Team 5 - Crypto Platforms

Team Projects – Project 5

Your team is involved in designing a new cryptocurrency for a sovereign client.

You have been asked to evaluate crypto platforms for the basis of your currency.

As a substitute fiat currency, the government is mindful of certain processes and

regulations that should be supported and continue to operate flawlessly with the

new crypto currency regime as well. These include Anti-Money Laundering (AML),

know your customer (KYC), and Fraud detection.

What does your team think and would suggest as your team's platform of choice to

your client?

Slide 1:

As Cryptocurrencies are gaining popularity as alternatives to regular money. More people are using digital currencies (like Bitcoin) instead of regular money (like dollars) because they're faster, cheaper, and not controlled by banks. Cryptocurrencies give users more control over their money without needing banks. They allow for quick and low-cost international transactions, which is especially useful for people in countries with few banking options. Cryptocurrencies can also can be suitable investments, as their prices can rise significantly. Many users value their privacy because transactions usually don't require personal information. For example, sending $100 through a bank can take days and cost a lot, while Bitcoin transactions are instant and cheaper. Cryptocurrencies offer convenience, lower costs, global access, and investment opportunities.

Governments and banks are focusing more on important issues. Governments and banks are starting to notice cryptocurrencies. Some are thinking about making their own digital money, and others are figuring out how to deal with crypto in their systems.

Governments worldwide are increasingly focusing on cryptocurrencies for several reasons. One primary concern is regulation; authorities want to ensure that cryptocurrencies are used legally and safely, as their anonymity can facilitate illegal activities like money laundering and tax evasion. Many countries are developing regulations for crypto exchanges and tracking transactions to ensure tax compliance. Another concern is stability; governments worry that the widespread use of decentralized cryptocurrencies could undermine national currencies and impact the economy. As a result, some are considering regulations, bans, or even creating their

digital currencies.

Banks also pay attention due to competition from cryptocurrencies, which offer faster and cheaper cross-border transactions. To adapt, some banks provide crypto services and explore blockchain technology to enhance their systems.

Then there is Blockchain Technology; some banks aren't fully adopting cryptocurrencies yet, but the technology behind them, called blockchain, has huge potential. This allows transactions to be recorded securely and transparently without needing a middleman (like a bank). It can make financial systems faster, safer, and more efficient. Banks are experimenting with blockchain to improve payment systems, reduce fraud, and make international transfers faster and cheaper. Some governments and banks are seeing the growing popularity of cryptocurrencies and wondering if they should create their own digital version of their national currency. For example, China is one of the countries leading the way in creating a digital version of its national currency, the digital yuan (also known as e-CNY). It's being tested in different cities and is designed to be a state-controlled alternative to decentralized cryptocurrencies like Bitcoin.Governments and banks are paying attention to cryptocurrencies because they represent a fast-growing form of money that could change the global financial system. By exploring ways to regulate or use these technologies, they're trying to adapt to the changing landscape of finance and stay competitive with new technologies that could eventually replace traditional systems. Governments need to decide how to manage crypto and whether to create their digital currencies to avoid losing control over national economies. Banks are figuring out how to offer crypto-related services while using blockchain tech to improve their systems and stay relevant in a world moving toward digital finance.
In short, cryptos are becoming more important, and governments and banks are trying to figure out how to manage and use them in their systems.

As you see on the chart it has estimated about 1.2 billion in the US market size for the year 2022 in the crypto market. As crypto becomes more advanced, companies are considering investing in crypto options. For example, in the philippines during covid many could not work but they invested money into a game based on gaining income in crypto. **Axie Infinity** is a blockchain-based game where players collect, breed, and battle fantasy creatures called Axies, which are NFTs. Players earn cryptocurrency (SLP and AXS) through in-game activities. The game became popular for its play-to-earn model, allowing players to earn real income. While in the US we used cryptocurrency payments for goods and services. This is used on online shopping, inperson restaurants, and investing overall.

