



Decentralized Sovereign Biomed

The Anonymous-First Platform for Medical and Bioinformatics Data

A Partner of



A Member of



Technology partner



Built on



Awards



ETHDenver 2021
United Nations SDG Impact Winner
(as Degenics)



Winner, Best IPFS Use for Identity
(as Degenics)

Team



Ibn Gamal Alhadid
Biologist

Biologist, fitness professional, and wellness enthusiast. Experienced in network marketing, business development and sales throughout a wide range of industries. Coordinates the DeBio.Network Advisors.



Kevin Janada
Front End Developer & Ui Designer

Front-end developer with experience in building several decentralized web applications.



Muhammad Arif
Blockchain & Backend Developer

Experienced Software Engineer with a demonstrated history of working in the hospital & health care industry. Strong engineering professional skilled in SQL, Web Applications, goLang, and Node.js.



Pandu Sastrowardoyo
Ideation

IT & Blockchain consultant and business leader. Former environmental engineer with bioinformatics course certificates and microbiology experience Ex-IBMer, cofounder of multiple Blockchain organizations, as seen in Forbes, CNBC, CNN, Deutsche Welle, Forkast News, and many others.



Advisors



Dr. rer. Nat. Marselina Irasonia Tan

Researcher specializing in molecular and cellular biology in the biomedical science field. Has research experience in the fields of cancer biology, immunology, and whole genome sequencing. Currently teaching university classes on immunology, infection and immunology, cell biology, cancer biology, animal development, and tissue engineering.



Karlia Meitha, Ph.D

Researcher in the molecular biology field with interest in genome editing and the smallRNAs application to support sustainable living. Writes scientific articles regarding plants, within the molecular and physiology field. Leads Biotechnology Master's program with the primary task of creating a generation of creative biotech experts.



dr. Agus Mutamakin, M.Sc

Chief Information Officer of a major govt-owned hospital in Indonesia and a member of the healthcare informatics technical committee of the National Standards Bureau along with the National Telemedical Program. 15 years of experience in management, research, and informatics development in Indonesia



dr. Theza Pellondo'u, Sp.KF

Experienced in medical forensics, medicolegal, and bioethical fields, including assisting to solve criminal cases, doctor-patient conflicts, and other ethical problems within the medical field. Previously the Chairman of Law and Ethics for a private hospital in Jakarta. Currently the Department Head of Forensic and Medicolegal Science, and Bioethics, at a private medical university, and a practicing forensic & medicolegal specialist at the same city.



dr. Hendy Wijaya, M.Biomed

Researcher with a scientific specialty in biochemistry, nutrition, genetics, and metabolic disease. Currently actively teaching Biochemistry and Physiology at the Medical and Pharmaceutical Faculty of a major university. He is also a research consultant for a food supplements company.



Popi Septiani, PhD

Researcher specializing in genomics and bioinformatics. Experienced in genomic data analysis and transcriptomics in the medical and agriculture fields. Currently tenured for Molecular Genetics and Bioinformatics Classes at an Indonesian university.



dr. Kresna Sucandra, MD

Medical doctor who loves technology and entrepreneurship. Currently works as an anesthesiologist, intensivist, lecturer at medical school, and medical clinics co-founder. On the tech side, works as a blockchain development engineer and startup co-founder. Actively contribute to the blockchain ecosystem in Polkadot, Bit.Country and Covalent Ambassador program.





Vision / Mission

We aim to democratize direct-to-consumer genetic & biomedical testing with a privacy-preserving, anonymous-first platform running on a fully decentralized, autonomous infrastructure.

Empower labs of all sizes to collaborate on analyzing genetic and medical data, and offering joint biomedical products

Eliminates risks of genetic discrimination by leveraging blockchain technology and high-level encryption to protect identity — while allowing users to access the benefits of genetic testing.

To further increase privacy and anonymity, DeBio processes all genetic testing payments using cryptocurrencies so that even financial transactions in relation to genetic testing are nearly untraceable to the users.

