?

I studied structural and civil engineering, I then worked in Seattle for five years, designing and consulting on low- to mid-rise buildings downtown. It was a fun career that I really enjoyed. But along the way, I was introduced to DeFi and the concept of having control over personal finances. That led me to crypto investing and comparing different cryptocurrencies.

It became clear to me that the XRP Ledger had a bright future—it solved problems I was facing, like slow and expensive transactions. From there, I started learning software development and wanted to give back to the community. Unlike many developers, I didn't start coding at a young age. Blockchain made me a developer, not the other way around.

Now that you're an active contributor to XRPL, what upcoming developments excite you the most?

When we started Crossmark about two years ago, we were excited about a multi-chain world, with multiple XRPL sidechains. We also looked forward to AMM (Automated Market Maker) and liquidity pools to reduce slippage in asset trading.

Moving forward, I'm really excited about enabling smart contracts on XRPL, which will provide a non-opinionated, flexible layer for developers, unlocking entirely new possibilities.

What kind of new opportunities do you see with smart contracts?

There's a difference between a project and a business—a lot of people are building cool things in our ecosystem, but without a clear revenue model, it's hard to grow.

Smart contracts will enable new monetization models, allowing businesses to charge micro-fees for transactions and services. This will turn passion projects into viable businesses, helping them scale, hire, and sustain development.

Another major innovation is batch transactions. Crossmark was the first wallet to offer this, allowing users to send multiple transactions in one interaction rather than signing each individually. Now, XLS-56D↗—the amendment for native batch transactions—is in development (Read more about this on p. 18). Once approved by validators, it will open up even more business opportunities. Combined with smart contracts, it will help turn XRPL projects into real businesses with sustainable revenue models.

I really liked that you answered this from a business perspective. Where does Crossmark fit into that, and what's its story?

We launched with the goal of creating a developer-first wallet that made it easy to integrate XRPL transactions without needing a backend. Before Crossmark, most decentralized wallets required storing credentials on a backend server. With Crossmark as a browser extension, everything runs locally on the user's device, eliminating the need for a backend.

Crossmark was the first wallet to offer batch transactions, so projects can already use it.

For developers, this allows seamless switching between mainnet, devnet, and testnet and easy account activation.

MICKEY_B_FRESH

Composability in DeFi orchestrates financial primitives into a seamless symphony, unlocking limitless possibilities. Unlike rigid traditional systems, decentralized protocols interconnect like Lego bricks, fueling rapid innovation. AMMs, lending platforms, and synthetic assets harmonize, amplifying efficiency. This transformative power accelerates DeFi's evolution, forging a borderless, autonomous, and endlessly adaptable financial ecosystem.

→ Want to understand DeFi's advantages? Go to page 40,
→ or explore tokenization with on page 21!

To transform Crossmark from a powerful tool into a sustainable business, we need to rethink monetization. Some wallets have tried subscriptions or profit-sharing, but those models don't work. Instead, we need a pay-as-you-go model, where fees are charged when users interact with the wallet. For that to happen seamlessly, we need smart contracts and the batch transaction amendment (XLS-56D) to be implemented.

What kind of feedback have you received from the community on Crossmark's direction?

One big learning is that what we, as developers, think is a great feature can sometimes create friction. There's always a balance between adding functionality and keeping things simple. Personally, I love customization—I want to fine-tune every aspect of a wallet. But adding too many features can overcomplicate the product.
When we move to mobile, we're planning to redesign large parts of the wallet based on user feedback. A different environment requires a different solution.

What's next for Crossmark?

One major step for us is launching a public full-history node, similar to Ripple's S1 and S2 nodes. This is a big move because infrastructure is key to making XRPL more accessible. We're excited to contribute to that.
The other major step for us is moving to mobile. Browser extensions were a huge trend from 2016 to 2019, especially on Ethereum with MetaMask. They became popular because they offered a truly decentralized way to interact with smart contracts. But the landscape has changed. Today, most people are interacting with blockchain through their phones. Mobile-first development is the key to mass adoption.

Based on your experience, what advice would you give to new developers in the space?

Be intentional with what you build. Many developers focus on getting eyes on their project, but in blockchain—especially on the XRP Ledger—it's critical to think about monetization from the start.

There are a lot of projects right now, which is great for the ecosystem. But the goal should be to turn projects into businesses. Start with a project, prove its value, and then evolve into a business.
In summary, on the XRPL, there are three key pillars that developers should consider:

↳ **Infrastructure** – Supporting not just your product but also the broader XRPL network.
↳ **Wallets & Signing Tools** – Are you using an existing wallet, or are you building your own?
↳ **Platforms** – What's the use case, and how does it interact with the ledger?

Wallets and platforms are different—wallets act as middleware, while platforms solve specific problems. Successful projects often have their hands in all three areas.

XRPL COMMUNITY MAGAZINE 5

DEFI DEEP DIVE

FOR THE EXPERTS

INTRODUCTION TO XRPL

Introduction for FSI Executives

Odelia Torteman

Institutional DeFi: Transforming Finance Through Decentralized Innovation

The convergence of DeFi protocols with institutional financial frameworks is reshaping traditional finance by introducing unprecedented efficiency, flexibility, and accessibility. This article provides an overview of Institutional DeFi, tailored specifically for FSI (Financial Services Industry) executives seeking to understand and potentially deploy these technologies.

WHAT IS INSTITUTIONAL DEFI?

Institutional DeFi refers to the adaptation of decentralized finance principles and infrastructure within regulated environments, merging DeFi programmability with the strict compliance requirements of institutional players. While DeFi started as a grassroots movement aimed at individuals and small investors, institutional players are now increasingly interested in leveraging blockchain technology's benefits to enhance their operations and introduce new services to their clients.

ARCHITECTURE AND DESIGN CHOICES

The architecture of DeFi is built on several core elements that collectively enable the ecosystem's functionality and scalability:

↳ **Blockchain Networks:** The foundational layer where DeFi applications operate, providing decentralized data storage, and transaction processing.
↳ **Permissioned Access:** Operations in permissioned environments where participants are verified.
↳ **Compliance Integrations:** Regulatory requirements such as KYC, AML, and audit trails to ensure adherence to legal standards.
↳ **Enterprise-Grade Security:** Provides advanced security measures, including custodial solutions, multi-signature wallets, zero-knowledge proofs, and hardware-based protections.
↳ **Customizable Architecture:** Designed to integrate with existing enterprise systems, ensuring seamless adoption.
↳ **Interoperability:** Allows institutions to access a wider range of DeFi services and assets across various blockchains, for seamless communication and asset transfer.
↳ **Scalability and Reliability:** Built to handle high transaction volumes and ensure consistent uptime for mission-critical applications.
↳ **Custody Solutions:** Secure and compliant solutions are essential for institutional adoption, ensuring the safekeeping of digital assets.

KEY USE CASES AND APPLICATIONS OF INSTITUTIONAL DEFI

↳ **Tokenization of Assets:** Assets are represented as digital tokens on a blockchain network, enabling programmability, composability, and enhanced transparency—bringing operational efficiencies, fractional ownership, increase liquidity, and new revenue opportunities.
↳ **Decentralized Exchanges (DEXs):** Institutions can access efficient and transparent trading platforms for cryptocurrencies and other digital assets.
↳ **Lending and Borrowing Protocols:** DeFi protocols offer efficient lending and borrowing solutions with competitive interest rates and reduced counterparty risk.
↳ **Stablecoins:** Stablecoins are cryptocurrencies pegged to stable assets like the US dollar, used for efficient cross-border payments and settlements, reducing reliance on traditional financial intermediaries.

↳ **Yield Farming:** Yield farming involves lending or staking digital assets to earn rewards.

ONDO FINANCE: TOKENIZED TREASURIES ON XRPL

Ondo Finance, a leading tokenized real-world asset (RWA) issuer, is bringing tokenized U.S. Treasuries to the XRP Ledger (XRPL), expanding the breadth of institutional-grade products onchain. Deploying OUSG tokens, which represent shares in a BlackRock-managed Treasury fund, enable institutions to earn yield on idle cash reserves while maintaining instant liquidity. XRPL's native integration allows for atomic swaps between OUSG and XRP-backed stablecoins like RLUSD, facilitating 24/7 collateralized lending and borrowing. This use case has attracted sovereign wealth funds and asset managers seeking compliant exposure to blockchain-based yield products.

