

Pylons

The metaverse
made easy.

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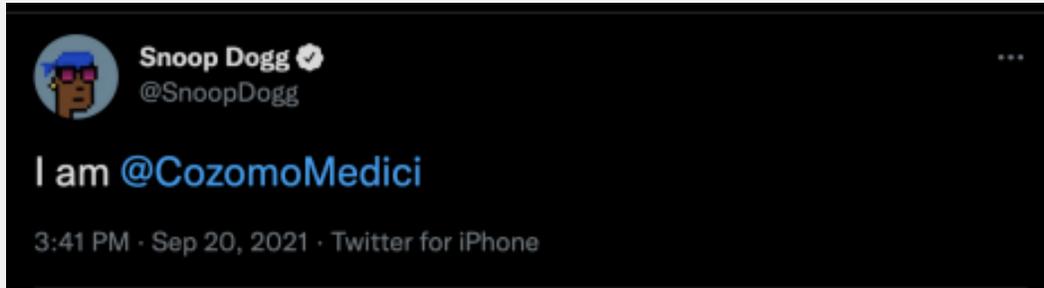
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The Long Nap of 2020–2021 is ending. We're emerging back into a world that has grown much more virtual. Fully-remote culture has redefined both work and play, with virtual business and social events now a permanent part of the culture.

Introduction

Meanwhile, the world's major brands are squinting into their monitors, scheming how to stay relevant to the way people relate to each other and display their tastes and affiliations. Sotheby's is selling Bored Apes. Gucci is shilling clothes in Fortnite. Snoop Dogg is reborn as an NFT trader.



Would Snoop lie to us?

Sports events, conferences, concerts, even parties, are following gaming into the online sphere. These emerging spaces have sparked a new gold rush, but instead of glittering metals the motherlode is attention and advertising.

Legacy players have been slow to get started. The brands that drove culture a decade ago have almost no presence in these new virtual worlds. Where they do, it's at the mercy of the venue operator, with deals negotiated on a per-item basis.

Not so long ago brands held the power. You could flex by wearing what they sold anywhere you wanted. But in the metaverse—the collection of fully-online venues springing up around the internet—you can only wear what a venue operator lets you wear, so you can only flex in the ways they let you flex. It's frustrating for both brands and users. How do you wear your favorite player's jersey to the game when the game is on your phone?

This is why we're building Pylons: to become the connective tissue that connects NFTs to the metaverses and the masses.

Part 1

Why Digital Property?

In digital worlds, people use property to express who they are and assert where they belong.

Why Digital Property?

In the long run, the Internet always wins. Power will flow back to the users. In fact, it already is: digital property owned by users already exists in the cryptocurrency world. These objects are known as non-fungible tokens (NFTs), completely digital items that are verifiable and can be truly owned.

CryptoPunk NFTs have become a way that people identify and signal themselves on Twitter, leading to a wave of NFT profile picture projects like [Bored Ape Yacht Club](#) and [Pudgy Penguins](#). NFTs are the du jour psychographic and lifestyle vehicle for a kind of self-segmentation. Really, it's about self-branding. In asserting where we "belong," we communicate a larger message about who we are.

The problem is that NFTs are awkward and difficult to acquire and display. In fact, the entire process of buying NFTs is hostile to regular users.

Even the term for these collectibles—NFTs—is opaque and makes sense only if "fungible" and "token" are things you already think about, which most people don't. Users don't want to sign up on cryptocurrency exchanges to get a special kind of money to buy their online outfits. They don't want to install browser extensions, either. They just want to buy hats and wear them to parties. We are here to serve the "I wear, therefore I am" culture.

In 2017, Netflix CEO Reed Hastings said at an industry summit that his company's greatest competitor was not Fortnite, Fox, or Hulu—rather, their number one competitor was sleep. Similarly, in acquiring the dominant share of total available market for digital property our competitor is not Dapper, or even Ethereum. Rather, our greatest competitor is the apathy, ambiguity, and antipathy towards web3 generation of digital properties and experiences. Our greatest challenge is to remove the stigma and frustration associated with the current blockchain user experience. The onboarding process is nasty, brutish, and actually even worse than Hobbesian, because it's painfully long!

Even in the absence of any true ownership by players, in-game fashion on platforms like Fortnite was a \$54B market in 2020—that's larger than the film industry in 2019. Computer gaming was already growing more social over the last decade, and COVID pushed it past the point of no return. Many children view Roblox and Fortnite as primary social spaces. They care about how they look there as much as they do at school.

Breaking down walled gardens

More and more online spaces are popping up, but many of them are walled gardens—spaces that only allow certain digital objects, chosen by the venue owner, to operate within them. But as online spaces proliferate and compete, it'll be hard for them to maintain themselves as closed venues.

And why would they want to?

As new innovations appear, the space will become more crowded and fragmented. People will go to the spaces that let them present themselves the way they want to be seen. Walled gardens may think they're protected from the outside, but really, they're locking out addressable market opportunities while amputating users' right to freedom of expression and the right to travel.

Twitter sees this, and thus is integrating ETH wallets to authenticate NFTs as profile pictures. But this approach—each venue choosing a set of items to integrate one by one—won't work long term. It's a piecemeal, patchwork solution.

