DeSci Industry Brief

1/7/25

Summary

DeSci (decentralized science) is a movement inside of the crypto industry dedicated to using crypto funding and technology to create a new way for science to get accomplished outside of normal corporations and academia.

It started in 2021, slowly built in the bear market, and is gaining some traction in the last few months to year. Next year will be a big opportunity for DeSci as it started at the tail end of a crypto cycle so this will be its first time in a bull market to see how much mainstream attention it can get.

I currently know the most about the funding space and least about the healthcare space. As I continue to research I will focus on healthcare and infrastructure as two areas I don't know much yet.

Size of the market

DeSci currently represents an early market, and it is not easy to predict if it will grow faster than BitCoin or other sectors of crypto that have promise like AI coins. Funding to DeSci DAOs and platforms has grown rapidly in 2024, with entities like **VitaDAO** raising **$5M+** in initial investments. As of Jan 7, [according to CoinMarketCap](), Desci tokens had a market cap of 1.7 billion dollars.

Key segments

DWF Ventures has an ecosystem summary [graphic]() for DeSci as of Dec 2024 ([and directory link here]()):

DWF Ventures DeSci Ecosystem Summary
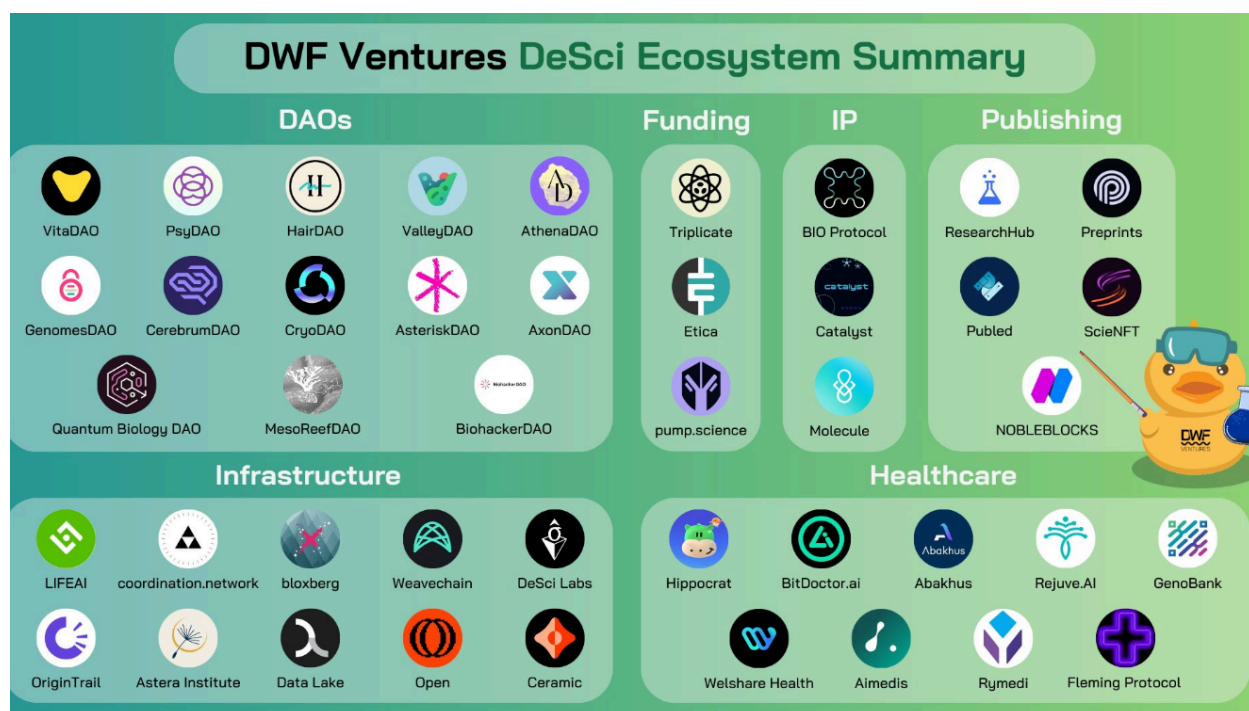
- **Funding:** These projects are centered around providing teams with financial support for research, enabling inclusive, transparent, and flexible funding models. Solutions range from periodic voting on proposals used by @eticaprotocol, to public raises on @pumpdotscience, and include DAOs funding research like BioDAO, AthenaDAO, VitaDAO (backed by Pfizer) and more.
- **Publishing:** Free from influence of centralised parties, these decentralised platforms aim to support open collaboration and accessible sharing of research. @ResearchHub (funded by Brian Armstrong, CoinBase CEO) is one example, with the recent #SciCon discussing updates that could potentially increase participation.
- **Healthcare:** This sub-sector aims to empower individuals, improve transparency, manage health data, and facilitate new healthcare solutions through blockchain technology. Projects like @BitDoctorAI and @Hippocrat_io are examples of teams working in this area.
- **Infrastructure:** Projects here provide the foundation for secure, efficient, and transparent verification and exchange of data and resources in DeSci. One solution is the decentralised knowledge graph created by @origin_trail which enables autonomous AI research.
- **Tokenized Intellectual Property (IP):** Allowing fractional ownership of discoveries. Lastly, projects here open up new opportunities for funding and commercialisation of research, making IP more accessible, and liquid via tokenisation and governance. @Molecule_dao and @bioprotocol are key protocols in this area, and have helped in the growth of many DAOs.