Key Risks and Opportunities

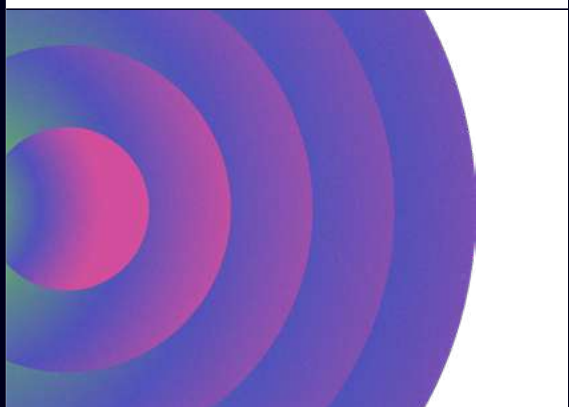
RISKS	OPPORTUNITIES
Regulatory Uncertainty: The evolving regulatory landscape requires careful navigation and compliance.	**Increased Efficiency:** DeFi can streamline financial processes, cutting costs and procedures for institutions.
Smart Contract Risks: Vulnerabilities in smart contracts can lead to financial losses, highlighting the need for robust security audits and risk mitigation strategies.	**Enhanced Transparency:** DeFi's structure enhances transparency by ensuring that the underlying blockchain remains public, while private wallets provide users with full control.
Market Volatility: The inherent volatility of cryptocurrencies and digital assets can impact the value of DeFi investments.	**Access to New Markets:** DeFi provides access to new investment opportunities, expanding institutions' reach.

NEXT STEPS FOR FSI EXECUTIVES

The benefits of DeFi can bring new cost efficiencies and effectiveness into the traditional financial marketplace. Institutional DeFi creates a new system that combines the innovation and efficiency of DLT protocols with a level of safeguards to meet regulatory compliance and customer safety requirements.

FSI executives interested in exploring Institutional DeFi should consider the following steps:

↳ **Conduct Thorough Research:** Gain a deep understanding of DeFi protocols, technologies, and potential use cases.
↳ **Develop a Clear Strategy:** Define specific objectives and goals for deploying DeFi solutions, aligned with the institution's business strategy.
↳ **Assess Regulatory Compliance:** Ensure compliance with relevant regulations and guidelines, navigating the legal landscape and staying up-to-date on DeFi regulations.
↳ **Partner with Experienced Providers:** Collaborate with established infrastructure providers and technology partners to facilitate implementation.
↳ **Prioritize Security and Risk Management:** Implement robust security measures and risk mitigation strategies to protect institutional assets and reputation, thorough security audits, multi-factor authentication, and clear risk management frameworks.



INSTITUTIONAL DEFI ON THE XRP LEDGER

What's Live and What's Next

Jazzi Cooper, Head of Product, RippleX

Institutional adoption of blockchain-powered finance has surged, with tokenized real-world assets (RWAs), stablecoins, and decentralized liquidity markets driving growth. To scale, financial institutions require a robust, compliance-focused, interoperable blockchain infrastructure supporting digital assets, cross-border transactions, and institutional-grade decentralized finance (DeFi).

XRPL: A SCALABLE, COMPLIANCE-FRIENDLY INSTITUTIONAL DEFI ECOSYSTEM

The XRP Ledger (XRPL) addresses this need, leveraging its native DEX, low fees, rapid settlement, and compliance-friendly architecture to power institutional DeFi. Several key capabilities are live, reinforcing XRPL's role as a secure and scalable layer 1 for financial institutions.

EXPANDING INSTITUTIONAL DEFI ON THE XRPL

XRPL has enhanced liquidity, improved price transparency, and introduced compliance tools to meet institutional demands. Its native Decentralized Exchange (DEX) integrates an Automated Market Maker (AMM) and a Central Limit Order Book (CLOB) to optimize liquidity and reduce slippage. The Payments feature continues to enable fast, low-cost transactions, supplemented by scalable micropayments, deferred settlements, and conditional transfers. With over 2.8B transactions processed, XRPL remains a leading institutional blockchain.

ORDER-BOOK DEX EXTENSION: AUTOMATED MARKET MAKER (AMM)

XRPL's AMM (XLS-30) introduces protocol-level liquidity for RWAs, stablecoins, and tokenized assets. Unlike traditional AMMs, it integrates with XRPL's CLOB, optimizing pricing across liquidity pools and order books. A continuous auction mechanism mitigates impermanent loss, making AMM liquidity more attractive to institutions. The AMM Clawback feature enhances regulatory compliance by enabling issuers to reclaim funds under specific conditions.

Key Use Cases:

↳ **Institutional Liquidity Provisioning** – Funds and market makers deploy capital in AMM pools to generate yield.

↳ **Tokenized RWA Trading** – Trade illiquid assets like tokenized treasuries and real estate.

↳ **Arbitrage & Cross-Chain Swaps** – Improve pricing accuracy across DeFi ecosystems.

DECENTRALIZED IDENTITY (DID)

With XLS-40 live, institutions can create decentralized identifiers (DIDs) on XRPL, enabling self-sovereign identity verification without centralized intermediaries. This enhances security, privacy, and compliance while supporting permissioned finance.

Key Use Cases:

↳ **Privacy-Preserving KYC & AML Compliance** – Verify identity attributes without exposing personal data.

↳ **Permissioned Finance & Access Control** – Gate entry to regulated trading venues using on-chain credentials.

↳ **Institutional Onboarding** – Streamline identity verification for tokenized RWAs and lending platforms.

PRICE ORACLES: ON-CHAIN MARKET DATA

Accurate price feeds are critical for institutional DeFi, especially for tokenized assets and cross-chain transactions. XRPL's protocol-native oracles provide efficient, trusted data without third-party reliance. Band Protocol and DIA already deliver robust price feeds on XRPL mainnet.

Key Use Cases:

↳ **Accurate RWA Valuation** – Ensure tokenized assets remain pegged to real-world values.

↳ **Cross-Chain Interoperability** – Support price feeds for assets across blockchain networks.

↳ **Institutional-Grade Risk Management** – Enable reliable on-chain lending and derivatives.

WHAT'S COMING: COMPLIANCE, INSTITUTIONAL LENDING, AND PROGRAMMABILITY

XRPL is evolving with new features to expand compliance capabilities, introduce institutional lending, and enable programmability for financial applications.

BUILDING ON DID: PERMISSIONED DEX & CREDENTIALS

Enhancing the identity stack in finance, XRPL introduces credentials (XLS-70) to attest to user attributes, supporting seamless institutional onboarding. Permissioned Domains and the Permissioned DEX enforce compliance by requiring DID-based credentials while preserving privacy.

MULTI-PURPOSE TOKEN (MPT): A FLEXIBLE STANDARD FOR RWAS

MPTs bridge fungible and non-fungible tokens, allowing tokenization of structured financial products like bonds and private equity. Currently in validator voting, MPT enhances efficiency, compliance, and asset metadata representation.

Key Use Cases:

↳ **Tokenized Bonds** – Represent fixed-income assets with precise metadata.

↳ **Regulated Asset Management** – Improve control over tokenized securities.

XRPL LENDING PROTOCOL: INSTITUTIONAL CREDIT-BASED DEFI

XRPL's lending protocol will integrate lending with Ripple Payments, DEX, RWAs, and stablecoins, reducing liquidity fragmentation. XLS-65d introduces pooled asset lending, while XLS-66d enables fixed-term, uncollateralized loans with off-chain underwriting and risk management.

Key Use Cases:

↳ **Institutional Lending Markets** – Tokenize and distribute loans on-chain.

↳ **Stablecoin & RWA Integration** – Enable lending backed by tokenized assets.

