Hook

Current models of building and deploying applications are centralised and have a single point of failure that poses major problems for the developer and entrepreneur, such as:

- guaranteeing trust
- security and
- efficient scalability that avoids latency and escalating cost.

Blockchain platforms continue to solve these problems but most of them

- do not take UI/UX seriously
- are not developer-friendly.
- Are increasingly expensive to use, with ridiculous gas fees when faced with scalability.

That is where NEAR comes in.

Intro

Hello guys, today we will be talking NEAR and why we are excited about its potential.

But firstly, what is NEAR?

NEAR is a developer-friendly decentralised platform for **Open Web applications** that runs on a **Layer 1 blockchain** called the NEAR Protocol.

Body

Unlike traditional web applications that run on a centralised server and require certain permissions for users to access and see its code, open web apps are **serverless**, **permissionless** and **permanent**. Their code is written into smart contracts and exists decentralised on the Blockchain.

Serverless - the applications live on the Blockchain
Permissionless - can be accessed and run by anyone
Permanent - will exist as long as the Blockchain exists.

When you hear Layer 1 Blockchain, think Ethereum network, Polkadot, the Bitcoin blockchain etc.

Essentially, these are blockchains that form the foundation of a crypto network, and their primary **function is to provide security and stability**.

Most Layer 1 platforms have a token that is the unit of value of the network and enables holders to use applications on the network. NEAR is no different in that aspect. The platform has its own token, **$NEAR**.

If other blockchain networks and platforms already exist and are more popular, **what makes NEAR different?** you may ask

1

Well, for starters, NEAR actually cares about UX for both developers and end-users, which is a big pain point for developers and users of blockchain platforms. NEAR put in huge efforts to address **usability.**

By implementing a progressive security model NEAR's platform allows developers to build applications with the end-user's UX in mind. The applications simulate the familiar experience of traditional web applications so that end-users can feel right at home with processes like sign up, onboarding, and subscribing to a service.

For developers, NEAR's platform provides a suite that makes the development process seamlessly, from writing their code to testing and finally deployment. Firstly, the platform runs on **Web Assembly (WASM)** that can be compiled from popular languages like C, Rust, and C++.

WASM is used to run code on the web similar to how a virtual machine is used, but with the **added advantage of supporting multiple languages**.

Secondly, the platform allows the **use of familiar and fun languages like Rust and AssemblyScript to write smart contracts**. These are languages that are fun, quickly gaining popularity in developer circles and are also secure.

Ethereum and other Layer 1 blockchains use Solidity, which is run on the Ethereum Virtual Machine. Many developers have, however, complained about the **difficulties in learning and implementing the program**, especially how it **adversely affects the security of smart contracts**.

NEAR is also laser-focused on the fundamentals of **security** and **scalability.**

2

The security problem

NEAR's decentralised platform is operated via nodes all around the world by individuals known as **validators**. These validators secure the blockchain via the consensus algorithm and by staking their $NEAR, which creates a common economic incentive and interest not to sabotage the system. Any malicious validator loses their $NEAR when they try to harm the system.

Decentralisation also **negates the weakness of a single point of failure**. By having multiple nodes scattered worldwide, there is no single point of failure but rather redundancies protected by the programmatically achieved consensus amongst validators.

So, think of Google, AWS or Azure. These are clouds on which users can build and deploy applications, but their data servers are centralised and owned by a single entity (Alphabet, Amazon or Microsoft), creating a single point of failure. Data on these servers can easily be hacked, censored, altered or sold without the knowledge or permission of the developers or end-users.

With NEAR, the data servers (the nodes) are decentralised across the world, creating redundancies of stored data, thus eliminating points of failure. The cloud is controlled by a community instead of a single entity which creates transparency and more security for the apps and data.

3

The Scalability problem

As the number of network users grows, the necessity to increase the throughput capacity (AKA scale) of the apps and network arises. This is because without efficient scaling, the network becomes slow due to overloading, and expensive for users (developers and end-users) who will need to pay more for the fast processing of their requests.

The Ethereum blockchain can only process 20 transactions per second on its main chain, which means that for the everyday user of the network, gas fees go up when the chain is overloaded with transaction requests and as more users come to the network.

The Polygon Network is presently experiencing lagging issues and a hike in gas fees because of increased users on the network.

NEAR has solved the scaling problem by coming up with a technology called **Nightshade**, which leverages the strength of an approach known as **sharding**.

Sharding is an approach in which **work on a network is split among all its participating nodes** and run in parallel.

This is a different approach from other Layer 1s like Ethereum, in which all work has to pass through every single node. This creates latency, low throughput, and, as a result, high gas prices and inefficient scaling.

As proof of the success of the sharding approach, Ethereum is currently scaling its network to Ethereum 2.0, using the sharding model.

4

Another cool feature on NEAR is the ability to seamlessly move assets between other blockchain platforms and NEAR through a technology called the **Rainbow Bridge**.

This means that a developer or user with assets such as tokens, on the Ethereum network can move them back and forth between NEAR and Ethereum quickly and at low costs.

Conclusion

This puts NEAR way ahead of the competition and makes it basically future-proof and opens up a new world of possibilities to developers and entrepreneurs. NEAR is driven by the vision of a digital world that is completely Open Web.

So, when you hear of NEAR, think of:

- A decentralised platform that is focused on Open Web development.
- Runs on a Layer 1 sharding Proof-of-Stake blockchain.
- Has its own unit of value or token, $NEAR
- Proposes infinite scalability at high speed and robust security while maintaining low cost.
- Prioritised usability to improve and enhance UX for developers and end-users
- Has a multi-chain framework allowing you to move assets seamlessly between different blockchains.
- Very cool UI

There you have it, NEAR in a nutshell and thank you for watching.