Messari just published a new graphic at the end of 2024:
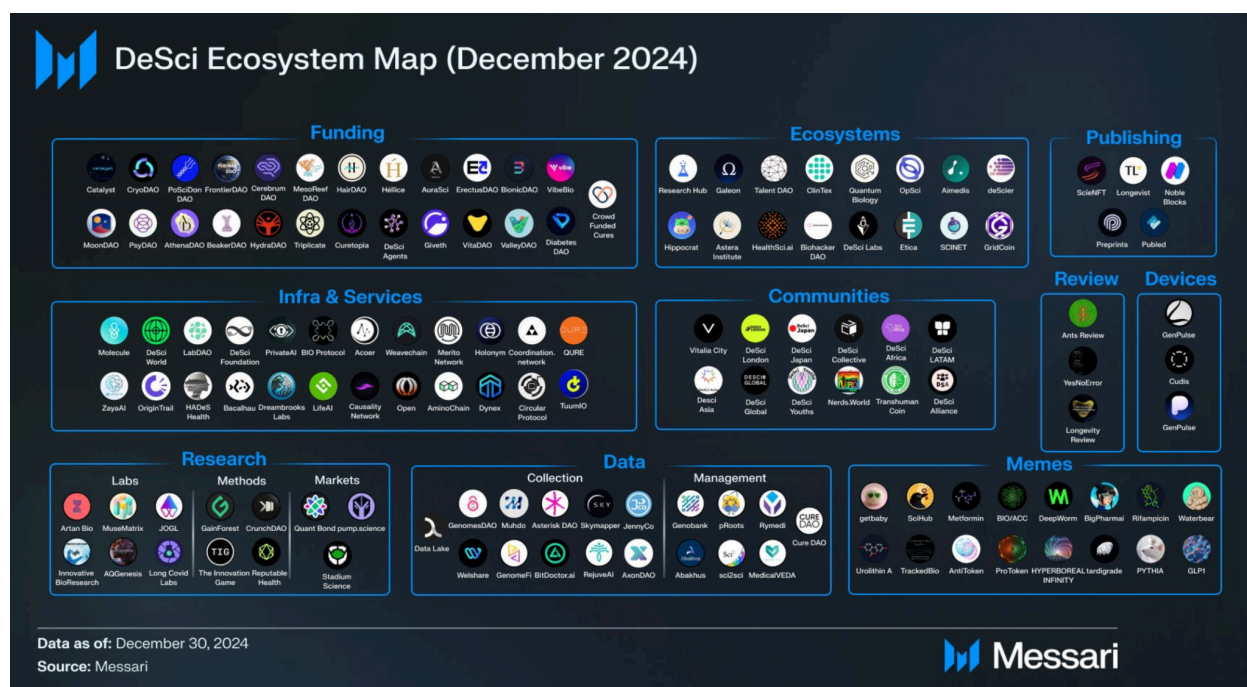
([source](#))

