The Ethereum Virtual Machine (EVM) is what defines the rules for computing a new valid state from block to block. The EVM is a powerful, sandboxed virtual stack embedded within each full Ethereum node, responsible for executing contract bytecode. Contracts are typically written in higher-level languages, like Solidity, then compiled to EVM bytecode.

This means that the machine code is completely isolated from the network, filesystem, or any processes of the host computer. Every node in the Ethereum network runs an EVM instance which allows them to agree on executing the same instructions.

The Ethereum Virtual Machine (EVM) is the core of the Ethereum network and the heart of smart contract deployment and execution. EVM to Ethereum is like a CPU to a computer.

Currently, 80% of the top 10 chains are compatible with the EVM, and even Non-EVM chains like Terra and Solana are making EVM-compatible solutions or can already operate with Ethereum’s account system (NEAR’s Aurora, Solana’s Neon, Polkadot’s Moonbeam, etc.)

EVM-compatible public chains can quickly gain customers and grow in the early stages with the advantages of Ethereum. However, they need to compete with many other chains in the Ethereum ecosystem. Therefore, they will have advantages in terms of user experience, developer friendliness and ecosystem incentives.

Non-EVM compatible chains are more likely to grow in trending categories and niches where new ideas are emerging. NFTs, GameFi, and payments are all areas where heterogeneous public chains can thrive. With their application scenarios, innovation can also be successful in the DeFi market.

It’s impossible to conclude that EVM or non-EVM chains are better as a whole. Rather, each case is different and developers must choose a public chain that fits their project’s development path.