EXPANDING PROGRAMMABILITY

Ripple and the XRPL community are advancing programmability while preserving efficiency and security. Extensions will allow developers to attach small pieces of code to XRPL primitives, customizing escrows, AMMs, and tokens without new smart contracts.

Timeline:

↳ **Q1:** Early devnet for Smart Escrows

↳ **Q2:** Full-functional Smart Escrow devnet

↳ **Q3:** Smart Escrows amendment for voting

↳ **Q4:** Smart Contract devnet

LOOKING AHEAD

As DeFi evolve, XRPL is positioned as a leader in regulated on-chain finance, offering deep liquidity, compliance-friendly features, and institutional-grade tools.

DEFI REGULATORY

Romena Urbonaitė

About the Author

Romena Urbonaite is the Chief Compliance Officer of Axiology DLT TSS and an expert in EU financial regulation. Romena has dedicated the past 5 years specifically to crypto asset and DLT market regulation.

Axiology

GROWING DEFI ADOPTION AND REGULATORY CONSIDERATIONS

The crypto asset market is growing. One key factor driving adoption is an increasingly regulated environment in certain jurisdictions, such as Markets in Crypto-Assets (MiCA) in the EU. MiCA sets rules for crypto asset service providers, stablecoin issuers, and other crypto assets, contributing to the rise in adoption not only among retail investors but also among institutional clients.

Despite being a comprehensive regulatory framework, MiCA has intentionally excluded decentralized finance (DeFi), despite its potential to bring exciting new opportunities in the financial industry. As use cases and adoption expand, regulatory frameworks are still evolving to support broader participation. Greater clarity in regulation could help accelerate mass adoption, especially among institutional players like banks, investment firms, and funds.

DECENTRALIZED ARTICLE

VITO TUMAS

DeFi significantly lowers the barrier to entry for advanced financial instruments, opening lending and other services to a broader audience on the blockchain. For example, traditionally, lending was limited to those with the expertise and resources to manage loans securely and within regulations. DeFi protocols aggregate assets from multiple investors and automate risk management through smart contracts, enabling broader participation without traditional gatekeepers.

→ What's DeFi beyond the tech? Go to page 58 with Danella Draper to find out!
→ More interested in the role of infrastructure? Go to page 25 with Aanchal!

A MORE REGULATED ENVIRONMENT WOULD BRING ABOUT SEVERAL ADVANTAGES FOR DEFI MARKETS.

With authorization in one EU country, businesses gain access to the EU's 450-million-person market, enabling significant scaling opportunities. Clear and predictable regulations will enhance user confidence, further contributing to greater DeFi adoption, while allowing innovation to thrive without excessive restrictions. DeFi facilitators will also benefit from lower compliance costs and improved efficiency due to streamlined regulatory processes. The key challenge is finding the right balance in regulation—safeguarding users while fostering an environment that encourages innovation and keeps it thriving within Europe.

_ LANDSCAPE IN THE EU

REGULATORY PROPOSALS

In the EU, legislators have already started discussing potential DeFi regulations. So, what can we expect? To explore this, we can examine recent discussions among key EU regulators.

France recently issued a public consultation proposing to regulate DeFi by putting requirements for smart contract certification and audit. In this case, individuals who develop, deploy, or use the smart contract would be required to get such certification. According to the French proposal, smart contract safety and governance principles should ensure security, transparency, and user protection, including such measures:

↳ **The code should follow best practices,** avoid documented errors and mitigate vulnerabilities;
↳ **Access should be restricted based on necessity** (least privilege), and duties should be separated to prevent misuse;
↳ The contract's entire lifecycle, including updates, **should be secured;**
↳ **Governance principles should require clear decision-making processes,** timely updates, and published rules;
↳ **Changes must safeguard user interests** by providing information, notice, and exit options;
↳ **Contingency mechanisms should ensure quick responses** to attacks, with safeguards to prevent misuse during emergency interventions.

EU regulators – ESMA and EBA – have echoed similar proposals in their Joint Report On Crypto Asset Development. This report highlights the need for "fit and proper" requirements for the holders of governance tokens because, in some of the DeFi cases, the holders of governance tokens make strategic decisions without being subject to such suitability rules. This raises risks related to poor governance and conflict of interest. The importance of embedded supervision (i.e. real-time supervision of the transactions, possible with blockchain technology) was highlighted as well.

Another issue mentioned in this report is how to identify real DeFi activity. In order to say if the activity is indeed DeFi, the regulators proposed to evaluate holistic factors such as the nature of the DLT (public or private, permissioned or permissionless), the presence of "key persons" who control services or benefit economically, and governance structures affecting decision-making. Key indicators include the mutability of smart contracts, the concentration of decision-making power, and remuneration structures.

In conclusion, while MiCA has provided much-needed regulatory clarity to the crypto market, it also presents an opportunity for further discussions on how to effectively integrate DeFi into the regulatory framework, paving the way for its future growth and innovation.

As discussions around DeFi regulation gain momentum in the EU, upcoming policies may introduce requirements for smart contract certification, governance, and embedded supervision. Striking the right balance between regulation and innovation will be critical to foster trust, attract institutional adoption, and ensure DeFi remains a thriving part of the financial ecosystem.

DEFI REGULA

AMM-based DEX on the XRP Ledger: A New Approach to Decentralized Exchanges

Walter Hernandez
with Firas Dahi,
Yebo Feng,
Jiahua Xu,
Aanchal Malhotra,
and Paolo Tasca

THE PROBLEM WITH TRADITIONAL AMM-BASED DEXS

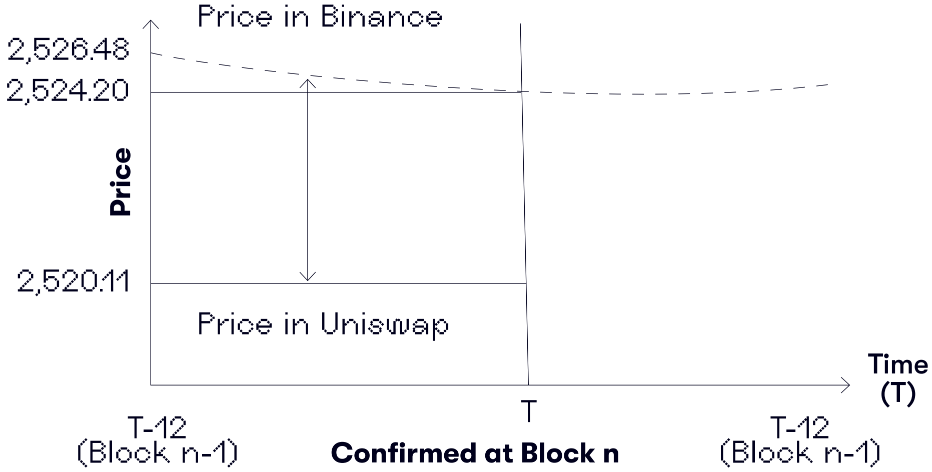


FIG. 1: ARBITRAGE BETWEEN AN AMM-BASED DEX AND CEX

Despite the growing volume in the use of AMM-based DEXs, current implementations suffer from several limitations:

↳ **Price Synchronization Issues:** AMM-based DEXs often quote outdated prices compared to Centralized Exchanges (CEXs).

About the Author

Walter Hernandez Cruz is a Science Fellow at the DLT Science Foundation, PhD candidate in Financial Computing at University College London, and a contributor to the UK Centre for Blockchain Technologies.

At the heart of the DeFi revolution are Automated Market Makers (AMMs) powering Decentralized Exchanges (DEXs), which enable asset trading without conventional market makers. Since 2018, DEXs have facilitated more than $2 trillion in transactions[1].

↳ **High Transaction Fees:** Especially on Ethereum-based platforms
↳ **Slippage:** Large price changes during trades because of slow block confirmation times.
↳ **Impermanent Loss:** Liquidity providers experience potential opportunity costs.