Key tokens ([top 5 by marketcap on coinmarketcap](#))

- [OriginTrail](#) ($400m market cap), largest DeSci token ([source](#))
- [ResearchCoin](#) ($110m)
- [Hippocrat](#) ($65m)
- [Rifampicin](#) (48m)
- [Urolithin](#) (48m)

Key players

- [Bio.xyz](#): Funding and accelerating other DeSci funding DAOs
  - Funded by [Binance Labs](#) + Tokenization (60+m [token](#) sale early Jan 2025)
  - From Bio.xyz team / community
    - https://x.com/jamessinka
    - https://x.com/paulkhls
    - https://x.com/vincentweisser
- [ResearchHub](#): Funded by Brian Armstrong, helps publish research in a more decentralized way than academic journals
- [VitaDAO](#): One of the oldest DeSci DAOs focused on funding longevity research
  - Pfizer Ventures a backer (see full list [here](#))
- [Hippocrat](#)
  - Hippocrat currently provides DID and decentralized data storage solutions for more than 4 million unique health check up recipients, of whom 1.4 million renew their data every year. As Saluscare works with over 800 hospitals addressing

11M patients in the corporate health check market, Hippocrat expects the number of users to grow more rapidly in the next few years.

- OriginTrail
- VC people
  - https://x.com/AdamDraper
- Pump.science?
- Molecule DAO

Challenges to adoption

- Cultural Resistance: Traditional scientific institutions may be slow to adopt decentralized models.
- Monetization & ROI Clarity: Investors may find it challenging to quantify short-term returns in DeSci projects.
- IP Protection Concerns: Open-access models challenge traditional intellectual property systems.
- Regulatory Uncertainty: Blockchain adoption faces legal challenges in various jurisdictions.
- Technical Barriers: The complexity of blockchain technology can limit accessibility for researchers.

Trends & opportunities

- Democratized Research Funding: Transitioning from centralized grant systems to community-driven funding.
- Tokenization of Biotech IP: Providing liquidity for early-stage research assets.
- Integration with AI: DeSci platforms utilizing AI for decentralized data analysis.
- Collaborative Science Incentives: Implementing tokenized reward systems for research contributions.
- Climate Tech & Biotech: DeSci-driven funding for synthetic biology and climate-positive projects.
- Pharma Interest: Pharmaceutical companies exploring innovations through decentralized IP systems.

Porter's 5 Forces analysis

Great industries to enter are ones that have a easy way in that isn't open forever and then have a large moat. Network effects is one of the best examples of that with companies like Facebook and LinkedIn.

DeSci has a potential maker moment coming in the next few years, but faces many challenges including being hot while the market is hot, and then substituted out if a crypto bear market

dampens it. As most of crypto, teams are often lower quality than outside because of the perception which gives an opportunity for easier competition.

Threat of new entrants

- *Moderate:* Open-source platforms reduce barriers, but niche expertise in science and crypto is essential.

Bargaining power of suppliers

- *Low to Moderate:* Scientists gain alternative funding options, decreasing reliance on centralized grants.

Buyer power

- *Moderate to large:* Pharma companies and investors demand proven results and IP clarity.

Threat of Substitution - low/maybe medium

- *High*: Traditional grants, venture capital, and government research programs remain dominant funding models.

Competitive rivalry

- *Moderate:* An increasing number of DeSci projects are vying for limited funding and researcher adoption.

Resources

- https://coinmarketcap.com/community/articles/676441c70e444a65634caf38/?utm_source=coinmarketcap
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