HJUI

The Healthcare Data Marketplace Powered by AI and Web 3.0

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“You might be dirt poor and sitting on a goat in the middle of the Namibia Skeleton Coast Desert, but you probably have 1) a cell phone and 2) the cell phone has apps that record health data like blood pressure, temperature, heart rate, number of paces, calories, etc….that health data is worth something to somebody.”

- *Michael Nova, Re-Work TED AI Healthcare Summit, London, 2017*

“It’s all well and good we now have laws that give us ownership and control of our own health data. But what does it mean to own something if you can’t sell it? Or trade it? Or delete it entirely from the digital sphere if I so choose? How come I can’t sell my own data on Amazon?”

- *Question tweeted during Yaniv Erlich TedMed 2018 talk*

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Abstract

HJUI will change healthcare by putting the consumer in charge with Web 3.0.

In 2021, 1.7 MB of data will have been created every second for every person on earth: 30% of which is healthcare data. Over a lifetime, each person generates the equivalent of more than 300 million books of personal and health-related data (~12 terabytes) that could unlock valuable insights into their wellbeing. This Big Data has the potential to create significant value in health and wellness care by improving outcomes, increasing personalization, helping with disease prevention, and lowering costs. *It is the aggregation, merging, and analyses of such data that creates value.* In corollary, the dominant revenue model for all of tech involves "give me your data, we will analyze with AI and machine learning, then we will market products or ads back to you."

A recent (2020) IBM study found that 81% of consumers say they have become more concerned about how their data is used online (...look what happened to Facebook). In the current Web 2.0, we are missing a system that defines and grants users "digital agency" — the ability to own the rights to their personal data, manage access to this data and, potentially, be compensated fairly for such access. This would make data similar to other forms of personal property: a home, a bank account or even a mobile phone number. (Chakravorti, HBR 2020)

Our company, HJUI , will enable consumers, large companies, and brands to seamlessly share and access rich user data and insights. This will be facilitated through our novel blockchain microservice Xchange (HJUI) built initially on Polygon with a view to migrate to the Constellation's Network Web 3. 0 Hypergraph when available. The HJUI will move towards a Decentralized Autonomous Organization
(DAO) governance model. DAO's are online member-owned communities governed by the consensus of their members instead of centralized leadership. This HJUI hosted state-channel Xchange allows consumers to contribute their commerce, social, IoT, device and health data, receive personal AI-generated recommendations ("HealthGPT"), and compensation. Companies will also gain access to valuable demographic, product purchasing, social, personal genomic and healthcare information, with real insights and outcomes, that can better inform R&D decisions, directions, new product creation, advertising, and product strategy. HJUI is the convergence of Healthcare and IoT Data, AI, and Blockchain; the first healthcare DataDAO.
HJUI enables expanded personal property rights online; and is a place where sellers and buyers can store, explore and procure using a universal portal and wallet. The company is, in-part, a healthcare data node on the mobile edge network implementing *precision public health* with a true immersive experience. By virtue of our DAO treasury, HJUI will reward contributors for outcome data, positive behaviors, and helping with the common good. The future of health and wellness is more about *preventing disease* than treating it.

As oil once was, we believe that data is the most valuable commodity of the current era. Users deserve to be compensated for the value they create with their data. Users also deserve governance over how their data is

used. Multiple possible HJUI DataDAO's will help make this vision a reality by helping to group users into specific categories of interest, such as a NutritionDAO, an ArthritisDAO...or even a NursesDAO.

HJUI is launching HJUI Xchange (HJUI)- a global blockchain Data DAO with a utility token - $HJUI , and a
digital marketplace for buying and selling data that positions owners (i.e. individuals) and buyers of health-related data on a level cost-effective playing field. This entity and architecture neatly resolves the ambiguity regarding data ownership, compensation, and the growing controversies regarding user rights and privacy of individual data records, while still benefiting large corporate clients.
Our Web 3.0 DataDAO blockchain network will enable the deployment of both smart contracts (via off-chain State-channels) and applications (DAPPS) and facilitates uses like direct micropayments to individuals and companies (consumers and buyers) each time data is accessed and/or users purchase HJUI at-home products and services. HJUI DAO can be used to manage assets, build protocols, vote on community
matters, and create niche factions for interests like digital healthcare outcome collecting via NFT for a doctor's practice data.
HJUI X is the first DataDAO digital healthcare platform and token where an immutable record of all consumer data, and engagements will be recorded and validated on a blockchain (state channel) and usher in accountability for the new digital healthcare data-analysis paradigm.