Slide 2:

Cryptocurrencies are becoming more popular due to their speed, affordability, and ease of access. As more people use them for payments, savings, and investments,

governments and financial institutions are taking closer notice. Some are creating regulations, while others are considering launching their own digital currencies. This highlights the importance of compliance—it ensures cryptocurrencies are used legally and securely. When platforms follow regulations, they build user trust, which helps cryptocurrencies gain wider acceptance. Compliance also helps prevent illegal activities like money laundering and fraud.

Crypto platforms focus on three key areas to stay compliant:

- **Anti-Money Laundering (AML):** Rules to stop criminals from using crypto for illegal activities.
- **Know Your Customer (KYC):** Verifying users' identities to prevent fraud and identity theft.
- **Fraud Prevention:** Using technology to detect and prevent fraud, ensuring the safety of users' funds.

As the crypto market grows, regulations continue to evolve to address fraud, money laundering, and data privacy concerns. Compliance with AML and KYC rules is essential for reducing fraud and protecting users. Non-compliance can lead to fines or loss of trust. Staying compliant is crucial for the success and security of the crypto market.

Slide 3:

When looking for a cryptocurrency compliance platform, start with these four important areas: Compliance Features, Scalability, Security, and Governance. These areas help ensure the platform follows regulations and can handle future challenges.

Compliance Features (AML & KYC)

AML and KYC Processes: The platform must include Anti-Money Laundering (AML) and Know Your Customer (KYC) processes. This means it should verify user identities and watch for suspicious transactions.

Regulatory Agility: To remain compliant in different regions, it should quickly adapt to changing rules.

Scalability

- Handling High Volumes: As the crypto market grows, the platform must process many transactions without slowing down.
- Automation: Automating compliance tasks, like monitoring and reporting transactions, helps the platform run more efficiently.

Security

- Data Protection: Protect user data and cryptocurrency with encryption and security measures.
- Fraud Prevention: Use tools to stop unauthorized access and fraud, like multi-factor authentication and regular security checks.

Governance

- Governance structures must be flexible to adapt to changing regulations. Clear roles, transparent reporting, and ongoing training are important. Regular communication with regulators like FinCEN and the SEC is essential to prevent legal changes.

When choosing a crypto compliance platform, focus on these four key areas:

1. Strong AML/KYC features
2. Ability to grow with your needs
3. High security measures
4. Adaptable governance

These factors help reduce risks, ensure you meet regulations, and build trust with users and regulators. This approach clearly outlines how to evaluate a crypto compliance platform.

Slide 4:

1. Leading Platform for Compliance

Ethereum is a popular platform for smart contracts and dApps. It automates tasks like AML and KYC through customizable smart contracts, making compliance efficient and secure.

As an open-source platform, Ethereum also allows developers to build fraud detection apps, helping cryptocurrencies comply with changing regulations.

2. Widely Adopted and Trusted

Ethereum is a trusted platform in the crypto world. It has global users and a large community of developers. This trust is important for creating a new cryptocurrency because it lowers risks and increases confidence among users, regulators, and developers.

3. Customizable Smart Contracts for Regulatory Needs

Ethereum's smart contracts allow customizable solutions for automating compliance tasks like AML, KYC, and fraud detection. Its flexibility lets developers create tailored solutions, making it ideal for meeting regulatory needs and giving control over compliance.

4. Scalable and Secure

Ethereum 2.0 improves scalability, efficiency, and security. It can handle more transactions, making it ideal for a government-backed cryptocurrency. The upgrade also strengthens security to protect user data and transactions from fraud.

5. Adaptable to Changing Regulations

Ethereum's decentralized governance allows it to adapt to changing regulations quickly. This flexibility ensures it can meet evolving AML and KYC requirements, making it ideal for a cryptocurrency project that needs to stay compliant.

Conclusion: Ethereum for a Future-Proof Cryptocurrency

In summary, Ethereum is a strong choice due to its compliance features, scalability, security, and adaptability. Its trusted reputation, strong ecosystem, and evolving

governance make it ideal for launching a sovereign digital currency. Ethereum's smart contracts ensure your cryptocurrency meets AML, KYC, and fraud detection requirements while staying scalable and secure.