Unlike traditional exchanges based on Limited Order Books, where market makers actively adjust prices [1], AMM-based DEXs only update prices when someone trades in their liquidity pools. This creates a delay: AMM-based DEXs' prices often lag behind real-world prices on Centralized Exchanges (CEXs) like Binance or Coinbase. Therefore, AMM-based DEXs rely on arbitrageurs to synchronize the liquidity pool prices with external markets to close this gap. However, arbitrageurs profiting from these price differences would usually result in impermanent losses for liquidity providers – who deposit funds into DEXs' pools – because the opportunity cost of providing liquidity often outweighs the fees earned [2,3,4], especially on platforms like Uniswap V3 [5,6,7].

Arbitrageurs face challenges, too. When they submit a trade, the final price they execute may be worse than what they got quoted during the trade submission. This happens because prices can change during the short time between when a trade is submitted and when it is completed, depending on the underlying blockchain's block confirmation times (see Fig. 1).

THE XRPL-AMM-DEX APPROACH

The XRPL-AMM-DEX addresses these challenges through several innovations[2] such as price pathfinding, dynamic fees, **Continuous Auction Mechanism (CAM), and the protocol-level integration of the XRPL-AMM-DEX**. From this innovation, we benchmarked:

1. Protocol-Level Integration: The XRPL-AMM-DEX built directly into the XRP Ledger's protocol.
2. Continuous Auction Mechanism (CAM): A feature that reduces impermanent losses for liquidity providers by redistributing fees from arbitrageurs.

OUR FINDINGS

Using agent-based simulations with real market data and artificial pricing across various volatility scenarios, we compared the XRPL-AMM-DEX to a Generic AMM-

1. https://defillama.com/dexs
2. https://gov.uniswap.org/t/uniswap-v3-fees-factory-owner-amendment/23187

based DEX (G-AMM-DEX) similar to Uniswap V2, but with findings applicable to Uniswap V3 and other DEXs. Our results revealed:

1. Improved Price Synchronization
The XRPL-AMM-DEX consistently maintained closer alignment with external market prices. At high volatility (20%), XRPL-AMM-DEX showed 28.6% less price deviation than G-AMM-DEX.

2. Reduced Slippage
Traders experienced less slippage on XRPL-AMM-DEX. At moderate volatility (12.5%), the 80th percentile slippage values were 1.58% for XRPL-AMM-DEX versus 1.82% for G-AMM-DEX—a 15.2% improvement.

3. Better Returns for Liquidity Providers
With its Continuous Auction Mechanism, XRPL-AMM-DEX provided:
↳ **67% higher returns** than G-AMM-DEX in high-volatility markets;
↳ **Reduced impermanent losses,** particularly in volatile conditions;
↳ **More stable divergence gains** (+1.9% vs. -0.5% at 20% volatility);

4. Infrastructure Advantages
The protocol-level implementation offers:
↳ **Lower transaction costs** (fees on G-AMM-DEX were millions of percent higher)
↳ **More efficient** transaction processing
↳ **Reduced vulnerability** to front-running attacks through pseudo-random transaction ordering

WHY THIS MATTERS

Our research demonstrates that the underlying blockchain infrastructure significantly impacts AMM-based DEXs' performance. The XRPL-AMM-DEX shows that:

↳ **Faster Block Times Matter:** Quicker transaction finality allows AMM-based DEXs to maintain better price synchronization
↳ **Protocol-Level Integration Improves Efficiency:** Operating at the blockchain's core layer reduces computational overhead;
↳ **Auction Mechanisms Can Redistribute Value:** The CAM feature captures value from arbitrageurs and returns it to liquidity providers.

LIMITATIONS AND FUTURE WORK

The XRPL-AMM-DEX is relatively new, with approximately $80.37 million TVL compared to Ethereum's $50.06 billion at the time of writing. As adoption grows, real-world performance may reveal new challenges or benefits.

Additionally, our simulations used simplifying assumptions, including fixed Ethereum fees, constant pool sizes, and single users per auction slot. Despite these limitations, our results align with recent research on slippage, impermanent loss, and auction mechanisms [8, 9, 10, 11], highlighting how faster block times, lower fees, and built-in auctions improve market efficiency in AMM-based DEXs.

CONCLUSION

The XRPL-AMM-DEX represents a significant advancement in AMM-based DEX design, leveraging the XRP Ledger's infrastructure advantages and innovative auction mechanisms to improve market efficiency. As DeFi evolves, protocol-level implementations with shorter block times and built-in auction mechanisms could set new standards for DEX performance.

This article is based on original research comparing AMM-based DEXs on different blockchain infrastructures. For the complete methodological details and comprehensive findings, please refer to the full research paper: https://arxiv.org/abs/2312.13749

DECENTRALIZED ARTICLE

JAZZI COOPER

This combination of tokenization—or the ability to represent anything from the real world on the blockchain—with real-time peer-to-peer transferability is incredibly powerful. It enables DeFi to improve legacy technology and processes that prevent efficiency, equity, and accessibility in traditional finance today. We anticipate that tokenized assets and on-chain activity utilizing those assets will skyrocket as a result.

→ What does Vet have to say on the topic? Go to page 14 to find out!
→ Or explore lending on page 40!

DECENTRALIZED ARTICLE

IKE IWUMENE

As a key component of DeFi, stablecoins enable anyone to engage in lending, borrowing, and trading in a decentralized and accessible manner. They serve as a bridge between traditional and decentralized finance, making it easier for newcomers to participate with confidence. RLUSD, a fully compliant stablecoin issued under NYDFS guidance, is backed 1:1 by USD, ensuring trust and reliability.

→ Read more about the role of trust in Defi on page 58,
→ or about DeFi's future on page 61!

DECENTRALIZED ARTICLE

ARTUR KIRJAKULOV

This modularity also enables developers to rapidly prototype and deploy novel financial applications, iterating and improving upon existing models with unprecedented speed. The open-source nature of many DeFi projects further encourages community-driven development, fostering an ecosystem of shared knowledge and continuous advancement.

→ Check out Panos's thoughts on DeFi on page 32,
→ or continue the article on page 58

NAVIGATING THE XRPL AMM: 10 GOLDEN RULES FOR SUCCESS

Krippenreiter

The AMM is an untapped opportunity for all of us to actively contribute to the success of the XRPL while being rewarded for our part in the process. A true money-making protocol on the XRPL brings additional income to those that master it.

WANT TO EARN PASSIVE INCOME ON THE XRPL BY SUPPORTING DECENTRALIZED TRADING?

AMMs are the dynamic cousins of on-chain order books, as they are always ready 24/7, to trade any market-order thrown at them, only bound by available liquidity, rules, mathematics, and features set to glue it all together.

In the real world, the thing that comes closest to an AMM is a vending machine dispensing goods after they are paid for. In essence, AMMs are just like digital vending machines on a blockchain, letting users swap tokens without a middleman, while liquidity providers like you and me may earn fees by funding these trades. This is called “liquidity provisioning” – the main topic for this article, as it’s the source for possible passive income, but it comes with risks. Don’t worry, I’ll share 10 rules to help you succeed.

DEMYSTIFYING IMPERMANENT LOSS

The difference that separates the wheat from the chaff and makes an AMM-investing winner is the understanding of impermanent loss, i.e., the understanding of “HODL vs. opportunity cost”— in other words, “how much better would it have been to hold two assets instead of providing them to an AMM pool?”.

To really simplify the situation around price changes and the consequences of the opportunity cost you are exposed to, imagine the following:

We have a super simple digital vending machine that trades dollars and candy bars. To fill the machine, we deposit **$2 in cash** and **2 candy bars** into the machine. At first, each candy bar shall be worth **$1.** So, the total value we start with is:

$2 (cash) + 2 candy bars × $1
= $2 + $2 = $4

Now that it's able to offer candy bars to each and every one, all your friends are invited to trade dollars for candy bars or candy bars for dollars. It's a pretty smart machine—it adjusts how many dollars and candy bars it has to keep things balanced.

Now it gets tricky, because a very viral marketing campaign for chocolate bars made our friends bullish on candy; thus, the price has changed—their value jumps to **$2 each**.