"Today, you can't live your life without a mobile phone. In a few years, you will have to participate in one or more blockchain solutions because they are just more efficient and lower cost"

- David Schatsky, Managing Technology Director, Deloitte (WSJ 2018)

Why Blockchain, and DataDAO's:

Blockchain is a virtual computer and distributed ledger, or database, shared across a public or private computing network that can make a verifiable commitment. Each computer node in the network holds a copy of the ledger, so there is no single point of failure. Every piece of information is mathematically encrypted and added as a new "block" to the chain of historical records.

Various consensus protocols are used to validate a new block with other participants before it can be added to the chain. This prevents fraud or double spending without requiring a central authority. The ledger can also be programmed with "smart contracts," a set of conditions recorded on the blockchain, so that transactions automatically trigger when the conditions are met. For example, smart contracts could be used to automate healthcare data analysis, or insurance-claim payouts.

Blockchain's core advantages are decentralization, cryptographic security, transparency, and immutability. The technology is evolving to be much more than a digital currency, and Silicon Valley sees it as the digital infrastructure atop which the next internet will be built (Web 3.0). If the original internet allows one to easily copy information, the next internet (i.e. blockchain) will let you easily trade ownership of digital goods, like healthcare information. Blockchain technology has the potential to transform health data, placing the patient at the center of the healthcare ecosystem and increasing the security, privacy, and interoperability. This technology could provide a new model for health information exchanges (HIE) by making electronic healthcare records more efficient, disintermediated, and secure. (Deloitte, 2020). For example, every citizen in the Baltic republic of Estonia owns their own medical data, which in a government-supported effort, is stored on a blockchain and easily (but securely) shared.

Building the MVP on Polygon's L1 and then migrating to Constellations L0 Hypergraph will allow HJUI 's state channels to process and validate third party data from multiple blockchains or other data sources (cars, devices, API's, health sensors, and IoT)

Our HJUI DAO is a community-led entity with no central authority. It is fully autonomous and transparent: smart contracts/state channels lay the foundational rules, execute the agreed upon decisions, and at any point, proposals, voting, and even the very code itself can be publicly audited.

Ultimately, a grouped DataDAO is governed entirely by its individual members who collectively make critical decisions about the future of the project, such as technical upgrades and treasury allocations. This is similarly analogous to the Indian financial "Chit Funds," and part of the growing $3 trillion global ecosystem of digital assets that includes cryptocurrency and NFTs.

Opportunity

Mining consumer data is a non-stop activity that technology and brand companies are largely obsessed with. R&D financial outlay for both the consumer products and pharma industry is ~$90 Billion/year. Forward looking enterprises are focused on monetizing the data since it is a critical path for their success. *Now, in every state in the US, a patient/contributor has the legal right to gain access and copies of their entire health records, in whatever format they choose.*

In addition, traditional marketing research often involves assessing the overall market for a good or service, surveying consumers about their likes and dislikes, and conducting focus groups to gauge consumer responses to a new product. The growth of information technology has transformed market research, with a growing number of analysts learning about consumer preferences and buying habits by mining massive sets of quantitative data and employing complex algorithms to uncover patterns and correlations that enable more effective marketing.

Data mining is also projected to help cut costs. If the U.S. healthcare industry continues to use big data to drive efficiency and quality, the value could be significant. Research from McKinsey has shown that system wide data analytics efforts could cut overall healthcare costs by 12-17%. On spending data reported by CMS, the United States national healthcare expenditure reached $3.5 trillion in 2017. Applying a 12-17% savings to that number, the estimated cost reduction from system-wide data analytics efforts could reach between $420 billion and $595 billion.

According to the Cleveland Clinic (2022), value-based care is a method of improving care for patients that also reduces costs. Value-based care emphasizes preventative screenings, lifestyle and dietary changes, and realistic exercise plans for patients, all which minimizes expensive medications and procedures down the road. The future of health and wellness may well depend on using data mining to decrease costs, identify *personalized* treatment plans, products, and best practices; measure effectiveness, detect fraudulent insurance and medical claims, prevent chronic conditions, and ultimately, improve the standard of user care and prevention.

