

## **Glow programming language brings smart contract simplicity to Cardano**

- IOHK and MuKn have launched the Glow programming language on the Cardano devnet
- Glow is an open source programming language which allows a 20-line application to perform similarly to a 100-line application written in other languages
- Glow is designed to work on any blockchain, meaning developers will be able to choose a blockchain based on value proposition, rather than being limited by programming language

**25th February, 2021:** Startup [MuKn](#) and global blockchain research and development company [IOHK](#), have announced a partnership to bring the Glow programming language to the [Cardano](#) blockchain. Glow is a domain specific language which will allow anyone to write blockchain-based applications and deploy them on Cardano. Glow is initially being launched on Cardano's Ethereum Virtual Machine (EVM) developer network (devnet), an environment that currently allows developers to write in Solidity (the smart contracts programming language used in Ethereum) and deploy these smart contracts for testing. Glow's compatibility with the EVM will allow developers to write applications with a significantly smaller number of lines of code, simplifying and reducing the cost of the development process.

By broadening the number of programming languages available for writing smart contracts on Cardano, more developers will be able to take advantage of the Cardano platform's lower fees, enhanced functionality, formally verified security and quicker speeds. Glow is also portable. While it currently works on Cardano and Ethereum, in the future it will work with other blockchains. That means that once an app is built, it can be ported and used on other platforms. So, developers will be able to choose to run their application on a blockchain based solely on its merit, rather than being limited by programming language.

**Aparna Jue, Product Director at IOHK, said:** "Interoperability is a key focus for IOHK. We believe that mainstream blockchain adoption will be driven by the industry providing broad compatibility, breaking down barriers between individual blockchains and their native programming languages, allowing a broad range of developers to onboard. This is why languages like Glow are such an important piece of the Cardano puzzle.

"Our devnet programme has allowed us to test and improve smart contract development like never before, with a variety of different languages for developers to explore. These include Plutus, which will be a language for building blockchain-based applications across a number of industries and Marlowe, a domain specific language which could be a game changer for the financial industry, underpinning a whole new global financial system".

**Francois-Rene Rideau, Co-Founder of MuKn, added:** "Writing a DApp is the single hardest thing to do, because you can't afford any mistakes. Mistakes may mean a significant loss of user funds, with active adversaries looking for them. Existing developer tools didn't measure up to the task of creating secure

DApps in this adversarial environment, so MuKn decided to create those tools with Glow. IOHK is a great partner for us because both companies are founded on the principle of thinking in the long term rather than what only works for today. We want to build on stone, not quicksand.”

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## **Notes for editors**

### **Cardano devnets**

The Cardano devnets play a similar role to developer kits for games consoles, where manufacturers provide early access to developers to create their games ahead of launch. They are comprised of developer tools, allowing developers to begin building and testing smart contracts on 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. This is a crucial stage in IOHK's Goguen rollout, which began in November last year and will bring smart contracts to the Cardano mainnet in the first half of this year.

### **What is the Cardano EVM?**

As Cardano thrives and evolves, the network is expanding its reach and interoperability by creating novel avenues of cooperation. We are now opening Cardano up to the Solidity/Ethereum community via a compatible and interoperable platform using their native code.

Such a framework will create a permanent bridge that will enable developers to work seamlessly across both ecosystems, now and into the future

### **What is Marlowe?**

Marlowe is a special-purpose language for financial contracts on Cardano, allowing contracts to be written in the language of finance, rather than using a general-purpose language on the blockchain. Because it is special-purpose, it is easier to read, write and understand Marlowe contracts. It is also safer: some sorts of errors are impossible to write, and we can completely analyse contract behaviour without having to run a contract.

### **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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### **About MuKn**

Pronounced “Moon”, MuKn stands for Mutual Knowledge Systems, Inc., and mutual knowledge sums up our core values: open-source technologies, synergies, and interdisciplinary knowledge. MuKn believes that for blockchain technologies to reach their full potential, they need to be built with safety, usability, and portability in mind.

MuKn built *Glow*, and offers commercial support, custom development and training for the *Glow* open-source ecosystem, in addition to providing formal verification services, custom DApps, code optimization, and private blockchain services.

For more information, email [contact@mukn.io](mailto:contact@mukn.io)