Problems / Opportunities

Problems

Companies Own -
And Monetized -
Your Data and
Personal ID
([Consumer Reports](#))

Genetic
Discrimination
([WHO](#))

Government
Agencies Access to
Genetic Data
([Medium.com](#))

Opportunities

Genomic Stocks:
The First Inning of
Multi-year
Megatrend
([Forbes](#))

Genetic Testing
Market Will Reach
USD 18.6B By 2025
([Brandessence](#))

47% Genetic Testing
Consumers Are Very
Concerned About
Their Privacy
([PwC](#))



Blockchain for Bioinformatics

Why Decentralize The Platform?

EMPOWER DIY Labs

DIY Biology Labs have created \$100 PCR devices, introduced hundreds of open-access tools, and helped produce everything from coronavirus vaccines to many many transgenic organisms.

DIY Labs are also difficult to monetize and are usually limited to "garage-scale" hobbies.

A decentralized, merit-based blockchain platform that allows DIY Labs access to the \$8billion market of personal genomics changes the value equation for these labs.

GENOME REUSE FOR FUTURE TESTS

Your genome, once sequenced fully, can be reused and retested at any time.

Gain access to insights from future genetic research, or combine your genes with your future spouse to see what your children would be like. All done anonymously and securely, with no chance of "vendor lock in".

DECENTRALIZED CONFIDENCE

Degenics solves a problem with current personal genetic testing services:

Customers can't normally check the efficacy and the accuracy of the sequencing results, unless they have their own labs at home.

Degenics allows each user to recheck the results of 2 labs' test and scores each lab based on accuracy.

This is designed to maintain the quality of the test results while accelerating the growth of the ecosystem.