We need to start designing the many-to-many protocol-driven digital metaverse that will ably support the “right to wear/where” movement consumers deserve.

A metaverse for all

That's why Pylons is building the foundation for a multi-venue, multi-creator world. We're building simple and intuitive tools to create and purchase digital items. We're making a blockchain that's cheaper, faster, and easier to build on than anything out there today.

We're building tools for exporting items into any venue that wants to host it, and handling the administration, commercialization of licenses, and payment distribution systems.

Pylons will be the mainstream vault for digital property, the default tool for minting digital art, and the gateway to bring that property into virtual worlds all over the metaverse. Like a virtual closet, users will load up Pylons on their way into the metaverse and choose what to bring in with them.

Why Digital Property?

The Pylons app will actively integrate with all digital property chains (although the Pylons chain will be the default) and with virtual spaces to create the most powerful network of integrated experiences in the world.

How? By providing a middleware layer on a sovereign chain designed for the explicit purpose of democratizing the blockchain. We become an open web3 society through lowering barriers of entry on the supply side and demand side in the production of digital goods.

Part 2

The Elements of Pylons

The core of Pylons' design comes from our belief in three values: Performance, User Experience, and Cultural Integration.

The Elements of Pylons

The system must be fast, easy to use, and should mesh coherently and seamlessly with the way users learn and acquire new behaviors.

Disruptions are rarely the result of technological innovation. Rather, they enable them. At the center of every disruption is human behavior, and blockchain can't disrupt that until it's designed in a way that serves the majority user.

The early majority adopter of blockchain is a digital auto-didact. This kind of auto-didact is neither just an artist or technologist, but both.

This self-taught generation, by virtue of their place in digital culture and time, have distinctly digital aesthetics informed by video games and sci-fi movies: neon-lit environments, smooth gradients, pneumatic curves. The ongoing consumerist nostalgia boom is not because the autodidactic generation are unimaginative cultural appropriators—rather, they are intensely self-taught students who become learned, passionate fans of various eras of fashion, music, art, and culture.

The autodidactic generation is a self-taught developer.

In view of all this, in order to truly standardize, normalize, and serve the blockchain and NFTs to a mass market, we must give people accessible and usable tools so they can scale their level of interactive design from day one. The interoperability of chains is only one part of web3's destiny. People need interoperability with blockchain software, too. This is the missing heart and engine of the revolution: usable tools that enable and evolve the desire to use them in everyday life.

The cultural flip around digital goods is the movement from “free” and “unregulated” to owned and standardized.

The Current Situation

Most existing NFT blockchains fail at all three of Pylons' core values. Most likely this is because they focus on metrics that should follow and support product success, like the number of token holders or a high token market capitalization. Although these are interesting measures, projects focused on them put the cart before the horse. They create constituencies focused on day-trading the token rather than a system that delivers value long term.

Authenticity is everything in culture. For art and cultural artifacts, authenticity comes from provenance, tracing an object back to its creation to confirm its authenticity. So solving the digital property puzzle starts with an origination strategy—how is an NFT made (or in this case, minted), and how can you know it's the real deal?

To bring digital property to the mass market, Pylons has to add important features to every part of the value chain. A quality property market has no fees for origination and the simplest possible APIs for developing property lifecycle (origination, mutation, redemption—in essence, everything that affects the status of the property constitutes its lifecycle).

Lack of Usability

Current NFT platforms think of themselves as part of the cryptocurrency world. They think that it's no big deal to ask a user to memorize twelve words or to create an account on a cryptocurrency exchange. No existing blockchain system has simple SDKs, none offers smoothly designed mobile wallets, and no systems integrate easily with in-app purchasing, the main way that users buy digital assets today.

Right now origination is painful with Ethereum and IPFS, making it slow and expensive to use. Blockchain wallets are complex and difficult. Gas fees require artists to buy cryptocurrency from an exchange before they can start making pieces.

These are not just problems for digital property, they are problems that stand between the digital asset world in general and mass adoption.

A blockchain for the masses needs a cleanly integrated payment flow for users to purchase items and upgrades, and a set of end-user software that meets the quality bar that mass market users have come to expect. It must allow them to interact with NFTs just like they do most of the modern Internet, which operates on top of a technological structure that few want to understand.

Just like the Internet, as long as Pylons works easily and smoothly, most users don't want or need to understand the inner workings.

Ethereum Compatibility (EVM) Focus

Many projects prioritize compatibility with Ethereum. Although Ethereum does have the largest blockchain developer community, and by far the bulk of current NFT projects and developers, it's actually quite small in the context of developer communities in general, and tiny compared to the community for something like the Unity game development engine, for instance.

A lot of theoretical value is tied up in Ethereum tokens and a large volume of tokens change hands every day in fees on the network. But that's not necessarily a sign that Ethereum is a good choice for a system designed to support fast and large-scale computation. In particular, Ethereum has very low throughput and becomes expensive when executing complicated computations. Using the Ethereum chain at all requires complicated development and mathematical wizardry. When it is used for end-user application code, it's done via "Layer 2" solutions where a non-Ethereum system does all the work and essentially just records the results in the Ethereum chain.