This means that if you had kept your original $2 and 2 candy bars in your pocket instead of putting them in the vending machine, their value would now be:

$2 (cash) + 2 candy bars × $2 = $2 + $4
= $6

But hey, it was our own decision to fill the vending machine, and we simply can't stop our friends from buying our candy from the machine now that they are worth more than before (they just taste so good, I've been told). Our smart machine adjusts automatically and ends up with:

$3 in cash
1 candy bar

The value that remains in the machine and that I could theoretically withdraw right now would be:

$3 (cash) + 1 candy bar × $2 = $3 + $2 = $5

You've probably already guessed it: the impermanent loss we face as providers of candy bars and dollars is the difference between us doing nothing versus filling the vending machine.

HODL STRATEGY
You'd have $6 worth
↳ $2 cash + 2 candy bars at $2 each

VENDING MACHINE STRATEGY
You'd have $5 worth
↳ $3 cash + 1 candy bar at $2

That **-$1** is our impermanent loss, or in other words, missing out on extra candy bar value because the vending machine traded some away to keep itself balanced.

But why would we want to provide the vending machine with anything at all in the first place? Surely it can't just be about making sure we have sweets to offer our friends?

One aspect that I intentionally left out to explain the example is the fact that additional fees are accrued over time, which are paid either in candy bars or in USD, depending on how our friends pay at the vending machine. These fees accumulate more and more, and hopefully exceed the candy bar value we would otherwise have with the HODL strategy.

Obviously this real-world example is heavily simplified and actual numbers will differ, but the concept is essential: Whenever we provide liquidity to an AMM pool, we are exposed to the opportunity cost that we have to outperform to make it all worth it.

For this, there are currently 3 mechanisms that will help us to be successful on the XRPL:

↳ **Fees** (the longer we are invested, the more assets we can potentially withdraw at a later point in time)

↳ **Continuous Auction Mechanism** (the longer we are invested, the more valuable our LP tokens become, which we hold as a claim to a share of the pool's assets)

↳ **Farming** (some token issuers regularly airdrop tokens as a reward for our loyalty to the pool).

Key Takeaways

↳ **XRPL AMM:** Genuine rewards, but caution is needed.
↳ **Yields:** Up to 20% annually (or even more), though impermanent loss exposes you to opportunity costs.
↳ **Starting Tip:** Begin small—liquidity provision can start at just cents to test it out.

Be bold, stick to the 10 Golden Rules, ask questions, and connect with the XRPL community for more help and tips!

About the Author

Krippenreiter is a key voice in the XRP Ledger community, recognized for his technical insights. With a strong background in IT and networking, he offers informed perspectives on XRPL developments and education around DeFi on YouTube and X. His expertise in open-source projects since 2014 further led him to the XRPL ecosystem later in 2017.

DECENTRALIZED ARTICLE

CRYPTO ERI

We can easily envision a global platform where anyone, from a student in Tokyo to a farmer in Nairobi, can invest in a tokenized vineyard in France, earning yield from the wine production annually, all settled reliably on-chain, making investing as simple and immediate as joining a rewards program online.

→ What's the role of trust in DeFi? Find out on page 58
→ or go to Aanchal Malhotra to learn about ZKPs on page 25!

The 10 Golden Rules

for Liquidity Provisioning

1 UNDERSTAND THE BASICS FIRST

Invest in AMMs only when you have a full understanding of impermanent loss and basic concepts.

2 PLAY THE LONG GAME

Provide liquidity with funds that won't be needed in the near future, to stay invested for a long period (1+ years).

3 PICK BUSY POOLS

Choose pools that have consistently demonstrated high trading volume and stable performance.

4 FOLLOW THE MONEY

Focus on top pools based on the asset value already provided.

5 LOOK FOR EXCHANGE SUPPORT

Invest in pools where tokens are traded on at least one centralized exchange (the more, the better).

6 AVOID WILD RIDES

Avoid joining pools during periods of high volatility and wait out such times if already invested.

7 TIME IT RIGHT

Invest during periods of low volatility or sideways price action and withdraw when impermanent loss is low.

8 TRUST PROVEN PLAYERS

Trust AMM pools only with reputable token issuers that have a proven track record of trustworthiness.

9 DON'T BE A GUINEA PIG

Avoid being the first to join new AMM pools or to test new features, with a waiting period of at least 3+ months.

10 AVOID EXTREME BETS

Never provide liquidity to a pool if there's a strong belief that the tokens will either crash or moonshot in the near future without a major recovery.

Original Source here

DEFI RESEARCH

On the academic front, we bring your attention to a number of cutting-edge research projects around blockchain and XRPL for decentralized finance.

LLM-Powered Multi-Agent System for Automated Crypto Portfolio Management

Authors: Yichen Luo, Yebo Feng, Jiahua Xu, Paolo Tasca, Yang Liu
Institutions: University College London–Nanyang Technological University
Focus: DeFi and AI

↳ The research uses Large Language Models (LLMs) and collaborative AI agents to pilot crypto investment strategies

↳ Puts forth multi-modal and multi-agent systems, with a layer of explainable AI to enhance user confidence

↳ Aligned with current trends around the use of AI agents

Read more here: https://arxiv.org/abs/2501.00826↗

TO LOOK OUT FOR

Design Variations, Vulnerabilities, and Security Measures of Crypto Custody and Payment Solutions

Authors: Yimika Erinle, Yathin Kethepalli, Yebo Feng, Jiahua Xu
Institutions: University College London–GlueX Protocol–Nanyang Technological University–DLT Science Foundation
Focus: DeFi and Security

↳ In depth coverage of the different custody models (custodial, non-custodial, shared) and their implications on security

↳ Provides an analysis of real past breaches, to understand common attacks and the payment systems' weak points

↳ Proposes practical paths to implement custody solutions adapted to the needs of various user profiles (individuals, businesses, wealth managers)

Read more here: https://arxiv.org/abs/2307.12874↗

Analyzing Safe Haven, Hedging and Diversifier Characteristics of Heterogeneous Cryptocurrencies against G7 and BRICS Market Indexes

Authors: Manoel Fernando Alonso Gadi, Miguel-Angel Sicilia
Institutions: University of Alcala de Henares
Focus: DeFi–TradFi Markets

↳ Comparative analysis of cryptocurrency trends and conducts, as a hedging asset versus a safe investment

↳ Assessment of stablecoins as a 'better safe investment' (with Ripple USD as the use case) than gold, or on the resilience of certain cryptocurrencies in the face of market fluctuations

↳ Provides thought-provoking insights toward understanding the stakes around regulatory decisions and evolutions

Read more here: https://www.mdpi.com/1911-8074/15/12/572↗

Go Further

University Blockchain Research Initiative↗ (UBRI): Ripple Impact's research framework in partnership with 57 universities using the XRP Ledger for research on blockchain and its use cases.

EVENTS AND OPPORTUNITIES

GRANTS, GROWTH, AND GATHERINGS

OPPORTUNITIES IN THE XRPL ECOSYSTEM

Whether just starting out or an advanced XRPL dev, some of these opportunities might be waiting for you!

1

GETTING STARTED

The Aquarium is a 12-week residency program hosted by XRPL Commons in the heart of Paris. It offers builders and developers the space and time to get inspired, build impactful projects, connect with like-minded peers, and kick off their next big thing.

Learn more about it at xrpl-commons.org/build/residency

2

LAUNCHING INTO THE SEA

Applications are open on a rolling basis for **XRPL Grants!** Projects are evaluated and awarded continuously. The XRPL Grants Program funds software development projects and ventures that leverage the open-source XRP Ledger (XRPL) and help grow and benefit the XRPL community. Funding opportunities range from $10,000 to $200,000 for projects with a timeline of up to one year.

Learn more and apply at xrplgrants.org

3

FINDING YOUR EDGE

The XRPL Accelerator is a 12-week program to support entrepreneurs seeking to scale up their XRPL projects. The “Launch” phase of the Accelerator is an optional "primer" program preceding the “Scale” program, empowering Advanced Start-Ups to Scale on the XRP Ledger and including a $100K grant (non-equity) with emphasis on securing further funding. Turn the page for more details on upcoming cohorts.

