Quale piattaforma di smart contract scegliere?

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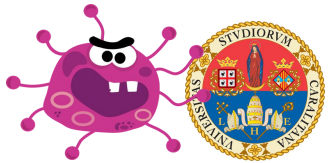

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Which criteria to evaluate smart contract platforms?

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Which criteria to evaluate smart contract platforms?

Security: ability to create contracts which are resistant to attacks from malicious adversaries.

Not measurable, but affected by various factors:

- Completeness and precision of **documentation**
- **Verifiability** of smart contracts
- Security of the **consensus** protocol
- …

Which criteria to evaluate smart contract platforms?

Performance and scalability: ability to efficiently process a growing amount of contracts and transactions.

Defined by multiple metrics:

- **Throughput** (number of transactions / time unit)
- **Latency** (delay between when a tx is sent and when it is committed)
- …

Which criteria to evaluate smart contract platforms?

Expressivity: ability to execute smart contracts with complex behaviors.

Various shades of gray:

- Turing-complete, general purpose language
- Domain-Specific language
- Minimalist tx approval language

Which criteria to evaluate smart contract platforms?

Cost-effectiveness: ability to keep the price of smart contracts development and execution low.

Defined by multiple metrics:

- Development and **auditing** costs
- Transaction **fees**
- **Carbon footprint**
- …

Which criteria to evaluate smart contract platforms?

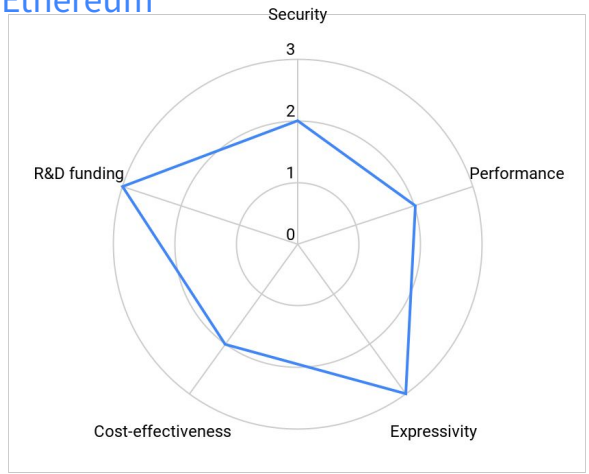
Research & Development funding: availability of grants to fund the research on the foundational aspects of the platform, and the development of its ecosystem of tools.

Other relevant criteria?

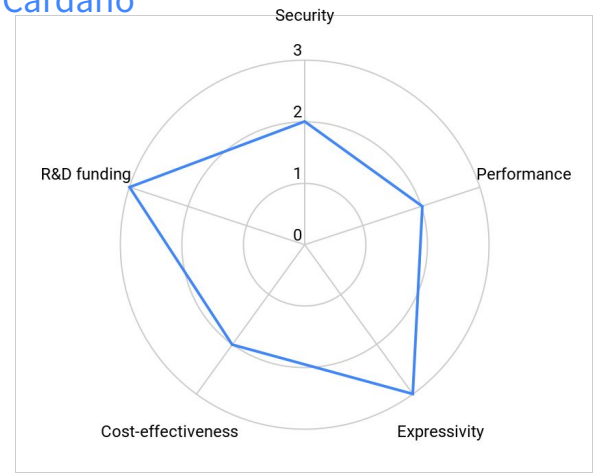
- Privacy
- Decentralization
- Cost of storing data
- Compliance to regulations
- …

Bitcoin

Ethereum

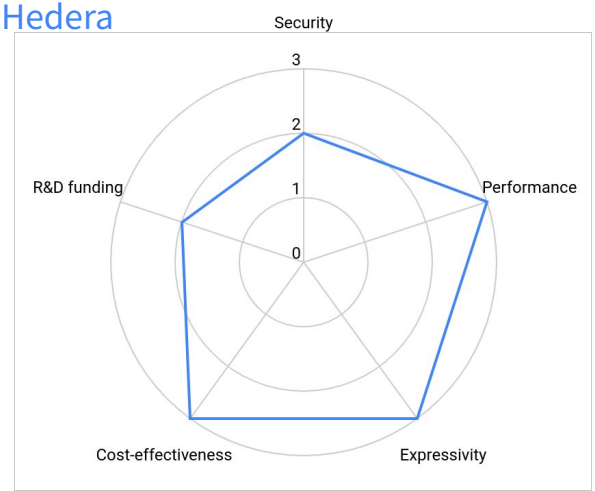


Cardano

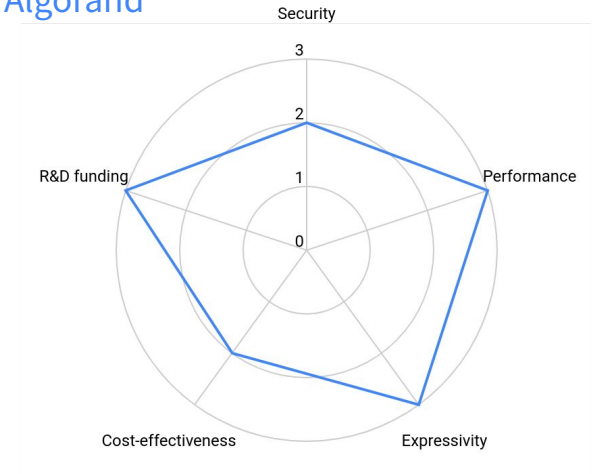


Tezos

Hedera



Algorand



Platform	Throughput (tx/s)	Latency
Bitcoin	3-7	1h
Ethereum	10-100	>13s
Cardano	17-20	2m
Tezos	180*	30h
Hedera	400,000*	10-20s
Algorand	6,000	4s

* = theoretical estimate

Platform	Transaction fees (USD/tx)	Emissions (Wh/tx)
Bitcoin	1—2	360×10^3 — 3700×10^3
Ethereum	1.5—10	0.26 — 8
Cardano	< 0.25	0.037—1.135
Tezos	< 0.01	0.36—11
Hedera	0.0001	0.02—0.04
Algorand	0.0003	0.17 — 5.34

Thanks