While the method behind Layer 2 solutions is mathematically intriguing, and these projects are serious technical achievements, all this work, time, and overhead adds nothing of value from the perspectives of a user, the system, or a developer building on top of it. Not to mention that aspiring Ethereum developers need to learn a new programming language, Solidity, to do any work at all.

A lot has gone into creating a way for systems to record their state in the Ethereum chain, but very little has gone into the things that matter most.

Our Approach

Pylons focuses on the user and developer experiences first, and the internal crypto enthusiast marketing second. We've implemented a simple SDK for item creators to use, built on top of a fast blockchain that isn't tied down to Ethereum, and designed a clean mobile application that integrates simply and easily with Google Play's in-app purchasing, plug-and-play fiat gateways, and crypto payments over inter-blockchain communication (IBC).

We believe it's time to build a system that has real usage by regular people.

Developer Experience

The Pylons developer experience is unlike any other in the blockchain space. Digital property and origination is about rules: who authorized the creation of a digital asset, how many, and for what payment?

The next layers down add more rules to the system. Are there royalties on resale? Can the item be destroyed? Redeemed? Can it change or combine with other items?

Blockchain is a tool for enforcing commonly agreed-on rules on all members of the system. It's perfect for applying lifecycle rules to digital property. This is where Pylons takes a step that's unique in the NFT space.

Cookbooks and Recipes

The rules that developers define in Pylons to create and transform digital property are called Recipes. The collections of Recipes that interact to create a complete experience are called Cookbooks.

Every Pylons asset is associated with the Cookbook that contains the Recipe that created it, and a Recipe can only interact with items associated with its Cookbook. Developers build experiences by creating and publishing Cookbooks, and then use the Pylons SDKs to build the client apps that allow their users to execute the Recipes in those Cookbooks.

We provide a web page where a developer can connect with Keplr (downloading a chrome extension isn't too much to ask of a dev) and load recipes onto the Pylons blockchain with JSON. Once the recipes are there, a very simple Dart SDK allows the dev to connect their app to the Pylons app for transaction signing.

By allowing non-blockchain developers to think just about the kind of property they want to create without getting lost in the minutiae of how blockchains work, we open the door to exponentially more people than those who are willing to learn Solidity. We unlock the space to infinitely more ideas, any one of which could be revolutionary.

Games

Pylons powers blockchain gaming directly. Recipes for character creation, combat, gathering, crafting, and in-game commerce can be easily

The Elements of Pylons

constructed. The recipe system supports simple math for combat and crafting, allowing outcomes to vary both on the characteristics of the inputs, but also based on randomness generated by the validators. The system supports needing to wait to recharge energy, for example, as well as spending money (fiat or crypto) to recharge faster.

Art

A recipe for the creation of art is very simple. It requires metadata parameters, a URL, a hash, and (probably) a limit on the number of times the recipe can be executed. Because Pylons doesn't charge for recipe creation, there are no minting fees. Artists only pay when art is purchased.

There will be a Community Ecosystem and Development Fund (CEDF) dedicated to artists who create, sell, and buy interesting work on the platform.

Ticketing

We are very excited about the use of Pylons to reinvent ticketing with NFTs for real world events. Issuance, trading with royalties, redemption, door prizes for redeemed tickets, etc.

And more

There are so many things we are expecting to see, but we're even more excited about the things we don't expect. The ease of the Pylons' low-code system will finally enable any developer to create experiences on blockchain we have yet to imagine. We can't wait! The book of use-cases has no genre, clear plotline, or primary characters. It is truly open to being written.

Part 3

Stakeholders

Now that you understand some of the things Pylons can do, here we'll outline the system stakeholders and how they interact with the Pylons networks and each other.

User

Pylons will bring the masses into web3. The long-term vision sees Pylons as the central nexus between experiences throughout the metaverse, and whose assets are interoperable between all these different experiences.

Users begin their Pylons journey because they want to buy something on Pylons or play a Pylons game. Maybe they saw a link to a piece of art, or maybe they downloaded a game built on Pylons. Whatever the reason, the user downloads the Pylons app from an app store to their mobile device. The user opens the app, generates a key, and registers the key with the blockchain.

Registering a key, like many actions on Pylons, is free. Pylons has no gas system, so unlike every other blockchain, users can get started immediately without any assets in the app.

The experience generated by a Cookbook can be a game, an art gallery, an event ticketing system, or any number of other experiences a clever developer can implement. These actions can be free, so truly free-to-play gaming is possible on the Pylons chain.

Once the user has accumulated any number of valuable items generated in free apps or purchased with external resources, they can sell them to other users, either on the basic integrated order book or on various interconnected marketplaces.

Each item has a minimum transfer cost set by the developer of the Recipe that created it (governance can set a network minimum that applies if left unset). When a user sells an item, the minimum transfer fee is charged and sent to the developer. This keeps the network from filling up with free bot transactions while still allowing a new human user to get started for free.