Check out the details at xrplaccelerator.org

UNLOCK YOUR STARTUP'S POTENTIAL, JOIN THE XRPL ACCELERATOR!

In 2025, the XRPL Funding Program , led by RippleX, is launching three cohorts of the XRPL Accelerator, combining virtual learning with in-person demo days in Dubai and Singapore.

2025 FOCUS: DRIVING INSTITUTIONAL DEFI ADOPTION

Each cohort consists of 5-12 teams focused on blockchain-driven financial solutions. The primary focus is on enhancing institutional DeFi adoption, particularly in key areas such as Real World Assets (Primary Issuance, Asset Management, Token Issuance Platforms) and DeFi (High-Quality Tokens, AMMs, Lending & Borrowing, Institutional Market Infrastructure, Stablecoin Utility, Payment Systems, and Remittances).

While preference is given to projects addressing these areas, any innovative initiative utilizing XRPL is encouraged to apply.

PROGRAM BENEFITS

↳ **Funding:** The XRPL Accelerator Program provides up to $200K in funding, linked to development and adoption milestones.

↳ **Mentorship:** Startups gain access to mentorship from experts across the XRPL ecosystem and Tenity's and DIFC's vast networks.

↳ **Tailored Curriculum:** A customized curriculum covers key XRPL topics, equipping startups with the necessary knowledge to scale.

↳ **Expanding Networks:** Participants join a vibrant community of entrepreneurs, receiving valuable exposure and connections within the Web3 funding ecosystem.

WHO SHOULD APPLY?

Ambitious founding teams eager to explore the potential of the XRP Ledger in shaping innovative products. You must have an MVP–the more traction you've garnered, the stronger your application. Your product should address a distinct pain point and possess significant market potential.

↳ **Cohort 5 – Dubai:** The first 2025 program, in partnership with DIFC Innovation Hub, runs from March 10 to May 13, concluding at the Dubai Fintech Summit.

↳ **Cohort 6 – Singapore:** The program will run from June to mid-August, in partnership with Tenity.

↳ **Cohort 7 – Late 2025:** The final 2025 cohort, also in partnership with Tenity, runs from late September to November. Applications are currently open!

SUPPORTING PARTNERS:

Ripple
Tenity
DIFC Innovation Hub
Fenasbac Innovation

For more information, visit XRPL Accelerator↗ and apply for Cohort 7!

UPCOMING EVENTS

Engage with the XRPL Community IRL

APRIL 08-10
PARIS BLOCKCHAIN WEEK

APRIL 06
↳ **PBW Hackathon**
@Online, Register!

APRIL 07
↳ **XRPL Town Hall Meeting #3**
@Online, Register!

APRIL 08
↳ **Blockchain For Social Impact**
@XRPL Commons HQ, Paris Register!

APRIL 29
↳ **Academic Teacher's Meetup**
@XRPL Commons HQ, Paris

MAY 05-06
↳ **XRPL Developer Training**
@XRPL Commons HQ, Paris
Register!

MAY 14-16
↳ **Consensus**
@Toronto

MAY 27
↳ **Blockchain Ireland Week, XRPL Meetup**
@Dublin

JUNE 09
↳ **APEX Hackathon**
@Singapore

JUNE 04-05
↳ **NFC**
@Lisbon

JUNE 10
↳ **UBRI Connect**
@Singapore

JUNE 10-12
↳ **XRP Ledger APEX**
@Singapore

JUNE 18
↳ **Aquarium Community Night**
@XRPL Commons HQ, Paris

JUNE 30-JULY 03
↳ **EthCC**
@Cannes

JULY 09
↳ **Aquarium Demo Day #6**
@XRPL Commons HQ, Paris

JULY 24
↳ **XRPL Meetup**
@Brussels, CryptoSquare

For more upcoming events, check out our Events page

Join Us at XRP Ledger Apex 2025 in Singapore!

June 10–12, 2025

Raffles City Convention Centre

THE PREMIER GLOBAL SUMMIT FOR THE XRPL COMMUNITY

Be part of XRP Ledger Apex 2025, the annual gathering of developers, builders, and visionaries shaping the future of blockchain and decentralized finance.

Over three transformative days, explore cutting-edge innovations, network with industry leaders, and dive deep into the latest advancements on the XRP Ledger (XRPL).

What's in Store?

↳ Exclusive Developer-Focused Sessions Explore programmability, XRPL SDKs, and developer tooling to take your project to the next level.

↳ Technical Deep Dives & Hands-On Workshops Work alongside XRPL core engineers in interactive sessions built for developers.

↳ Apex After Hours Join us for an exclusive night of networking, conversations, and celebration with the global XRPL community.

WHY ATTEND?

↳ **Inspiration:** Hear from world-class speakers and industry pioneers leading the blockchain revolution.
↳ **Innovation:** Participate in hands-on workshops, explore live demos, and gain practical knowledge on XRPL's latest features.
↳ **Impact:** Connect with XRPL developers, investors, and institutions tackling real-world challenges and shaping the next wave of DeFi, tokenization, and cross-chain finance.

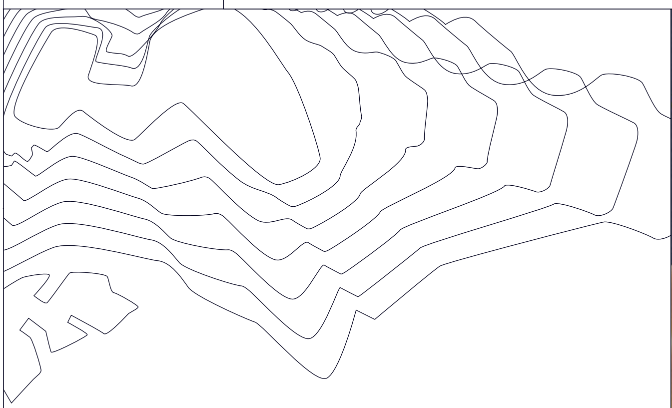
Secure Your Spot Today!

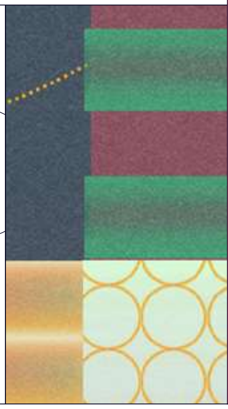
↳ 50% Ticket Discount: xrplcommons50

↳ Exclusive XRPL Apex 2025 Swag

↳ Full Access to Developer Sessions & Apex After Hours

DON'T MISS OUT! SCAN THE QR CODE & REGISTER NOW!





MANAGEMENT IN CRISIS: HOW CAN BLOCKCHAIN SOLVE THE $8.9 TRILLION PRODUCTIVITY CHALLENGE?

Integrating blockchain into workplace management addresses a matter costing businesses and countries $8.9 Trillion each year ↗ (Gallup Report, 2024). Indeed, decreased team productivity with poor optimization of working conditions has created a major trust deficit within organizations, pushing workers to demand more empowerment over managerial decisions. Blockchain can help bring them what they need—a more trusting and optimized relationship between employees and employers that unlocks new opportunities.

HERE'S HOW:

↳ **Skill Verification:** Blockchain securely records training and certifications, enabling verifiable, transparent skill tracking and proof of competencies.
↳ **Decentralized Engagement:** DAOs empower collective decision-making, ensuring employees' stake in the organization's direction.
↳ **Bias-Free Recruitment:** Smart contracts ensure fair hiring by evaluating candidates solely on skills, keeping personal data anonymous, and transparent decision-making.
↳ **Instant Rewards:** Employees earn digital tokens for achievements, redeemable for rewards or internal marketplace use.

Companies worldwide are leveraging blockchain to enhance HR and payroll processes. In France, **Digiposte,** a subsidiary of **La Poste,** certifies payroll documents for over 10,000 companies via the Archipels blockchain. Fintech company **N01ZET** offers a blockchain-based compensation system, allowing employees to allocate bonuses toward savings, consumption, or equity. **Walmart** is experimenting with blockchain to track work history and automate payroll, while **Fujitsu** is developing solutions to certify employee skills. **IBM** uses blockchain to verify academic credentials, and **Dock.io** provides a decentralized platform for managing HR data transparently.