Solutions / Products

Decentralized
Genetics

Electronic
Medical
Records

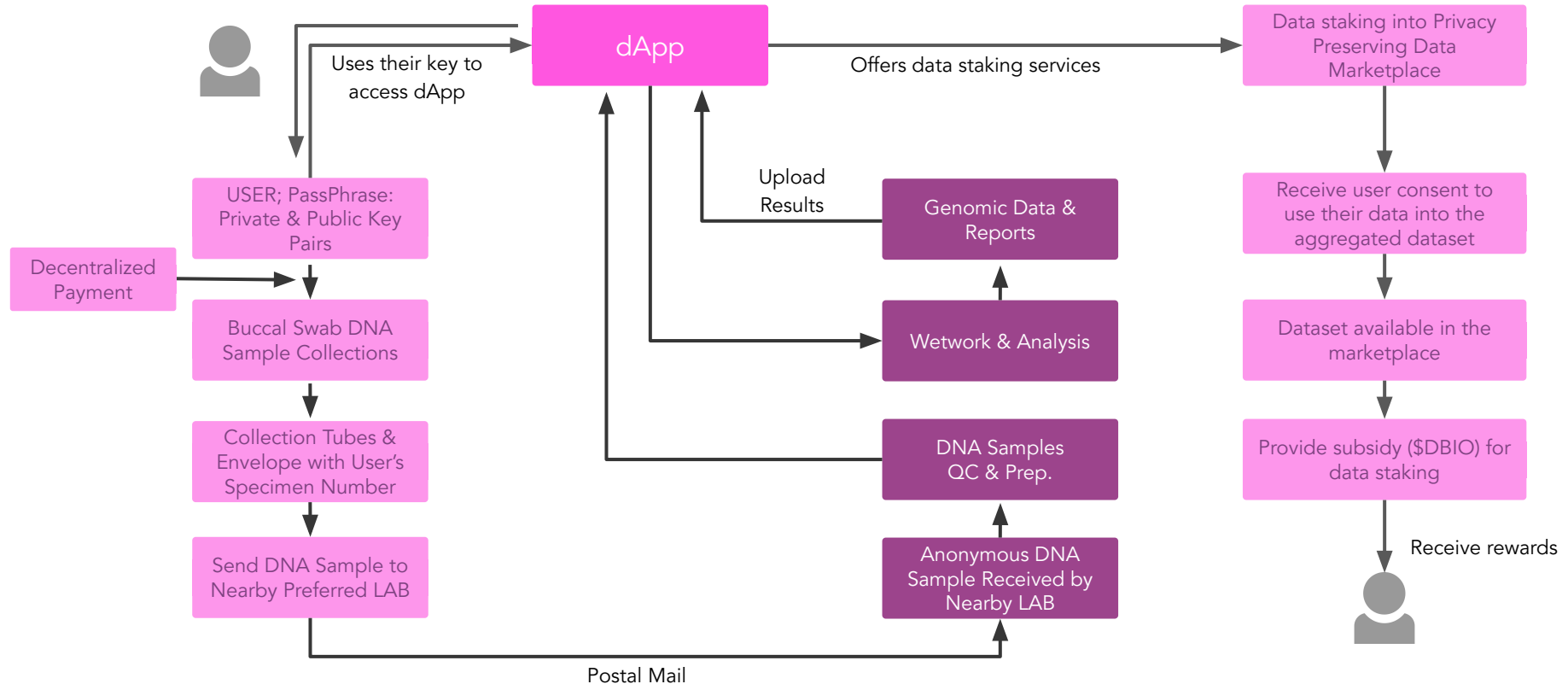
Biomedical
Testing

Collaborative Marketplace based on Non-Fungible Tokens

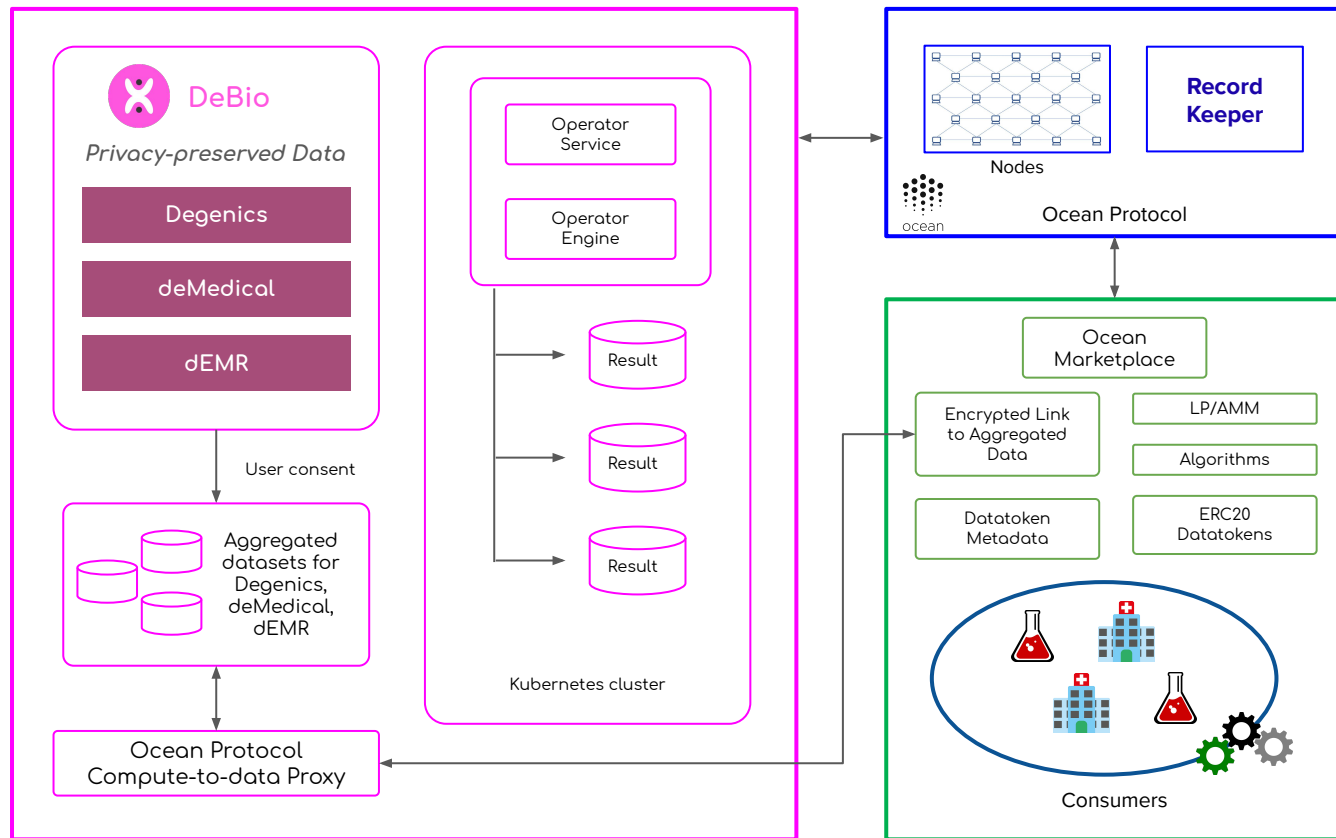
Interlab Data Interchange, Genetic Data Marketplace, Sovereign Ownership.
All Consortium-Governed.