Slide 5:

1. Permissioned Blockchain Framework

Hyperledger Fabric is a permissioned blockchain, allowing only authorized participants. This makes it ideal for government-backed cryptocurrencies, ensuring privacy and control.

2. Supports Private Transactions

The platform ensures privacy with private channels and transactions, essential for KYC and AML compliance. Sensitive data is securely processed, meeting regulatory requirements for a sovereign digital currency.

3. Customizable Governance

Hyperledger Fabric provides a customizable governance model, allowing the platform to set rules, permissions, and roles. This flexibility helps create a regulatory framework that adapts to changing government needs and standards.

4. Data Privacy and Access Control

Hyperledger Fabric offers strict access control, ensuring only authorized entities can view specific transaction data. This protects user privacy, meets KYC requirements, and helps prevent fraud while maintaining transparency and auditability.

5. Proven Use in Critical Sectors

Hyperledger Fabric is widely used in sectors like supply chain, finance, and government, proving its reliability and readiness for handling the complexities of a sovereign cryptocurrency.

6. Modular and Scalable

Hyperledger Fabric's modular design supports scalability, handling more transactions and participants as the cryptocurrency grows, making it a sustainable solution for evolving digital economies.

Why Hyperledger Fabric?

- Security: Hyperledger Fabric ensures strong protection for digital assets, data, and transactions.
- Compliance: Its customizable design supports AML and KYC processes.
- Flexibility: It adapts easily to evolving regulations.
- Proven: Used in government and finance, proving its reliability in meeting regulatory needs

Slide 6:

1. Regulatory Flexibility
- The Investopedia article highlights Tezos' on-chain governance, where token holders can vote on network changes. As noted in your slide, this allows for quick

updates and avoids hard forks, making it easy to adapt to regulatory changes like AML and KYC.

1. Security
● Tezos uses formal verification to ensure smart contracts are secure and function as intended, reducing bugs and risks.
1. Scalability
● Tezos can upgrade without forks, ensuring continuous improvement and long-term scalability, vital for government-backed cryptocurrencies.
1. Proven Use Cases
● Tezos is used in finance, governance, and NFTs, matching the use cases on your slide and showing its real-world application.

Conclusion:
Tezos is a trusted platform known for its security, adaptability, and scalability, making it a strong choice for a government-backed cryptocurrency. Its ability to adapt to regulatory changes, secure smart contracts through formal verification, and self-upgrading features ensure long-term sustainability. Additionally, Tezos has proven successful in finance, governance, and digital assets.

Slide 7:
1. **Permissioned Blockchain:** Corda is a permissioned blockchain, ensuring only approved participants can join. This makes it ideal for government-backed cryptocurrencies, offering control and security over sensitive data and transactions.
2. **Compliance Focus:** Corda automatically supports KYC, AML, and fraud detection, ensuring transactions meet regulations and maintaining ongoing compliance with changing rules.
3. **Privacy:** Corda ensures privacy by sharing transactions only with relevant parties, keeping sensitive information secure and preventing unauthorized access.
4. **Scalability:** Corda handles high transaction volumes efficiently, making it perfect for growing government-backed cryptocurrencies. It scales easily as transactions and users increase.
5. **Proven in Finance:** Widely adopted in the finance sector, Corda is trusted by banks for secure, transparent transactions. It's also proven for digital currencies and asset tokenization, demonstrating its ability to handle complex financial transactions.

Conclusion: Corda's focus on permissioned blockchain, compliance, privacy, scalability, and its proven success in finance make it an excellent choice for government-backed cryptocurrencies, ensuring secure, private, and scalable transactions while meeting regulatory needs.