UNDERSTANDING WORK 3.0: A PARADIGM SHIFT

The digital age brings new views on work and ownership. Technology must be practical and aligned with work needs, empowering workers and giving deeper meaning to their work. **This includes choosing where to work, setting personal work hours, managing time off, and selecting skills to develop**.

This shift shows how motivation and work management evolve in response to technological change. We have moved from the rigid structures of the industrial era to more dynamic, knowledge-driven work environments. We are at a turning point where the Work 2.0 and Work 3.0 models overlap, marking a profound shift in how we work and the role of technology in supporting these transformations.

Web 2.0 is becoming increasingly obsolete in meeting the needs of workers, and the evolution of digital culture profoundly influences how individuals approach their careers. Blockchain's 'read, share, and own' qualities offer a promising model of agency in the future of work.

Learn More

For more insights on building the future of work, join us at Deep Dive Monday—HR Transformation Hub 3.0↗ and help us shape↗ the future of Work 3.0.

THE FUTURE OF WORK ♡ THE FUTURE OF WORK ♡ THE FUTURE OF WORK ♡ THE FUTURE OF WORK ♡ THE FUTURE OF WORK ♡ THE FUTURE OF WORK ♡ THE FUTURE OF WORK ♡ THE FUTURE OF WORK ♡ THE FUTURE

DECENTRALIZED ARTICLE

RYAN MOLLEY

Trust has been, and continues to be, a critical aspect of traditional financial systems. The interconnected relationships and inherent trust within these systems have bolstered stability and reliability, enabling them to scale during the rapid growth and globalization in the late 20th century. Today, with advancements in distributed networking and computing, the XRP Ledger provides a trustless network that is reliable, secure, and decentralized, marking a significant improvement over legacy financial systems. Without having to rely on trust, more people can participate in, and take advantage of, modern financial services built on the XRP Ledger.

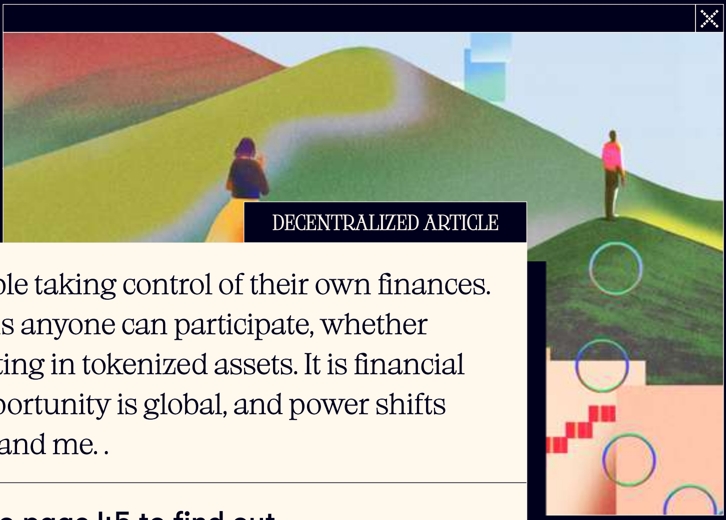
→ Would you rather find out what's LETS on page 21,
→ or composability on page 34? Choose wisely!

DECENTRALIZED ARTICLE

PAOLO TASCA

By removing the need for centralized trust, blockchain transforms financial governance. Decentralized Autonomous Organizations (DAOs) enable transparent, collective decision-making on protocol updates, risk management, and treasury operations. This shift fosters security, minimizes corruption, and paves the way for more horizontal, equitable financial markets where each of us can have greater control and participation in the system.

→ Read page 45 to see what makes DeFi community-oriented,
→ or explore what makes DeFi like Lego bricks on page 34!

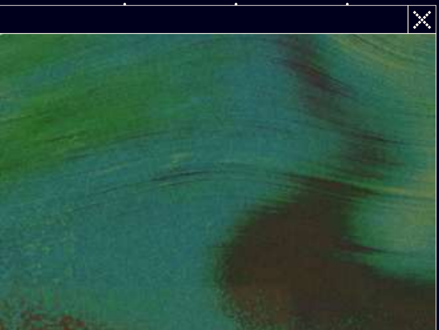


DECENTRALIZED ARTICLE

DANELLA DRAPER

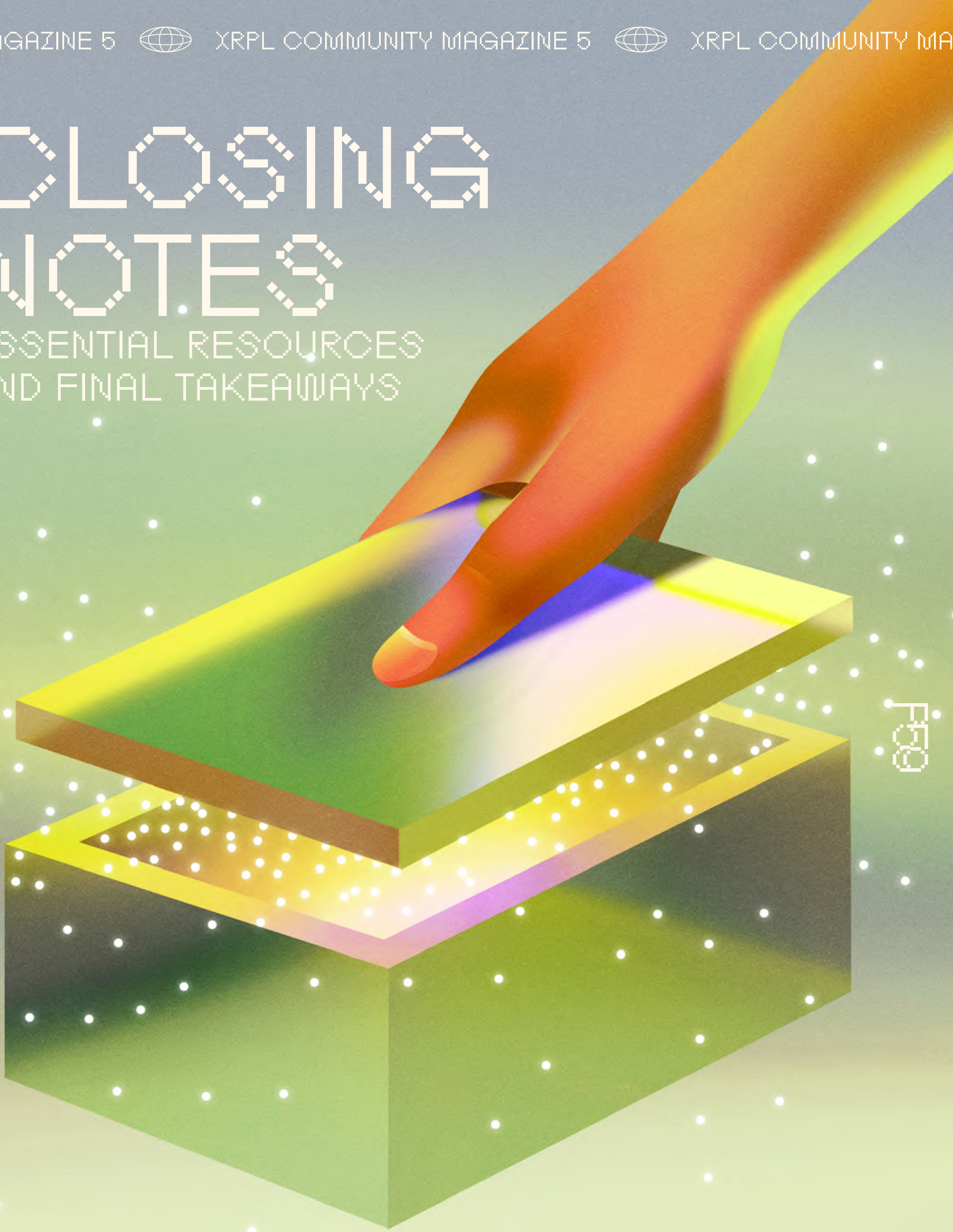
DeFi isn't just about tech—it is about people taking control of their own finances. The XRPL's open, trustless system means anyone can participate, whether it's developing, trading, lending, or investing in tokenized assets. It is financial freedom without barriers, where the opportunity is global, and power shifts from institutions to individuals like you and me. .