App Architecture



Privacy Computing



The DeBio Network values privacy. Soon, we intend to implement privacy computing concepts within our systems. Privacy computing concepts support privacy preservation. It does so with high concurrency and high efficiency even for a massive number of users. Privacy computing will later be performed on many types of lab results including services from Degenics, deMedical, and dEMR.

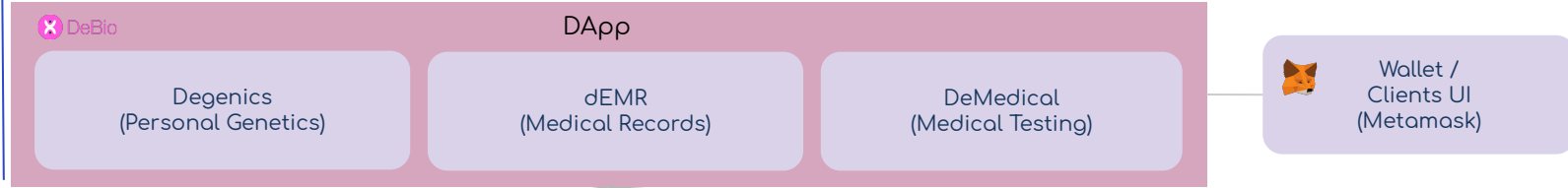
Once users give consent, their aggregated datasets, whether for degenics, deMedical, or dEMR can be sold for in the Ocean Protocol through the Compute-to-data proxy.

The idea behind using Ocean Protocol Compute-to-data is to let data stay on premise yet allow 3rd parties to run specific compute jobs on it to get useful analytics results like averaging or building an AI model.

It is meant to be useful for data sharing in science or technology contexts. It's also meant to be useful for selling private data, while preserving privacy. The private data isn't directly sold; rather, specific access to it is sold, access "for compute eyes only" rather than human eyes.

Technical Architecture

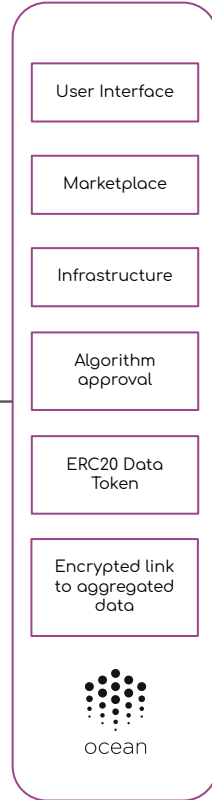
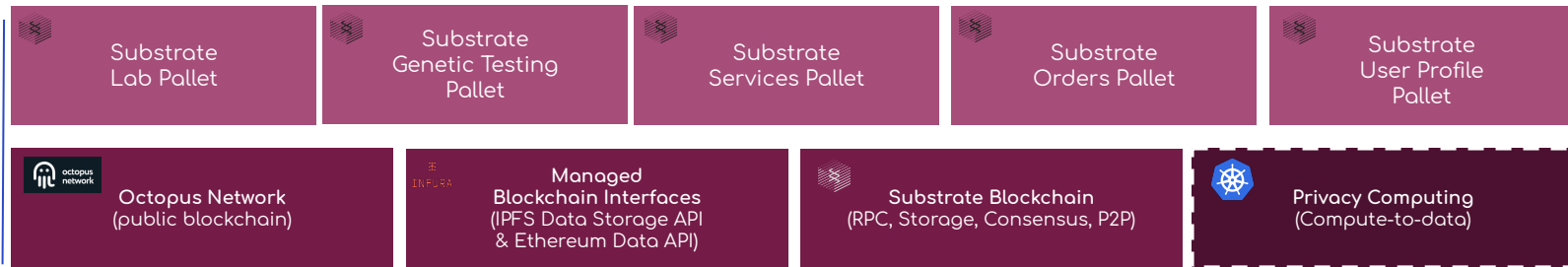
1. Business Logic



