



Blockchain Use Cases Under Development

Kadena works with clients in multiple industries to help them solve their specific problems through the use of blockchain technology. Our goal is to become partners in the early stages of development. In some cases, the goal is to create joint ventures that share revenue arrangements on applications.

Demonstrated viability in each new product vertical and the capacity to have real revenue generating applications running on top of a blockchain platform allows us to climb the client ladder. This results in onboarding increasingly large institutions onto Kadena's hybrid platform.

Kadena's strength lies in its hybrid platform, which provides both a private blockchain for back office functionality as well as a public blockchain for global interoperability. Descriptions of some of our ongoing projects follow. As more businesses onboard, Kadena shifts from a more hands-on approach to one of a platform service provider (similar to AWS's non-EC2 product line).

One key aspect of each of Kadena's use cases is that we solely work with clients that "understand the vision" of what we're building. Selling them on this vision of hybrid blockchain is how they become our clients.

Our clients clearly see how our platform is the future of blockchain. Portions of cloud computing will eventually migrate as we move to a more serverless world, thus bringing new lines of business to market. Converting clients to our vision has become far easier as the market becomes more educated. Companies of all sizes want to know how blockchain makes business sense.

Fund Management/Fintech

USCF ([Media Coverage](#))

Exchange Traded Funds (ETF) are investment vehicles which have experienced phenomenal growth over the last ten years. The global ETF market now has net assets of \$6 trillion. Many players have entered the industry, leading to crowding and competition with thin margins for fund managers.

USCF has always been at the forefront of innovation in the fund management domain. For example, USCF was one of the earliest pioneers of ETPs (Electronically Traded Products), which enable a basket of commodity related financial instruments to be traded on a national exchange.

USCF's interest in using blockchain to drive the next revolution in fund management complements their business model given their track record of introducing market leading initiatives using innovative technology.

Solution

While the use case is confidential for legal and commercial reasons, Kadena's hybrid offering is the natural choice for fund managers because it provides the scalability demanded by the fund management industry alongside the ability to simultaneously manage data that is both public and confidential in nature.

Kadena's Pact language provides access across both Kadena's public and private blockchain solutions. As a financial services company, USCF finds the use of Proof of Work consensus on Kadena's public blockchain to be aligned with its security needs while offering an onramp to global interoperability.

Strategic Importance

Fund management has proved to be an area in financial services that is particularly well suited to blockchain given its reliance on high data quality and straight through processing. Today, a number of fund managers are working on solutions within this space. We see these efforts as the start of a number of solutions that will bring new efficient financial instruments and provides users with a better investment experience.

Pharmaceutical Track And Trace

Rymedi

Problem

The ability to track and establish provenance of pharmaceuticals and controlled substances is a key challenge for the healthcare industry. Counterfeit goods masquerading as legitimate medicines are rife in the industry, especially in developing nations with the issue of drugs being sold on the grey and black market. Because of the multiple parties involved across the drug supply chain, tracking this type of good can be challenging with traditional technologies.

Solution

Kadena has integrated its hybrid blockchain solution into Rymedi's healthcare platform, enabling the ability to track the provenance of controlled substances. The unique nature of this hybrid blockchain means that a publicly available identifier can be stamped on medicines, and other controlled substances such as CBD, which can then be linked back to a set of records that are secured in a confidential vault as part of the Kadena/Rymedi solution. These records can then be inspected for audit purposes as well as sold on a data marketplace.

Rymedi's offering is broader than the tracking and tracing of controlled substances, providing a broad solution for management of data in the healthcare space. For example, Rymedi is also able to store HIPAA compliant data on the blockchain and has a track record of supporting the elimination of Hepatitis C infections through deploying vaccinations, using blockchain technology to manage related data. They have already begun administering Hepatitis C vaccines in Mongolia (in compliance with the World Health Organization) and are collaborating with Kadena to launch their data management system into the U.S.

Strategic Importance

The long term goal is self-sovereign (e.g. user owned) HIPPA compliant smart contracts, as well as providing a track-and-trace capability across any medical data set. There will also be the ability to provide a data marketplace for eligible participants to buy and sell records.

In the personal medical records domain, proving out the healthcare records management product vertical opens up a market that an estimated 20M Americans must interact with on a daily basis. This is a notoriously difficult product vertical to target. However, upon launch, the vertical has an outsized PaaS-based revenue potential.