Users can get involved with as many experiences as they like, freely sell the property they acquire, and mediate the whole experience through a delightful mobile app. By protecting the user from the machinery of finance that permeates DeFi, we can create a truly mass-market blockchain experience and reach the next billion blockchain users.

Developer

Developers create experiences on Pylons by building Recipes for creating and transforming property together into Cookbooks that define a world. For a game, the Recipes within a Cookbook are the set of rules. For an artist, they're the system for minting, transferring, and displaying the digital art, etc.

Developers can try out recipes using the developer website buidl.pylons.tech. Using Keplr, a Chrome extension Cosmos wallet, a developer can register a key on the Pylons network, create a Cookbook, and start adding Recipes using the web page. Developers can add the Pylons Flutter SDK to their apps and can call Recipes on the user's behalf. The SDK will ensure that the user has the Pylons app, and that the user authorizes the requested transactions from the developer's app.

Recipes are simple, Turing-incomplete state transitions, but they are still powerful enough to create a wide array of experiences. They can take advantage of JSON templates, which operate like classes, creating item types or specific upgrade paths that can be referenced elsewhere.

Developers can set a minimum transfer fee for each item and a percentage of the resale price for any item sold. Developers that create compelling experiences that generate items people value highly will receive the vast majority of the revenue generated by the Pylons system. They will also receive significant incentives from the app developer incentive token pool.

Developers can set high transfer prices on rare or powerful items and continue to earn revenue every time such an item changes hands, even if the original player who generated it no longer plays the game. An artist can issue a limited number of rights to use an image as a video chat background, and video clients could check that the person attempting to use it has a valid license. The artist would automatically be paid every time the license changed hands.

Developers who create on Pylons will be subject to a much smaller fee than app stores generally charge. We expect it to be about 5% at launch, but that number, along with other network parameters, will be set by governance.

Investor

The nature of distributed ledger systems is decentralized governance. The cryptocurrency community, however, is full of ICOs that are all marketing and no product. Pylons built the testnet version of the Pylons network with private funds to ensure that the team would have hyper-focus on delivering the product the market wants, unyoked from the volatilities of a token price. However, as we move towards the main net it is necessary to lay out our plan for achieving token distribution of the governance Bedrock token among the Atom and NFT communities.

We designed Pylons to run within a narrow margin and minimal fees in order to offer as much value to the creator community as possible. It's intended to be a commodity business, but a commodity business at scale generates a lot of revenue, and early investors in successful commodity businesses make a large ROI.

We intend for holders of the Bedrock token, who will control governance as well as receive the network's commission, to do well by their investment. We'll be distributing a small amount of tokens to early investors, creating significant pools for artists, app developers, and core tech developers, making a small amount of private token sales to strategic partners, and running an SEC-compliant IDO of Bedrock, on Osmosis if possible.

The network commission is paid in the currency charged by the developer. If this is an IBC cryptocurrency, the investor receives those tokens. If it is fiat, the investor receives the debt token of the payment partner. In the case of fiat, the debt tokens are not transferable, and the investor must have an account with the payment processor to cash them out.

Pylons Inc.

There are several points of contact with the centralized society that will need to be dealt with. Regulatory and legal issues, partnership negotiations, and marketing all need a central operator. Pylons Inc. expects to remain that operator until and unless the governance token holders replace it, much like a board of directors runs a company until and unless replaced by the shareholders.

In addition, connections to some gateways like Stripe may require running shim software that implements the Pylons payment processor APIs. Pylons

Stakeholders

Inc. will do this as well. In the long term, the role of Pylons Inc. in the Pylons blockchain should shrink away, and the company will focus on maintaining the user-facing tools to the highest standards.

Artist

The Pylons ecosystem will rely heavily on non-technical creative people for its success, and it exists in significant part to help them to break free of the onerous publishing systems that underserve and undervalue their creative property.

On the supply side, creation is locked behind a massive technical barrier: technical prowess. For most artists, deploying their art on a blockchain requires a technical partner, or the support of a primitive marketplaces designed to nudge “open-outcry” behaviours such as reciprocation tendency and deprivation super reaction syndrome. Marketplaces are socially engineered to manipulate people into illogical social and purchasing behaviours. At each step of the way, artists have their work and livelihood interfered with by unsubtle opportunism that benefits from making technology and its interfaces non-intuitive and cryptic.

We will build a simple minter as part of our launch toolkit, and we will continue to support the creation of more robust and specialized minters that can initiate digital property rights management at the point of origination. We will also create a dedicated artist pool to ensure the supply and production of premium digital properties in Pylons ecosystems.

Validator

The validator system is the heart of the Proof of Stake approach to blockchains. Validators will be just as central to Pylons. Validators are paid by charging a percentage of the commission that investors receive. Just like the investor payments, they are in the currency of payment, and fiat tokens require an account with the payment processor to be cashed out.

Validators are professional operators of software, and they should be paid enough from commissions to be able to make a profit. We do not expect that validators will need to buy a large amount of Bedrock before they're able to participate.

Stakeholders

Finally, because Pylons does not charge gas fees, validators are the first line of defense against spam attacks. Validators will need to run sentry nodes for API support and for prioritizing transactions to ensure high-value activity does not slow down.