There is significant interest from Wellness, Pharmaceutical, CPG, Big Tech, Insurance, DOD/VA, Hospital Groups, and medical research companies in obtaining high-quality data that has information about a user's demographic, social, healthcare, purchasing trends, treatment and *outcomes*, etc.; but does not include the patient's personal Information. Even back in 2011, more than 1500 companies and organization made healthcare data purchases. (Bloomberg News, 2016). A large Pharma, Pfizer, is on record saying it spends from $14-$30 million/year on acquiring healthcare data. (2016, EMBO Rep)

Consumer datasets have become valuable commodities and can currently be bought or sold without a patient's knowledge or consent. In fact, it is a multibillion-dollar market. (P. Padmanabhan, 2020, CIO Magazine)

For certain types of data, such as our own personal data involving DNA (a single copy of one patient's DNA contains ~200 gigabytes of information; for comparison, in 2018, the *entire* amount of data in the

Bitcoin Blockchain was ~200 gigabytes) and other health indicators, the risk to data availability, privacy, and unconstrained commercial use is especially intense. The conflict is fueled by lack of clarity of the rules of engagement between consumers (patients), their data, and how it's shared with other entities. This is triggering commercial liability, consumer distrust, and legislative adventurism.

We do not believe the resolution to this growing problem will be found in more legislative initiatives or in refinement of commercial entity EULA's.[1] We do believe the resolution will be found by creating an open market, run by our DataDAO, for human data transactions[2], built upon tried-and-true rules of open market engagement: transparency, trusted settlement, clarity about owner and seller rights, and a fair process of redress (for both buyers and sellers) to protect all market participants, including users and corporate consumers. We call this state-channel L_0 solution HJUI X.

The opportunity for the user/data contributor involves receiving personalized health and wellness recommendations, along with generating new sources of income. Our HJUI DataDAO will reward participants by serving as a structure for a healthcare-based Ownership Economy (J. Walden, 2020, Variant; P. Glimcher 2020

Problem and Solution

HJUI enables consumers and brands to *share, access and query* healthcare and demographic data seamlessly through our Xchange. HJUI allows consumers to own their health data, monetize it, and receive
personalized recommendations via our website and app; and for companies to gain access to valuable genomic, biomarker, social, ethnic, outcome, product purchasing, and other information that can better inform R&D decisions, directions, algorithms, advertising, new product creation and recommendations, and strategy.

Blockchain technology and DAO, by reducing the costs of verification and running decentralized networks of exchange, allows for the creation of ecosystems where the benefits from network effects and shared digital infrastructure do not come at the cost of increased market power and data access by platform operators. Blockchains can contain any arbitrary data, and cryptocurrency is not a required component (e.g., Valenta and Sandner 2017). Since most of Biomedical information is available in data silos of structured and unstructured formats (doctor letters, patient records, omics data, IoT device data) a broad range of additional applications has been identified and developed for blockchain. These include secure storage, permanent preservation of records, proof-of-existence, contract execution, decentralized virtual reality, and distributed device management across diverse sectors including supply chain, business, government, *healthcare*, *Internet of Things (IoT) and sensors*, privacy, and data management. In addition, decentralized applications (DAPPS) on the blockchain are increasingly using ANN-based AI and Machine Learning to learn and adapt.[3]

Through blockchain-based networks, individuals and organizations can source ideas, information, capital, and labor, and enforce contracts for digital assets with substantially reduced frictions. *Blockchain was a priority topic at Davos 2020; a World Economic Forum survey suggested that 10 percent of global GDP will be stored on blockchain by 2027*. Within healthcare, blockchain could be the key to unlocking the value of data availability and exchange across providers (ie MD's), patients, insurers, companies, and researchers. Blockchain-based healthcare records and recommendation-engines can not only facilitate increased administrative efficiency, but also give researchers access to the historical, non–patient identifiable data sets crucial for advancements in healthcare research. Tweaking healthcare legislation to allow patients to keep their own medical records with Blockchain self-sovereign identity wallets instead of hospital EHRs would also reduce costs by $72B. (January Walker, US Congress Utah04, 6.29.22)

Smart/State-Channel contracts would give patients more control over their data and even the ability to *commercialize data access*. For example, individual patients could work directly with pharmaceutical companies to use their data in drug research or decentralized clinical trials. Here is potential for private businesses to build platforms that enhance the value of patient data and share

the additional profits directly with patients. A good example is a platform for sharing patient data for research on Alzheimer's disease. It is the nation's most expensive disease, affecting over 5 million Americans each year. Despite notable efforts, such as the Alzheimer's Association' Trialmatch program, it is very difficult to find qualified patients to enroll in clinical trials. (N. Yagari, Brookings, 2019)