Latin America - Fintech And Government Infrastructure

Alteum

Alteum is a technology organization in Latin America that specializes in the interregional development of blockchain and Distributed Ledger Technology (DLT) for enterprises and governments. They chose to work with Kadena because of our speed, scalability, and security as well as the power of the Pact programming language. Pact has enabled them to conceptualize, build and deploy applications in a fraction of the time taken with other platforms.

Alteum, based in Mexico, shows how blockchains can play an important development role in emerging market economies. Alteum runs Alteum.mx, an end to end incubation-to-listing digitized debt platform which is helping solve the challenges of small-to-medium companies who are seeking funding to grow. Kadena is working with Alteum to integrate the Kadena permissioned blockchain as a rail into this exchange.

Problem

Alteum is targeting a number of key challenges in Mexico with one common underlying theme - addressing the lack of information transparency and the imbalance of wealth and access to financial services in the country. Some of the key challenges that Alteum is seeking to address include:

- **SMB access to capital** - Small to medium sized businesses (SMBs) are at a significant disadvantage to larger organizations when it comes to access to capital, thus having to borrow money at interest rates of over 20%.
- **Transparency & accountability** - Mexico ranks 138 out of 180 countries in terms of corruption according to [transparency international](#). Many of its citizens feel disenfranchised and are skeptical of politics.
- **Access to investments** - While the tourism boom has enriched property developers, especially on the Mexican Riviera, the local population is often excluded from the economic benefits as they do not have the purchasing power to own a stake in the land.

Solution

Alteum is using the Kadena blockchain across a number of initiatives to address these key challenges within the country including:

- **A debt tokenization platform for small to medium sized businesses, enabling them to crowdsource debt at far lower rates of interest while enabling individuals to make investments that are typically only available to the venture capital community.**
- **Sovereign voting platform that will enable citizens to make their voice heard across a number of municipal and governmental matters.**
- **Land and commodities tokenization which provides the ability for individuals to purchase land, property and rare metals in a fractionalized form enabling smaller investors to pool their funds for purchasing asset classes that are usually too costly to access.**

Strategic Importance

Our hybrid blockchain platform is inherently global and Alteum serves as our entry point to the Central and South American markets in an efficient way--Kadena's primary commitment is developer support and education. Alteum acts as our champion, training new developers and qualifying sales leads. Kadena has provided educational support to developers in learning Pact, which converted their team from using Solidity and Ethereum. Pact effectively provides the solution to their smart contracts and blockchain platform needs.

Blockchain Ecosystem

Cosmos / Tendermint / Interchain Foundation

Kadena received a grant from the Interchain Foundation to deploy Pact as the first open source smart contract language with Formal Verification in the Cosmos ecosystem. The implementation of Kadena's smart contract language on the Cosmos network is called "Kadenamint."

What is Kadenamint?

Kadenamint is the implementation of our smart contract language Pact on Tendermint, facilitated by the backing and endorsement of the Interchain Foundation. The Cosmos network runs on the Tendermint protocol, the only fully open source permissioned blockchain with a proven consensus protocol. The Tendermint protocol already supports billions in value from companies like Binance. Kadenamint brings blockchain developers an accessible smart contract language and further establishes Pact as the industry standard.

Why is Kadenamint important?

Kadenamint will allow for rapid implementation of apps in a safer way. Entrepreneurs and enterprises alike will have a configuration-free and completely open source smart contract language for business applications. Kadenamint brings the power of user-code Formal Verification, proper multi-signature features and full capabilities to Tendermint.

What people are saying about Kadenamint

- "Kadena is bringing a powerful and safety-oriented smart contract language with Pact. Pact is going to be the next standard smart contract language for the multiparty smart contract workflows that power Defi," said Zaki Manian, Executive Director of Trusted IoT Alliance and advisor to Cosmos and Tendermint. "The focus on Formal Verification, a capabilities-based security model, upgradeability and multisig aligns incredibly well with the design principles of IBC. This integration will provide Pact authors with billions in assets in the wider Cosmos ecosystem."
- "Kadena & Cosmos share the goal of creating a truly interoperable blockchain ecosystem," said Kadena Founder & CEO Will Martino. "Cosmos and Tendermint are industry leaders in Proof of Stake and we are proud to bring Pact to their developer community."
- "Pact on Tendermint, Kadenamint, is a meaningful step towards a unified and secure standard for smart contract languages across blockchain platforms," said Stuart Popejoy, Kadena Founder and President. "Pact's open source Formal Verification and native multi-signature features are aligned with the developer-first design principles of Cosmos' ecosystem."