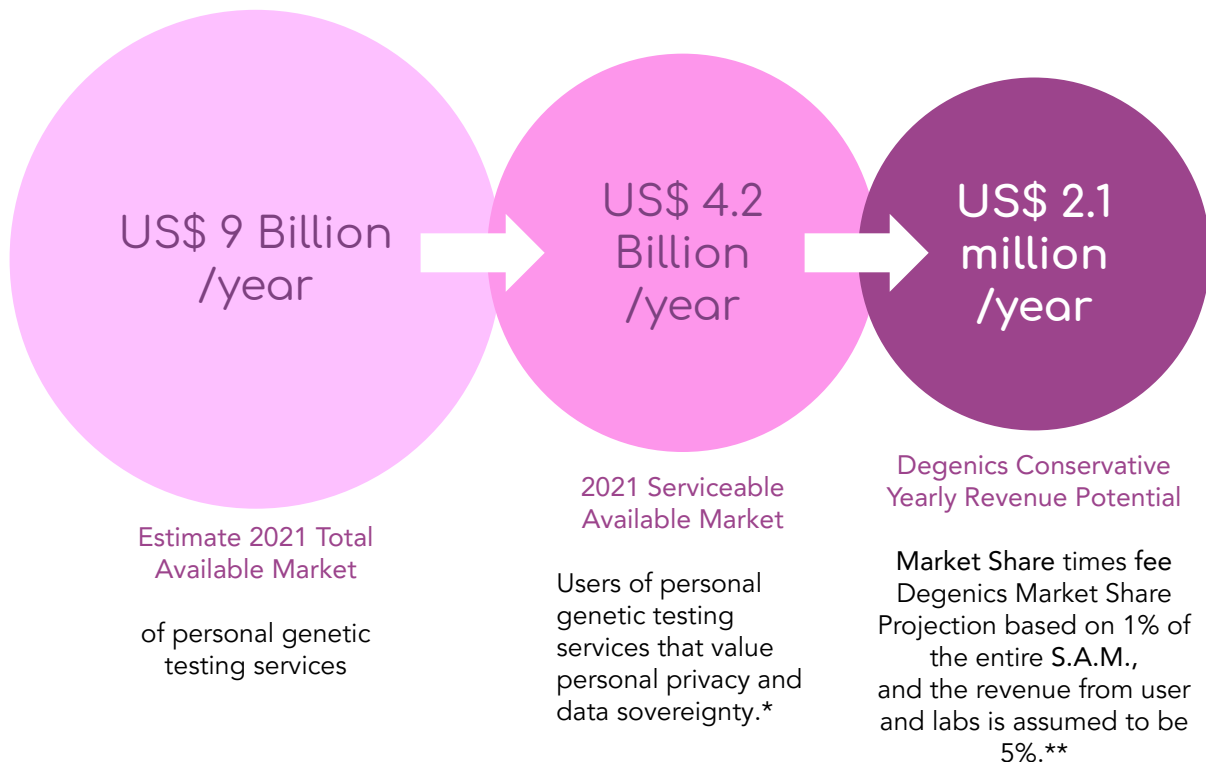
2 & 3. Blockchain Transport, Generic Business Logic