Part 4

Payments and Fees

Pylons allows users to pay for products in the currencies they already have and use, with no up-front fees.

Payments in the NFT space right now are painful. Each NFT platform accepts payments in its own native token, and to transact on it you have to buy some of its token on an exchange (either centralized or decentralized.)

In the Pylons ecosystem most payments are made with assets external to the system to make it as easy as possible for purchasers and sellers. Blockchain assets are brought in via Inter-Blockchain Communication, the central connectivity protocol of the Cosmos ecosystem, and fiat assets are handled using a proof-of-authority system to validate payments from external processors.

Pylons uses real-world currencies

Pylons allows users to pay for products in the currencies they already have and use. We believe this will change the nature of the experience of buying digital goods and that it will serve both as an example of how IBC chains should work and as a corrective to the idea of a “utility token” that took the space in such an awkward direction for years.

To require a payment within a recipe, developers add an external currency to the CoinInputs section of the recipe JSON file. A simple `{uatom: 1000000}` creates a 1 Atom payment request that a user can approve with the Pylons mobile app and will be automatically transferred to the developer’s wallet.

For fiat payments, adding the USD element to a Recipe will prompt the developer to link a Stripe merchant account. Once that is done, recipes with USD inputs can be created, and users can pay for items with credit cards. Cashing out with Stripe happens using Pylons’ Stripe Connect account, so merchants, validators, and governance token holders will need to have accounts on Stripe Connect to receive their USD or other fiat payments.

We will support Atom, eMoney EUR, Terra USD, and Stripe USD at launch, Bitcoin as soon as Axelar main net is live, and Ethereum when the ETH bridge is up.

Fees

The Pylons network takes a percentage of payments, eliminating gas fees. This allows the network to power free-to-play experiences, where users can join the network with neither up-front capital nor a visit to a cryptocurrency exchange. The validators are compensated out of the fee stream using the standard Cosmos validator percentage for staking.

Part 5

Launch Products

Pylons will have a simple but powerful set of products to build on. HackAtomVI marks the introduction of an inaugural set of tools that transforms the “Internet of Value” and its value chains into the participatory marketplaces they should be.