Some other possible HJUI DAO (MultiDAO) examples include clinical practitioners such as MD's,

Pharmacist's, or Veterinarians/HCP's using an NFT to secure their practice knowledge outcome base; or a PetDAO, consisting of trait and pet health data; or even a Women's Healthcare DAO. Blockchain is also being combined with IoT sensors to ensure the integrity of the cold chain (logistics of storage and distribution at low temperatures) for drugs, blood, and organs. The proliferation of mobile health apps, biometric trackers and remote patient monitoring devices have also given rise to large quantities of additional healthcare data. When structured and analyzed, this data can provide real-world and outcome evidence that could be used across the entire healthcare ecosystem, including in clinical trials, evaluating treatment outcomes, recommending products, and post-care safety monitoring. HJUI will assist large
companies/academic groups to expand and get access to this new richer data.
The innovation of the HJUI X technology will deliver a programmatic healthcare data exchange with the speed, security, and auditability of buying and selling consumer data on a distributed network, powered by token economics, and will transform the industry.

Value Proposition

HJUI will level the playing field and allow consumers to *participate in the value* of their own data *and* help the common good by pooling data to augment public health efforts. At the same time, benefiting

corporate clients with richer, pre-analyzed, and more cost-effective and secure datasets. Having genetic information *and* longitudinal data allows the clearest picture on patients' epidemiology, progression, product usage, outcome, and overall experience (www.assets.ey.com). Even on alternative markets, the value of healthcare data can be significantly higher than various types of financial records. According to Experian, a single patient record can sell for $1000 or higher on the black market, depending on how complete the record is; this is nearly fifty times higher than standard credit card or social media records. (Experian, 2020)

Below (table 1) shows the actual average monetary value of certain healthcare data (2020). A genetic test + clinical/phenotypic/EHR data is worth from $1200 - $5000 per patient:

HJUI will clarify and secure definitive data ownership rights via building an ever-growing ledger of

completed transactions, and documentation of the satisfaction between buyers and sellers. Open distributed markets are self-reinforcing in this regard, *providing incentives for both parties* in a transaction to meet their stated commitments. A new real-time revenue stream is being created by HJUI , that involves feeless value exchange between contributors, CPGs, and direct clients.

Blockchain is also gaining traction as a tool that could help solve some of the healthcare industry's age-old problems that have resulted in wasteful spending and higher costs for providers, insurers and patients. Insurance companies anticipate that blockchain will be the key that unlocks barriers to healthcare data-sharing and ultimately enables an industrywide shift to value-based care.

HJUI will reestablish the intended value exchange on Web 3.0 between Large Corporate CPG’s, Tech

Companies, Pharma Companies, DOD/VA, Insurance, etc., and data Contributors by supporting the real-time buying, selling, and utilization of Healthcare Data and Outcomes via a novel decentralized L_0 platform.

Establishing a blockchain market platform like HJUI Xchange requires bringing data buyers and sellers together with a common purpose at substantial large scales. Creating a market platform also involves the massing of an appropriate mix of "data inventory" that is *relevant to buyers* and remunerative to sellers. By leveraging blockchain, we can create a fully scalable decentralized healthcare exchange that adheres to industry standards, government regulation, the FDA, privacy laws such as CDPR, GIPA (California), CCPA and HIPAA, and GINA compliance.

The primary corporate markets for our backend portal and data analysis services includes many companies, research institutions, and healthcare/wellness groups and programs: consumer product companies (Nestle, P&G, Estee Lauder, Bayer, Unilever, CVS, Walgreens, Nestle-Purina); Tech Companies (Google, IBM, Facebook, Apple, Microsoft); Pharma companies (Merck, J&J, Roche, Pfizer); Department of Defense (DOD) and Veterans Administration (VA); Insurance Companies (MetLife, Aetna); Hospital groups and individual physician offices (Evergreen, Florida Hospital, Humana, HCA, Dignity, Trinity); Advertising companies; Cannabis companies (Tilray, Cura) and any other corporate/academic group that is interested in developing better outcomes, and/or personalized products for their users and clients.

