IOHK announces plan to achieve future Cardano smart contract compatibility with all programming languages

- IOHK to launch two developer environments to allow developers to write, deploy and test smart contracts for Cardano
  - The 'KEVM' devnet will allow developers to deploy existing or future Ethereum-based applications on Cardano, meaning 140,000+ smart contracts will be compatible with the blockchain
- The 'IELE' devnet will be the first large scale beta test to allow non-blockchain developers to start to build smart contracts on Cardano without needing to learn a blockchain-specific programming language

3rd December, 2020: Global blockchain engineering company IOHK today announced that it will launch two smart contract developer environments (devnets) for Cardano - KEVM and IELE. KEVM allows developers to deploy any smart contract on the Cardano blockchain platform written in Solidity, the programming language used to implement smart contracts on Ethereum. The other "devnet", IELE, aims to empower developers to write code in *any* programming language and port the resulting functionality onto the Cardano blockchain. These devnets will open smart contract development to all software developers, without the need to learn new programming languages.

The KEVM devnet utilises a version of the Ethereum Virtual Machine (the runtime environment for smart contracts in Ethereum) which has been verified by K - a framework used to create formally verified software. This allows developers to define or implement the formal semantics of a programming language in an intuitive and modular way. It will allow Ethereum developers to write DApps in Solidity and deploy them on Cardano, taking advantage of lower fees, enhanced functionality, formally verified security and quicker speeds.

The IELE devnet will be the first large scale beta test, focussed on ensuring that all programming languages are compatible with Cardano. The goal is to allow developers to build blockchain solutions regardless of their chosen programming language. This means that blockchain development would be opened up to all capable developers, making it possible to build smart contracts and decentralized applications in any non blockchain-specific language, from Java to C++, Python and Rust.

Charles Hoskinson, CEO of IOHK, said: "Universality is the next piece in the puzzle for mainstream blockchain adoption, which is why we're focused on removing barriers to the world of writing smart contracts for blockchain, no matter which languages developers actually know. This new access to the world of writing blockchain-based smart contracts, combined with our focus on industry collaboration, means that blockchain technology will finally be able to live up to its inclusive principles, allowing a diverse network of partners and developers to build innovative and potentially world-changing solutions."

The devnets play a similar role to developer kits for games consoles, where manufacturers provide early access to developers to start creating their games ahead of launch. They will comprise a full suite of

development tools, allowing developers to begin building smart contracts for Cardano. This means that once smart contract functionality is launched on the Cardano mainnet, the Dapps written using the development environments will be available on Cardano from day one.

Both devnets will be launching as standalone networks, and will then be connected as sidechains to the Cardano mainnet in the first half of next year. This is a crucial stage in IOHK's Goguen rollout, which began in November this year with the launch of multi-asset functionality and the Marlowe Playground Alpha release.

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Notes

IELE was created in collaboration between IOHK and Runtime Verification, a company which builds solutions to improve the safety, reliability, and correctness of software systems. It was tested in 2018 and is based on the Mantis codebase, which was developed by IOHK for the Ethereum Classic blockchain.

About IOHK
IOHK is an R&D and product engineering company, committed to using peer-to-peer innovations to provide 21st century services to the 3bn who don't have them.

We build blockchain based products for governments, corporations and academic institutions and upskill people across the world, empowering them to solve the most pressing problems faced by people in their countries.

We have core beliefs in decentralization, privacy, economic identity and financial empowerment for everyone, and stand opposed to centralized control and bureaucracy.

For more information - including interview opportunities, contact:
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