Timeline

2021

October 14
Public testnet

October 22
App beta

November 1
Open Source blockchain

November 10
HackAtomVI

November 30
Main net launch

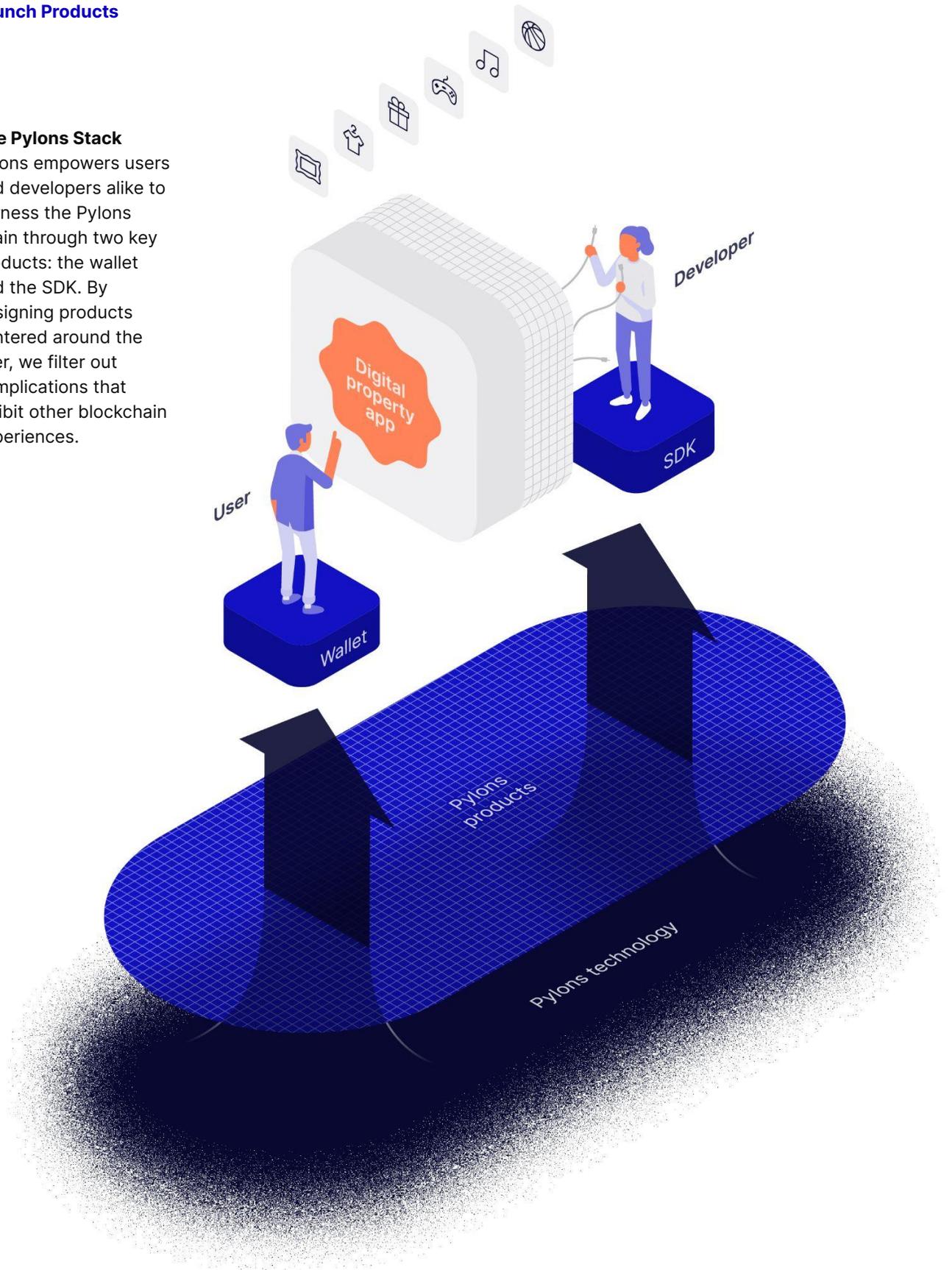
2022

- When approved—Osmosis IDO
- Venue integrations
- Rights management
- Inter-blockchain communication for moving items
- Inter-blockchain communications for RPC

Launch Products

The Pylons Stack

Pylons empowers users and developers alike to harness the Pylons chain through two key products: the wallet and the SDK. By designing products centered around the user, we filter out complications that inhibit other blockchain experiences.



The Pylons starting stack is relatively simple. A blockchain, a mobile wallet app, an SDK, and an art minter, plus two web pages: a block explorer and a dev portal. But these elements are only the seeds of what is to come.

The Chain

The Pylons chain is a Proof of Stake chain, with the Bedrock governance tokens at launch being held primarily by Pylons Inc. and Tendermint, one of the leaders of the Cosmos community and the incubator for Pylons, with small amounts held by launch validators. After the IDO the chain will function using standard governance processes. The chain will support minting, trading, and residuals. Residual income is income that one continues to receive after the completion of the income-producing work. Examples of residual income include royalties, rental/real estate income, interest and dividend income, and income from the ongoing sale of consumer goods (such as music, digital art, or books), among others. The chain will support payment in USD, Atom, and eMoney EUR, with other currencies being added on a regular basis through governance.

The chain will support the creation and execution of Recipes, including payments, IBC transfer of Atom in and out, and the creation and acceptance of item trades.

The License

One challenge that is unique to the blockchain space is software licensing. Traditional closed source software development is not appropriate, but traditional FLOSS licenses are also problematic. (See the SushiSwap attack on UniSwap).

Pylons takes a new approach, similar to the approach taken by [Dig](#). We commit to assigning copyright in the blockchain code to the token holders. Our legal team is determining the best way to proceed here, we are breaking new ground. But we commit to the Bedrock token holders substantively owning the code and controlling its licence via on-chain governance.

Pylons App

The Pylons mobile wallet app will be a smooth, beautiful experience for the art buyer and digital native, like nothing before seen in the crypto world. Buyers will be able to purchase directly from the app, using fiat through a payment gateway, or cryptocurrency, brought into the Pylons zone via IBC. The app will understand natively what a minting recipe is and will display what it does to the user. The app will be able to follow links directly from social preview cards to the minting recipe page.

The app will organize a user's items by type, experience, and creator, support making sale offers and social posts, and support requests from other apps to sign transactions, with confirmation options both in app pages and in notifications.

Actions the user will be able to take with the app will be:

- Creating an account
- Buying items
- Viewing your items
- Viewing another user's items
- Viewing all items in a set
- Bidding on items
- Offering items for sale
- Showing items on social networks
- Signing transactions from Pylons apps

The SDK

The Pylons SDK is a tool for building Flutter apps that interact with and connect to the Pylons app. The minter will be built entirely with the SDK; anyone will be able to build another minter with the same tools on Pylons. The SDK will be simple with a single command to connect it to Pylons app. It will support a range of developer needs: creating cookbooks (developer roadmaps), creating recipes, and executing recipes, as well as creating and fulfilling trades.

Experienced developers will be able to add the SDK to any mobile app built using any framework (although Flutter will be the first and easiest option) and make any part of their experience blockchain-powered with very little effort.

Easel

The Pylons art minter, Easel, is a Flutter app for artists to use to create NFTs. It connects to the Pylons app and creates recipes on behalf of artists that will generate NFTs at creation time. It supports the upload of PNGs and JPGs from a user's phone, ideally to a Cosmos SDK powered zone for long-term asset storage.

The Block Explorer

The Pylons block explorer serves two primary purposes. It allows people to explore the transaction history of the chain, and it serves as the web backing for the app's deep links. It generates social cards with a link to the asset users can post to Twitter, Discord, or another social media platform for any item and sale offer on Pylons. The block explorer supports opening those links in a browser tab to view details instead of the Pylons app. It may also eventually support NFT purchases with Keplr, which would require both the app and wallet share access to the same account.

The Dev Portal

The dev portal is a simple tool for developers to connect Keplr and paste in JSON recipes to be uploaded to the chain. This frees devs from needing to have a CLI installed on their machines.