HJUI X is the State Channel facilitating real-time usage, recommendations, and payment on digital consumer data.

The HJUI X Protocol features:

- Low fees/subscription model for the buying and selling of HDM healthcare data (see HDM below)
    - TBD buyer/CPG/Pharma/Tech data subscription
    - TBD seller HJUI subscription service
- Interoperability between existing, established incumbent technology and standards
- Transparency of the supply path through an immutable record of all data on the HJUI
- Distributed security and privacy
- Instant reconciliation of CPG/Pharma's spend and contributor revenue for supply path audits
- All Privacy laws (GDPR, HIPAA, Privacy Shield, GIPA) compliance; consent execution, and GINA law for any healthcare report testing
- Maintaining an immutable, distributed and queryable record of all exchange transactions.
- Advanced Market-Making Algorithms to effectively utilize the now accessible aggregated HDM (see below, Table 2) datasets to create strategies that support marketers KPIs (Brand Awareness, Brand Recall, Purchase Intent, Conversion)
- Community ownership and governance of the network
- Operator Rewards for liquidity staking

Operations & Roadmap

HJUI - a global, digital marketplace for data buying and selling transactions; and generating real-time
product and lifestyle recommendations directly back to the contributor. We resolve this by using DAO blockchain for the budgetary/digital primitive system, and cryptocurrency for direct micropayments to consumers for their data; and as data is accessed by companies.

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Phase 1, We will provide a mobile app with AI recommendation engine, at-home healthcare testing (lab tests as a service) and data collection/analysis solutions (products, AI ChatGPT interface, messaging, and smart investment instrument and wallet) to users and reward them via our token. This will also help enable consumer brands and white label partners to activate large-scale human data analysis so they can integrate this data into their product offerings, advertising, algorithms, and R&D processes. Initial users/contributors to the platform will come through university students, cryptocurrency networks, etc., and will be able to supply HJUI with their own social, demographic, questionnaire, Electronic Health Records (EHR's) and biomarker test results.

Phase 2, The app will evolve into an interactive chat-like interface for asking users questions about themselves and the world around them. We will also create substantial incentives and tools for collectors and users of human data records to participate and benefit from data aggregation on our platform and analysis portal. A robust and simple portal will be completed that allows for any group to analyze (or "mine") any type of relevant HDM, and user outcome recommendations. The app will also have direct contact to healthcare and telemedicine services.

Phase 3, We will deliver a highly efficient and productive monetization engine for the aggregated data in a way that ensures a fair exchange of value between individuals, data collectors, and data users.

Instead of using traditional databases, decentralized blockchain ledger technology is necessary to use in our HJUI system for several reasons including 1) healthcare and user data has value and is a movable commodity between consumers and multiple ledgers, and a user can interact directly with a data consumer with no intermediary, 2) a semi-permissioned blockchain can provide real-time ledger updates, append-only logs, friction free data transfer, and ultimate immutable privacy and security for patient data; 3) blockchain technology lowers reconciliation costs (rent-free) and need for distributed databases by overcoming barriers of trust and by bringing transparency and automation to existing processes (including between IoT devices which are very prevalent in healthcare and are only L_0 enabled); and 4) can provide transaction speed and finality of settlement directly between consumers and users (i.e., large corporate clients); including micro-payment options (fractions of a cent, like "Satoshi's") which more precisely manage scarce resources; and finally 5) by using AI on the blockchain, personalized medicine will also benefit; since by using newer encryption mechanisms it will be technically possible to store medical information such as a person's DNA (as NFT) on our state-channel and obtain medical results privately (Grigg and Sgantzos; 2019).

Target Markets

"If we can convince a buyer of one of our premium cosmetic products that our product is not only effective, but effective because it is tailored specifically for that buyer's genetics and lifestyle, I no longer have a customer, but a disciple."