4. Blockchain Infrastructure



Market Potential



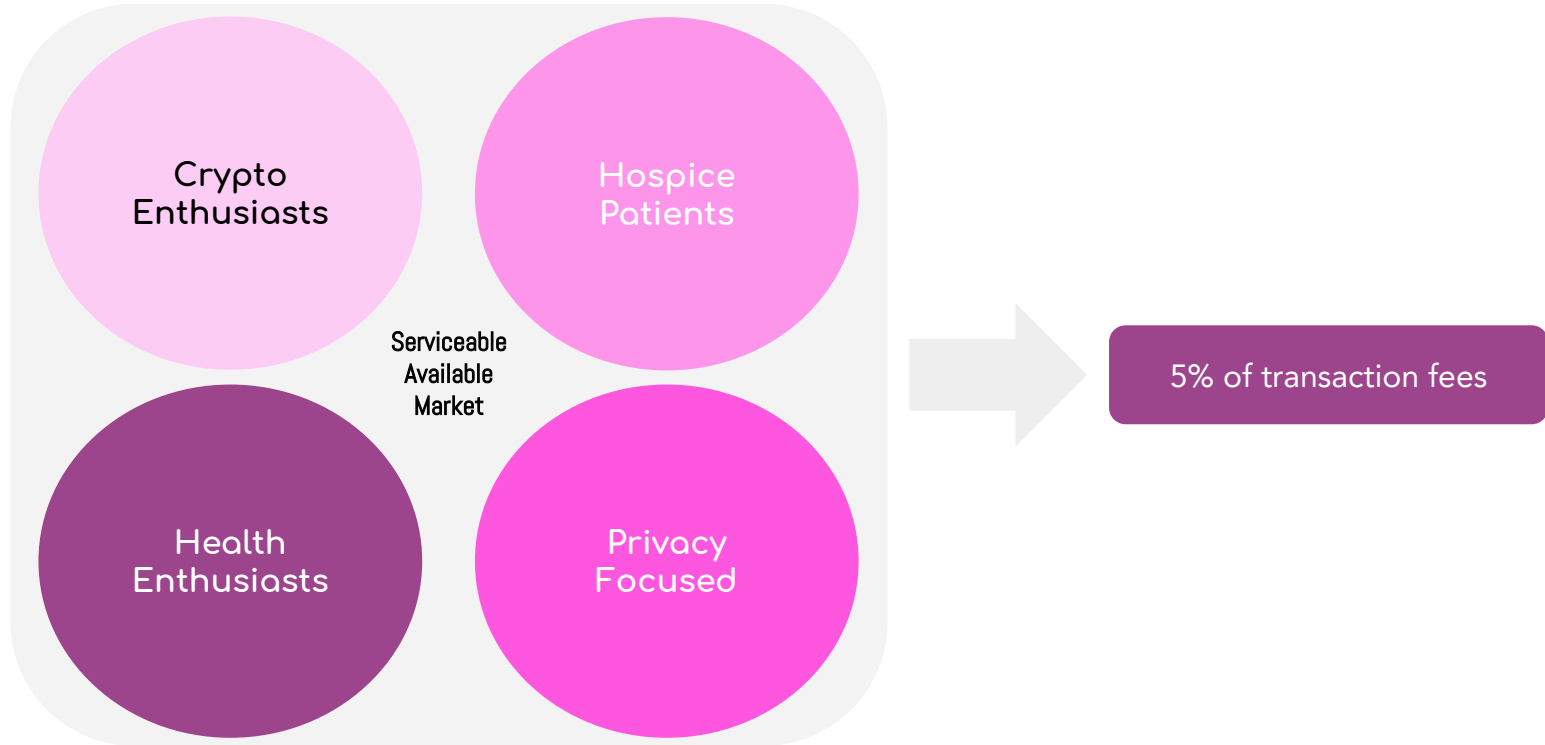
Market CAGR of 11.5 percent
Equates a 5 year revenue of
~US\$13.2 million

*The US comprises the majority of the personal genetic testing market. PricewaterhouseCoopers reports in their "[Protect.me Consumer Intelligence Series](#)", that 47% of US consumers are concerned about the privacy of personal genetic testing. Thus the SAM is derived from US\$9B x 47%, with the assumption that this can be extrapolated to global consumers.