Part 6

Roadmap

So what's the plan? How do we get to a decentralized system powering digital property for the whole world?

Roadmap

We start by onboarding devs, then artists, then users, investors, and major brands and venues.

HackAtomVI

The HackAtomVI conference, starting Nov 10, 2021 in Lisbon, Portugal is the kickoff of the plan. We will be offering \$100,000 in prizes and working hard to get the word out to the Cosmos community that digital property is here, it's on Cosmos, and it's time to build.

Details are at hackatom.org.

This is the beginning of a growth phase and the beginning of the developer community Bedrock pools, designed to give equity in the system to people who contribute to its success through their own skill and effort.

Art Acquisition

Through aggressive marketing, better minter products, and the creation of an artists' Bedrock pool, we will work to get as many of the best digital artists in the world creating art on the Pylons platform, and selling it to as broad a user base as possible. This is a huge challenge, but it isn't primarily a technical challenge, and we don't cover it in detail here.

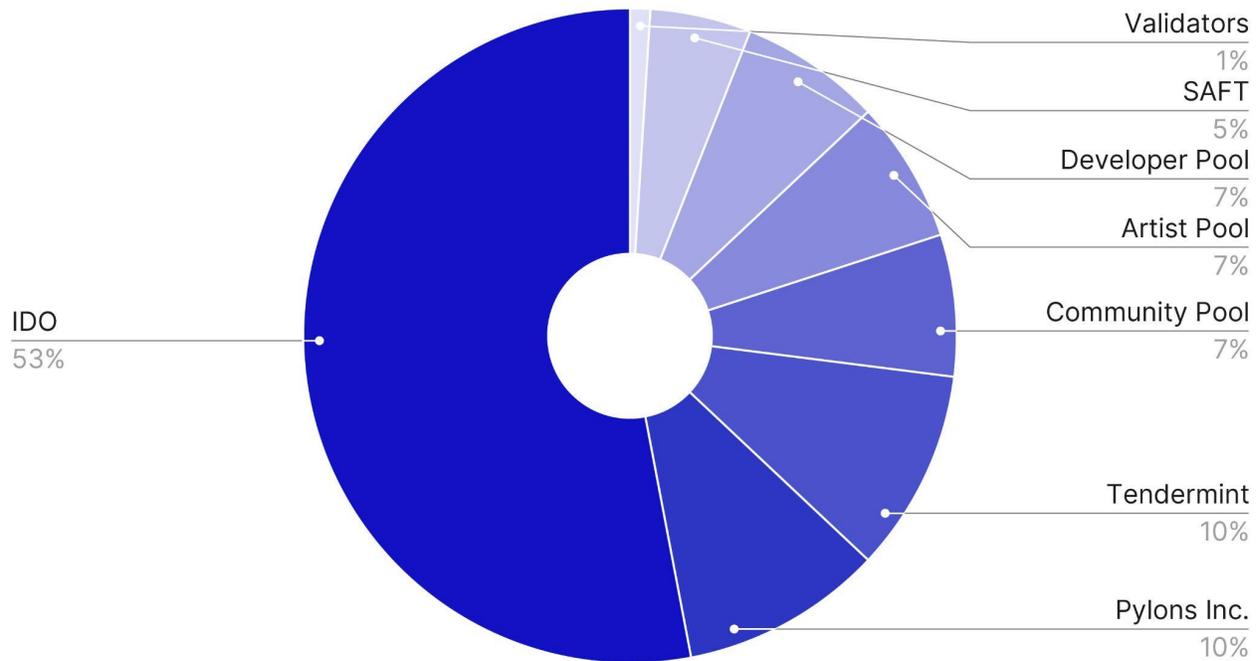
Regular Useful Apps

We will push to onboard a huge number of users by driving the creation of games, ticketing systems, digital fashion tools, etc. We will become the most installed blockchain app in the world, hopefully by an order of magnitude.

IDO

The Bedrock token that governs the Pylons network will initially be held by Pylons Inc. (90%) and Tendermint (10%). Once we have traction and regulatory approval, Pylons Inc. will begin selling tokens using a bonding curve on the Osmosis DEX. Users will probably not be able to withdraw from the pool until a year after entry.

Bedrock Ownership



Venue Integration and Rights Management

Online venues are emerging as the social center of the new culture. Integration of digital property with arbitrary venues is the next step in the economic transformation passing control of the culture and value chain to the creators who generate it.

Roadmap

Starting with our launch partners, Pylons will power importing Pylons-based assets into venues. We will allow venues to set fees to be charged for allowing import, and artists to set licensing rules that allow payments per instance of entry or limiting viewer numbers, for instance.

Further, Pylons will power the ability for 3D artists to make avatars that people can use in any venue on the internet, and get paid for it, and will incentivize venues to support standards for importing those avatars.

Lending

People want to be able to get liquidity from NFTs that have gone up in price without needing to sell them. We will do this by connecting to lending platforms using IBC. We will also take a leading role in expanding the IPC protocols to support encumbrances and remote usage so that an asset being posted as collateral in a loan can still be used unless the loan defaults.