- *Chief of Brand, Global Cosmetics Company*

HJUI is initially focused on the Wellness and Consumer Product Sector/large Consumer Brands as targets to access consumer data. Rather than solely enter the market (initially) in the pharma sector, we will focus on an equally large and diverse Consumer Product segment (wellness, nutrition, skincare, cannabis, etc.). This segment is just now beginning to mine the product development opportunities through data-driven processes using individual user characteristics such as DNA sequence patterns, sensor data, ethnicity, biomarkers, demographics, social, etc. This opportunity is only an option now that consumers have become comfortable with commercialized wellness at-home biomarker and DNA tests and therefore easily creating a database of proper size to be statistically meaningful:

The HJUI data model is especially well-suited to Consumer Products and their " personalization
imperative." Our specialization is a category of digital aggregated data called Human Data Markers (HDM), which we have pioneered at HJUI . HDM datasets and profiles are the product of combining ethnicity, foundational biomarker and genomic (DNA) records with selected health, lifestyle, real-time sensor IoT, social, and demographic data (see Table 2). Each user will get their own NFT based on their secure data. The careful grouping of these ethnicities and data types creates superior optimization potential for a wide

variety of products from food to cosmetics to cannabis compounds, and to health and fitness products, services, and regimens.[4]

For example, CVS the healthcare giant released its annual Health Insights survey (7.12.22), which polled 1,000 consumers and found that 85% believe personalized care is very important. In addition, 83% said they want their primary care physician to know about their family medical history, genetics, and inherited lifestyle habits. Digging deeper, the report finds that patients expect their providers to understand their lifestyles: 83% want their doctors to understand lifestyle habits that impact their health, while 80% want them to understand their health goals.

The CVS survey found patients have a renewed interest in preventive care. Half of those surveyed said their annual wellness visit is what most often leads them to meet with their primary care provider. Of people aged 65 and over, 79% said this was the main reason. More than half (54%) said holistic options including diet, exercise and counseling are very important to them.

Understanding the relationships between nutrition, lifestyle, and health is among the highest priorities for public health. As an example, in 2016, over consumption of food detrimental to health and under consumption of food beneficial for health are the leading causes of health burden in the United States, responsible for more than 10,000,000 disability-adjusted life years (DALYs) due to non-communicable chronic diseases. Based on the end-user, the food and groceries segment commanded the largest share of the artificial intelligence in retail market in 2021 (source; MMR, 2022). HDM data profiling is the greatest potential catalyst to activate mass-personalization, a strategic imperative now considered fundamental for most global consumer brands. It is a known fact that genetics plus lifestyle/behavior accounts for ~70% of all healthcare or wellness outcomes (AETNA, 2019).

The net result of this kind of data combination can significantly improve the statistical indications (or correlations) between HDM groupings and product effectiveness or desirability for those consumers who match the HDM profile:

HDM Application Topology

Category	Sub-Category	Correlation	HDM Representation Example	Product Rec Example
Food	Nutrition	Mineral Absorption	Vit D (CG/FUT gene); biomarker (selenium), EMR, etc.	Nestle Atrium – D+S supplement
Food	Nutrition	Weight Management	Low Fat (FTO gene); diet, BMI, calorie burn, lipids, etc.	
Food	Allergies	IBS/Celiac	Gluten (HLA gene), diet, ethnic group, zip code, etc.	
Food	Digestion/Absorb			
Food	Diet	Antiaging	Med Diet (Omega/FADS gene), epigenetics, age, etc.	
Cosmetic	Photoaging	Wrinkles/Collagen	MMP gene, Sun exposure. zip code, epigenetics	Walgreens/Boots #7 Cream
Cosmetic	Anti-Aging	Glycation	AGER, Sugar Intake, alcohol, EMR	
Cosmetic/Food	Acne	Dairy/Retinol	Intergenic, diet, Px (retinol), age, etc.	
Cosmetic	Nutrition	Antiaging	Hyaluronic acid, Px, Diet, glycation, epigenetics, etc.	
AWS&T	Cannabis	Sleep Enhancement	THC/CBD metabolism, CYCL1, Px, caffeine, age, EMR	ReLeaf – AC/DC Chewable
AWS&T	Cannabis	Pain Management	THC/CBD metabolism, Opioid rec, Px. etc.	
AWS&T	Cannabis	Eating Disorder	THC/CBD metabolism, DrD2 gene, anxiety, age, etc.	
AWS&T	Cannabis	Nausea	THC/CBD metabolism, etiology, etc.	
AWS&T	Cannabis	Epilepsy	THC/CBD metabolism, symptomology, etc.	
AWS&T	Cannabis	Mental Health	THC/CBD metabolism, Px, AkT1 gene, EMR, etc.	