→ What does Jazzi Cooper think? Go to page 45 to find out,
→ or read more about the DEX on page 32!



CLOSING NOTES

ESSENTIAL RESOURCES AND FINAL TAKEAWAYS



GLOSSARY

AI (Artificial Intelligence) – Machine intelligence demonstrated by computers, enabling them to mimic human cognitive functions and perform tasks autonomously.

AMM (Automated Market Maker) – A decentralized exchange mechanism used in DeFi to facilitate trading without the need for traditional order books.

Amendments – Changes or updates made to the XRPL protocol for improvements or new features.

Batch Transaction – Ability to send multiple transactions in a single interaction.

CBDC (Central Bank Digital Currencies) – Digital representations of a country's fiat currency that are issued and regulated by the central bank.

CeX (Centralised Exchange) – An exchange platform that facilitates the trading of digital assets in a centralized manner.

Continuous Auction Mechanism – A novel mechanism for the XRPL AMM instance to continuously auction-off trading advantages for a 24-hour slot at near zero trading fee.

Cross-chain – A technology enabling interoperability between blockchain networks, facilitating asset transfer and data sharing across different ecosystems.

Cryptocurrency – A digital or virtual currency that is secured by cryptography and tracked using a blockchain. The security and integrity of cryptocurrency makes it nearly impossible to counterfeit or double-spend.

DAO (Decentralized Autonomous Organization) – A digital organization run by smart contracts on a blockchain, enabling decentralized decision-making and governance without the need for traditional hierarchical management structures.

dApp (Decentralized Application) – An application built on a blockchain or decentralized network.

Decentralized Finance (DeFi) – Encompasses a wide range of decentralized applications (dApps) and protocols that enable individuals to access financial services, such as lending, borrowing, trading, and asset management, without relying on centralized institutions like banks.

DeX (Decentralized Exchange) – An exchange platform that facilitates direct peer-to-peer trading of digital assets without the need for intermediaries.

DLT (Distributed Ledger Technology) – A decentralized and transparent system that enables the secure and immutable recording of transactions across multiple nodes or computers.

ETFs (Exchange-Traded Funds) – Funds that trade on exchanges, generally tracking a specific index.

FIAT – Government-issued currency that holds value based on the trust and confidence of the users, rather than being backed by a physical commodity.

FSI (Financial Services Industry) – Encompasses banking, investment, insurance, and financial advisory services, facilitating money management and economic growth.

Institutional DeFi – A combination of the innovations from DeFi protocols with the safeguards of today's finance industry.

Interoperability – The ability of blockchain networks to communicate with each other, sending and receiving messages, data, and tokens.

Limit Order Books – A record of outstanding limit orders maintained by the security specialist who works at an exchange.

Memecoin – A cryptocurrency that originated from an internet meme or has some other humorous characteristic.

MiCA (Markets in Crypto-Assets Regulation) – Proposed EU regulations for governing cryptocurrencies and related activities, aiming to balance innovation with consumer protection, sustainability, and financial stability.

Multi-Chain Finance – The utilization of multiple blockchain networks for financial purposes.

Node – Refers to the computers or devices that participate in maintaining and operating a blockchain network.

Protocol – A set of rules that govern how transactions are executed and recorded on a blockchain network.

RWA (Real-World Assets) – Refers to physical or traditional financial assets tokenized on a blockchain, such as real estate, commodities, or equities.

Sidechain – Sidechains are a scalable solution that extends the functionality of blockchain networks by creating parallel chains that run alongside the main blockchain.

Smart Contract – A smart contract is a user-defined piece of code that executes predefined conditions and actions without the need for intermediaries.

Stablecoin – A stablecoin refers to a type of digital asset designed to maintain a stable value, typically pegged to a fiat currency or an underlying asset.

Tokenization – Tokenization is the process of converting real-world assets or rights into digital tokens on a blockchain or distributed ledger system.

Validator – Validators are crucial components responsible for verifying and validating transactions on a decentralized network. Acting as distributed nodes, validators authenticate the accuracy and integrity of digital transactions and vote on which to include in the next ledger.

Web3 Wallet – A wallet is a digital application or device that securely stores private keys used to access and manage cryptocurrencies.

FYI

DECENTRALIZED ARTICLE

ARSYDE

As DeFi evolves, its success relies heavily on infrastructure. The XRP Ledger, supported by an active community and validators, plays a critical role in enabling DeFi applications. This thriving ecosystem ensures scalability, security, and efficiency, positioning the XRP Ledger for continued innovation while maintaining low entry barrier for infrastructure operators.

→ **Are you sure you found all the missing 16 pieces? Well done!** ☺

GET INVOLVED!

YOUR VOICE MATTERS!

Thank you for reading the XRPL Community Magazine! Your feedback shapes each issue, helping us capture what truly matters to our readers. We're committed to highlighting diverse voices, and we want to hear from you!

What topics are you most excited to explore in our next edition? Reach out to us at **mag@xrpl-commons.org**, and let's craft the next magazine together!

BECOME AN INSTRUCTOR AT XRPL COMMONS!

At XRPL Commons, we're on a mission to make blockchain accessible to everyone! Ready to inspire curious minds?

In this role, you'll teach blockchain concepts to learners at every level, adapting your approach to fit diverse educational needs. We're looking for someone who's passionate about technology, loves to teach, and has excellent English communication skills. Fluency in other languages is a plus!

Sounds like you? Send us your CV to **education@xrpl-commons.org**!

BECOME AN XRPL ECOSYSTEM CURATOR!

Be part of our live XRPL Ecosystem Map featuring all live projects on the XRPL – share your insights, projects, and knowledge to help growing the community together.

By scanning the QR code below, you can actively contribute to this open-source database, ensuring it remains a reflection of the ever-evolving XRPL community.

Is your project already on our map? Find out: **https://map.xrpl-commons.org**

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www.xrpl-commons.org/build/residency

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Read the Latest Issue of the XRPL Community Magazine
www.xrpl-commons.org/engage/community-magazine

WIN EXCLUSIVE XRPL MERCH + FREE TICKETS TO APEX!

You've made it this far

now it's time for a reward!

We're giving away **exclusive XRPL Merch** – including T-shirts, socks, and caps – PLUS **free tickets to APEX 2025!**

HOW TO ENTER:

↳ **Scan the QR code** or click here and submit your email + follow **@xrpl_commons** on X.

↳ **Increase your chances!** Post a photo or screenshot of this **XRPL Community Magazine on X** and tag **@xrpl_commons.**

↳ **FIVE LUCKY WINNERS** will be announced on **May 16, 2025.**

Don't miss this opportunity to win exclusive XRPL swag and attend the ultimate blockchain event of the year.

Get scanning, get sharing, and good luck!

Claim Your Free XRPL Community Magazine NFT!

Get your limited-edition free NFT before they are gone!

visit xrpl.at/communitymag-nft to claim yours now.

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This Issue's Contributors

Copy
Zsofi Borsi

Design
chilli drop.

Illustration
Ibrahim Rayintakath

Contributors
Aanchal Malhotra
Angie
Arsyde
Artur Kirjakulov
Cassie Hirsh
Crypto Eri
Danella Draper
Harbinger
Ike Iwumene
Jazzi Cooper
Jovanie L
Kristen Dack
Krippenreiter
Luc Bocahut
Odelia Torteman
Panos Mekras
Paolo Tasca
Raquel Amanda
Romena Urbonaitė
Ryan Molley
Safia Ousid
Simon Luling
Sophie Stummvoll
Thomas Hussenet
Vet
Vito Tumas
Walter Hernandez

Photography
Angela di Paolo
Matan Ashkenazy
Zoriana Stelmakh