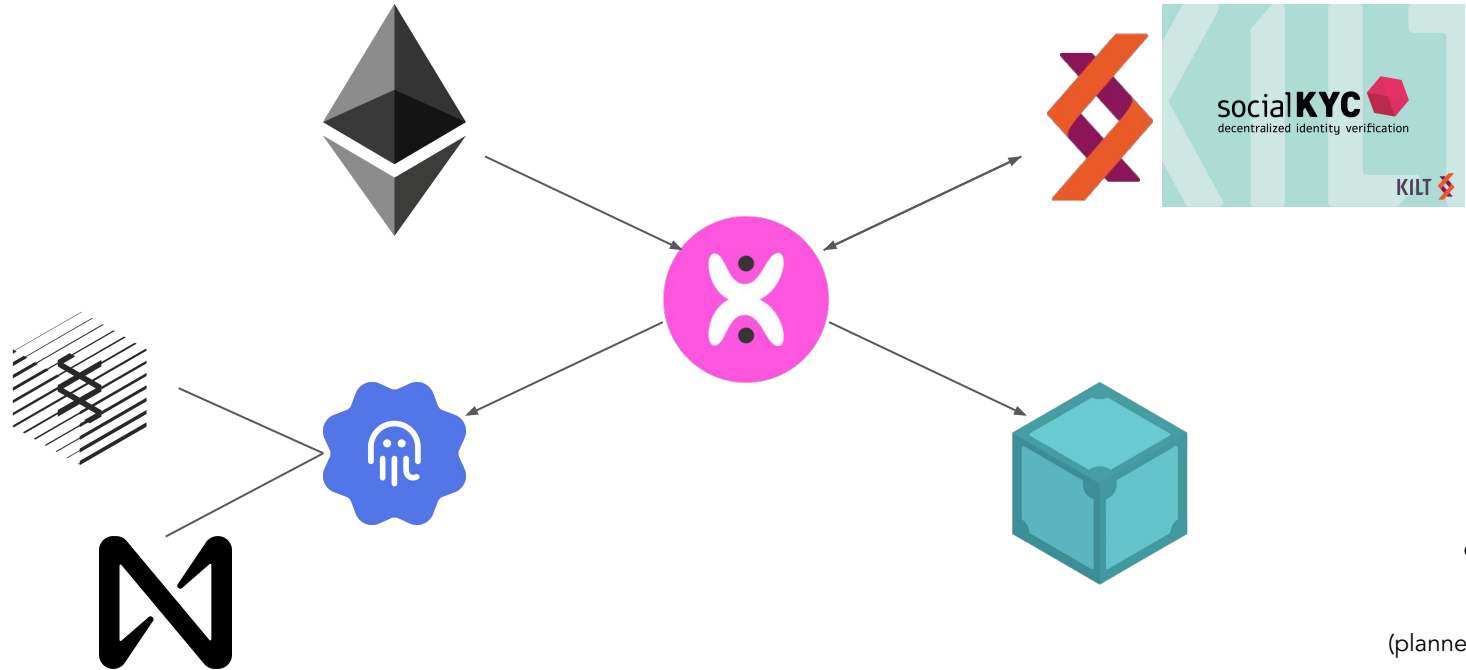
** Whole genome sequencing costs on avg: US\$300-600. Biomarker tests on avg: US\$75-150. Post-sequencing test costs (with no lab network required, and through an existing genome) can generally be <US\$100 and can even be free. (See: <https://genvue.geneticgenie.org/>)



Market Segments / Revenue Streams



Blockchain Technology Interoperability



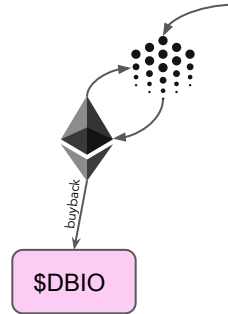
(planned collaboration)

Token Model

Stable Coin: Payment Mechanism for Users
Mainnet Coin (DBIO): Rewards for Users

Governance Token - (GBIO subtoken)
For DAOgenics Labs/Marketplace
Earn lab fees (admin and product registration)
Earn part of product sales

Validators Incentives (DBIO)
LP reward (DBIO)



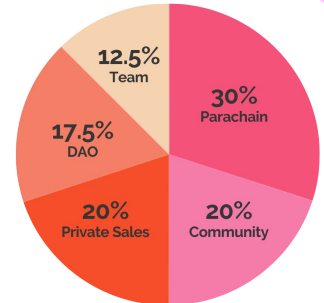
Data Tokens 1 - Genomics (\$GENE)
- Given to purchasers of data products

Data Tokens 2 - Electronic Medical Records (\$EMR)
- Given to hospital accessing patient records

Data Tokens 3 - Biomed (Multiple Types) (\$MED)
- Given to purchasers of data products

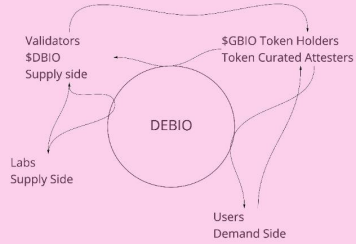
Token Allocation

DeBio plans a balanced token allocation model. A majority does go into parachain investment, with some investment to the founding team and the setup of the DAO. Community tokens and tokens allocated for Private Sales comprise the remaining allocation.