Slide 8:

Criteria	Ethereum	Hyperledger Fabric	Tezos	Corda
Compliance Features	Built-in **KYC**, **AML**, fraud detection via smart contracts	Built-in **KYC**, **AML**, fraud detection	Supports **KYC**, **AML** via governance	Built-in **KYC**, **AML**, fraud detection
Scalability	Improved with **Ethereum 2.0** (PoS)	Highly scalable, enterprise-level	Self-amending, scalable	High transaction volume handling
Security	High security with PoS & Ethereum 2.0	Strong in private networks	Formal verification of contracts	Proven in secure financial transactions
Governance	Decentralized, community-driven	Customizable governance model	On-chain governance	Centralized governance
Adaptability	Easily adaptable via smart contracts	Highly adaptable for regulatory needs	Self-amending for regulatory change	Customizable to meet regulatory needs

Ethereum is the best choice for a sovereign cryptocurrency due to its strong compliance, privacy, scalability, and security features. With proven success in finance and decentralized applications, it provides the flexibility to adapt to changing regulations and meet government needs.

Slide 9:
In conclusion, Ethereum is the best choice for a cryptocurrency platform due to its strong compliance features, scalability, and security. It supports AML, KYC, and fraud detection, while its proven financial success shows its reliability. Ethereum's flexibility allows it to adapt to changing regulations, making it a solid long-term solution.

Citations

U.S. cryptocurrency market size and share report, 2030. U.S. Cryptocurrency Market Size And Share Report, 2030. (n.d.). https://www.grandviewresearch.com/industry-analysis/us-cryptocurrency-market-report

Jr, E. O. (2024, July 27). *The metaverse has bosses too. meet the "managers" of Axie Infinity*. VICE. https://www.vice.com/en/article/the-metaverse-has-bosses-too-meet-the-managers-of-axie-infinity/

Crypto and Digital assets: Regulatory challenges. KPMG. (n.d.). https://kpmg.com/us/en/articles/2022/ten-key-regulatory-challenges-2022-crypto-digital-assets.html#:~:text=Key%20issues%20include%20a%20focus,in%20the%20last%2020%20months.&text=Explore%20here%20insights%20from%20the,key%20regulatory%20challenges%20of%202022.

DAngelo, C. (2024, April 3). *AML Crypto: An AML checklist for cryptocurrency exchanges*. Alessa. https://alessa.com/blog/aml-crypto-checklist/

Hayes, A. (n.d.). *Crypto due diligence and the fiduciary responsibility for financial advisors*. Investopedia. https://www.investopedia.com/financial-responsibility-and-crypto-due-diligence-8385090

Corda. R3. (2024, November 13). https://r3.com/corda/

Why ether stands out among Digital assets. Ark Invest. (n.d.). https://www.ark-invest.com/articles/analyst-research/why-ether-stands-out-among-digital-assets

DAngelo, C. (2024, April 3). *AML Crypto: An AML checklist for cryptocurrency exchanges*. Alessa. https://alessa.com/blog/aml-crypto-checklist/

Ibm. (2024, September 17). *What is hyperledger fabric?*. IBM. https://www.ibm.com/topics/hyperledger

Introduction¶. Introduction - Hyperledger Fabric Docs main documentation. (n.d.). https://hyperledger-fabric.readthedocs.io/en/latest/whatis.html

Team, T. I. (n.d.-a). *Hyperledger fabric: Definition, example, risks and 2.0 version*.

Investopedia. https://www.investopedia.com/terms/h/hyperledger-fabric.asp

Jahn, M. (n.d.). *Tezos (XTZ): Definition and how it works in crypto*. Investopedia. https://www.investopedia.com/terms/t/tezos.asp#:~:text=In%20contrast%20with%20other%20blockchains,users'%20economic%20stake%20in%20Tezos.

Insights, L. (2020, November 24). *The story behind Corda Network's first digital currency and symbol XKD*. Ledger Insights - blockchain for enterprise. https://www.ledgerinsights.com/corda-network-first-digital-currency-symbol-xkd/

Onofrio, M. (2020, July 28). *Asset tokenisation: An idea whose time has come... but not for the reasons you might expect*. Corda. https://corda.net/blog/asset-tokenisation-an-idea-whose-time-has-come-but-not-for-the-reasons-you-might-expect/