Ecosystem Token

We want to incentivize use of the Pylons network. To that end we will create an ecosystem token that we give to people and they can use for various activities on Pylons, discounts, etc.

Marketplace Connections

We are able to connect into marketplaces like OpenSea, Rarible, Foundation, etc. We will work with them to get our products listed there, and users can choose to list and pay fees to the market.

Referral/Marketing Split

We will add the ability for items to be offered using a coding recipe that pays a split to a referrer.

Part 7

Appendices

The Chain

The Pylons chain is a new entry in the blockchain universe, and the Cosmos galaxy. Fast and scalable, directly connected to fiat currency payment gateways, it is very simple to program and to do commerce with. By avoiding the complex virtual machines of most modern chains, Pylons can create a fast and scalable engine, and by combining IBC and proof-of-authority gateway mechanisms, Pylons ensures that digital goods can be directly purchased by users on the channels they already know how to use.

By building on the Cosmos SDK, Pylons is able to take advantage of the fast and heavily tested PBFT consensus protocol without being tied to any particular set of allowable transactions. By designing a powerful and fast set of primitives called Recipes, Pylons is able to power a rich array of commercial possibilities without exposing itself to the computational traps that require other chains to use unpredictable transaction fees dependent in real time on “gas prices” to control their costs, and so is a much more user-friendly environment.

In connecting to fiat payment gateways, Pylons creates a system of account mirroring, where the value held on the gateway’s books is represented by tokens inside the system, and users who hold the tokens can claim that money from the gateway by burning the tokens. This preserves double-entry bookkeeping, and allows users to choose which gateways they are willing to trust, and how much counterparty exposure they want to take with each one. In this way, users can pay as they are used to, and artists, validators, and staking token holders can receive their payments directly in fiat from established financial players.

The chain is designed for games and gamification, supporting a rich set of transformations, so that a casual mobile game could be designed to function entirely on chain, with gathering, crafting, questing and premium actions all supported directly by the engine. Multi-person interactions will also be supported, with auctions, raffles, and pooled payments. More complex multiplayer interactions can be handled using Inter Blockchain Communication to something like Agoric or Secret Network.

The Mobile App

The Pylons app is a mobile-first experience designed to be as comfortable and easy to use as possible. It shows a user all their transactions, provides consistent access to all their goods, handles importation of goods into venues, allows them to set permissions for connected apps, handles payments, and allows discovery of new apps and venues.

The user experience of the Pylons app is paramount. Cryptocurrency UX is generally terrible, so standing out in that crowd is not a particularly high bar, but Pylons intends to stand out among mobile apps in general, with a beautiful and intuitive experience.

The app's primary function is to take user input and submit it to a blockchain, with the first supported chain being the Pylons chain. When the action is a purchase, the app acquires the SKU being purchased from the user and makes a request to the payment gateway to purchase it. Once it has completed the purchase through the gateway, it submits a signed receipt of the purchase to the Pylons chain, and the chain executes the associated recipe.

When the action is requested by an attached app that only involves items created by that app, Pylons signs the transaction and submits it. When the action involves items from outside the attached app, currency of some kind, or items from another app, the chain requires the user to approve the transaction via a notification or authorization page.

The SDK

We are developing a Dart SDK which allows mobile apps to submit requests to the Pylons app running on the same device. This allows developers to build mobile apps however they prefer, and plug in blockchain-powered goods wherever they want to. The SDK will detect if the Pylons app is installed, and if so whether the user is logged in. The SDK can tell apps what items the user has, purchase or sell the user's items, and activate gamification Recipes. The app manages authorization for these actions using notifications or by taking focus and presenting the authorization question to the user, as appropriate.

Dev Tools

The process of building a Pylons app is simple. Build a mobile app as before, design and publish JSON-defined transition recipes, and use the SDK to allow your users to execute the Recipes. For designing and publishing Recipes, we have a webapp that allows developers to connect to the chain with Keplr and upload JSON recipe files into their cookbook. The process is very lightweight, a developer only needs to install the Keplr chrome extension, and add a library to their mobile app, and they can start adding blockchain-mediated experiences to their product.

Payment Tokens

To accept fiat payments on the Pylons network, payment processors sign up with at least one public key. Merchants who want to process payments through that vendor link their account on that platform with their Pylons app. Users can then purchase through the gateway, acquire a signed receipt for the payment, and submit that payment in a transaction. Pylons will execute the associated recipe, and issue the corresponding payment tokens to the merchant. The network then takes its fee from those tokens, sending it to the staking token holders, and the validators take their fee from that, keeping a portion of the tokens for themselves.

When a vendor or validator wants to cash out, they submit a cash out request with the tokens. The tokens are locked, and the payment is made on the gateway side. When the payment is complete, a receipt for payment is submitted and the tokens are burned.

Ecosystem Tokens

To support growth, advertising, marketing, and engagement, Pylons supports the creation of ecosystem tokens. The first will be called 'pylons', and will be the engagement token for the Pylons ecosystem itself. Governance will allow the creation of other ecosystem tokens for publishers to create them. Ecosystem tokens may be required as inputs in any recipe on the system, and are subject to the network fee.