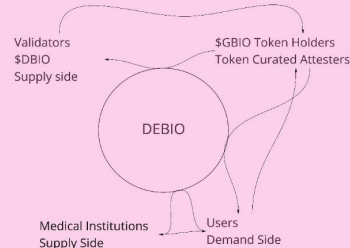


Economic Flywheels Analysis

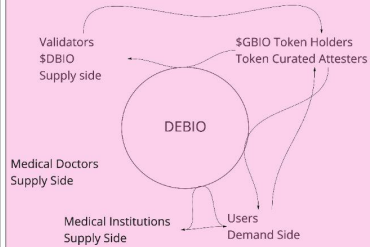
Multi Party Platform: Genetics Use Case



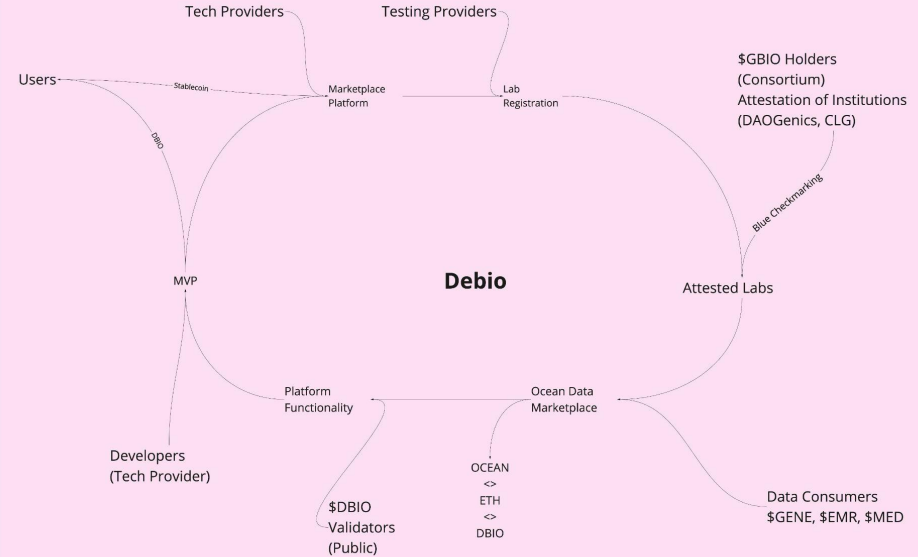
Multi Party Platform: Biomedical Testing



Multi Party Platform: Electronic Medical Records



Network Effects: Applies to \$GENE, \$EMR, and \$MED



Token Fundraising

Total \$DBIO Token Supply: 100 million

Angel Round - Completed Raise USD25k 2.5mil \$DBIO For 2.5% Supply of total supply Fully Diluted Valuation: usd 1mil Initial supply valuation: Usd 200k Usd 1 cents 10% + 9 months vesting	Seed Round - Completed Raise USD250k 5mil \$DBIO For 5% Supply of total supply Fully Diluted Valuation: usd 5 mil Initial supply valuation: Usd 1mil Usd 5 cents 20% + 4 months vesting	Strategic Round Raise USD500k 5mil \$DBIO For 5% Supply of total supply Fully Diluted Valuation: usd 10 mil Initial supply valuation: Usd 2mil Usd 10 cents 30% + 2 months vesting	Private Sale Raise USD750k 5mil \$DBIO For 5% Supply of total supply Fully Diluted Valuation: usd 15 mil Initial supply valuation: Usd 3mil Usd 15 cents No Vesting	IDO + NFT + Launchpad Raise USD500k 2.5mil \$DBIO For 2.5% Supply of total supply Fully Diluted Valuation: usd 20 mil Initial supply valuation: Usd 4mil Usd 20 cents No Vesting
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Thank You!

Try the demo
demo.Degenics.com

Learn More at
debio.network
github.com/Degenics

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