This is my current attempt at explaining the overall concept(s) and core elements of zkEVM - as simply as possible. No simple task as I am sure you are all aware!

[

explaining zkEVM_2023

1920×1080 208 KB

](https://global.discourse-cdn.com/standard17/uploads/taiko/original/1X/aeb47551bb8d5c0953e7549ea1d3f03968e2ff0e.jpeg)

(Infographic as of July 2023)

It is certainly a challenge to convey zkEVM with minimal words while also including all relevant elements (and hopefully still be understood by those who have only a beginner level understanding of the basics of Ethereum itself

). But I hope this adds some level of insight.

On Taiko zkEVM & Type:

While zkEVM is really the holy grail for layer 2 - Taiko is building a Type-1 zkEVM, 1-1 with EVM (ie a true Ethereum-equivalent solution) - the most ‘pure’/powerful kind of zkEVM. Layer1 smart contracts can be reused/redeployed without any need for changes - Taiko zkEVM works with any previous Ethereum EVM system code. This is also the ideal zkEVM to work together with rollups!

For further reading: The Different Types of zkEVM (by Vitalik Buterin)

On Loopring as a L3:

A test Layer 3

Loopring was [just deployed

](https://blogs.loopring.org/loopring-taiko-ready-layer-3/amp/) to Taiko Alpha-3 Testnet, which means Loopring is getting cozy with zkEVM currently as well. We could see this make Loopring even more efficient

as a Layer 3, while opening up the potential to interface with Taiko’s zkEVM in the future (*although please note plans for this are not yet known or announced

)

Future Research?

I was glad to see such a positive response to [the reddit post

](https://www.reddit.com/r/loopringorg/comments/14qwmnm/zkevm_explained_with_loopring_and_taiko_teaming/) I made about this infographic last week + feedback on twitter. I know there are a lot of people who want to understand zkEVM and Taiko better, so I hope I can help demystify relevant ideas & drive discussion with content like this.

I am always open to any feedback or suggestions (I can make edits/updates to this infographic if anyone spots something which can be explained better). I am also interested in doing more deep-dives on various areas of Taiko/zkEVM like this in the coming months. ie EMV Bytecode & ‘Circuits’ are two topics in my sights right now. If you have any other Taiko-related topics you would like to know more about, definitely mention here in the comments - lets help spread that zkEVM knowledge!

Footnote/Shameless self promotion:

I’ve been getting into Loopring/Taiko/zkEVM dev for over a year now and enjoy trying to explain and learn about these topics, sharing that knowledge where possible. I post dev/projects/ramblings mostly over on twitter for those interested in following along!

Find me here -[

](https://twitter.com/Alex_ADEdge)