Table 2

Overall, wellness products are a $1.5 Trillion market. Given an annual spend by the Consumer Product

sector in the US on science-based product optimization that approaches $5.5 billion per year (and pharma >$83 billion), we believe these sectors provide ample existing total addressable markets (TAM) to commence and grow a strong enterprise over the long term. In addition, the TAMs of Healthcare Data Analysis ($50B), Healthcare Blockchain 2025 ($5.6B), personalized nutrition ($64B by 2030/UBS) and the consumer *at-home testing* market of $2B (17% CAGR over next few years) are sub-section markets that are relevant to HJUI systems, services, and annual revenue. We forecast that the serviceable obtainable market (SOM) for a decentralized healthcare exchange is $500m per annum (1% revenue share of $50B healthcare analytics market), growing rapidly to $1500m per annum (serviceable addressable market). The TAM for the first decentralized healthcare exchange would be >$3.0bn per annum.

4 HDM data, in contrast to consumer behavioral data, is of primary value in creating products that are more effective or satisfying to consumers. HDM represents a new area of predictive data analysis to inform product development, brand positioning, and markets.

Products & Services

First, we are deploying our ***Analytics Suite***, a subscription-based mobile app using ChatGPT AI interface https://pub.dev/packages/chat_gpt_sdk), and smart wallet that collects user's data (Human Data Markers/HDM and EHR), provides recommendations by AI (artificial Intelligence), and compensates them in-part via cryptocurrency. Implementation of artificial intelligence and machine learning in the retail industry ($19 Billion market by 2027; source: MMR 2022) is completely transforming the traditional retail experience and taking it to the next level with automation, personalization, and increased productivity of retail operations.

The suite will also enable any consumer brand to engage in HDM data collection campaigns with their customer base. This set of solutions is designed to achieve a rapid and sustainable commercial business for HJUI that also serves to quickly aggregate large data sets of HDM data:

Deployed as a B2C and B2B model, our additional at-home Testing Service provides a low cost/high quality end-to-end solution for collecting, evaluating using AI and Machine Learning, and reporting on the findings of biomarker and genomics samples and HDM data elements; specifically tailored for consumer product, pharma, and other large companies. The testing platform is also partially monetized by charging consumer brands, if they need a direct (or white-label) testing service, a per-test fee to manage testing and report fulfillment through to their customer bases.

Our "Data-centric AI" is the discipline of systematically engineering the data needed to successfully build an AI system that works (Ng, 2022). For our AI system, we will implement certain algorithms and open-source products (ChatGPT, StabilityAI), including a neural network, in code, and then train it on our HDM data set. Basically, we are improving/annotating the AI dataset, rather than modifying algorithms.

For personalized product recommendations in healthcare, Collaborative Filtering and Matrix Factorization AI algorithms are commonly used. These algorithms leverage user behavior and preferences to make recommendations.

In addition to Collaborative Filtering and Matrix Factorization, other algorithms such as Deep Learning,

Natural Language Processing (NLP), LLM's, and Decision Trees can also be used in a complementary fashion to further enhance the recommendations.

Second, we will construct and deploy the ***Platform and Healthcare API***, a cloud-based, data services and data access gateway/portal that provides a variety of turn-key infrastructure elements for users of our Testing Solutions; and provides integrated queryable access to thousands of "orphaned" biomarker/genomics and HDM databases that have been built by clinics, diagnostics labs, other companies, research labs, universities, and PGHD[5] ventures.

The Discovery Platform is an aggregation point for these databases, various assay designs, and the HJUI ***Knowledge Base***– all monetized via a combination of conventional hosting fees and recurring revenue arrangements. A possible example of an encrypted HIPAA compliant blockchain system architecture, cloud storage, server stack, front end website and other components is illustrated below (Constellation and Amazon AWS service; Powering HIPAA-compliant workloads using AWS Serverless technologies; Chris Munns, 23 Jul 2018):

Beyond providing data services to our Testing Solutions clients, the Discovery Platform can be understood also as a "database of databases" that includes a data gateway component that utilizes API formats to aggregate both discrete data bases and other health data aggregation providers such as popular Direct-To-Consumer (DTC) DNA and biomarker collection sites. We also believe there are many health databases that are essentially "stranded" and unable to efficiently monetize or scale their data warehouses[6] that will be highly receptive to joining an aggregation platform that helps them monetize their data while avoiding channel and commercial conflicts.

Data Annotation (of HDM) is also part of the AI training data process which encompasses giving labels and metadata tags to texts, videos, images, or other content formats; and is crucial for the AI to eventually make accurate recommendations. Data annotations form the base for any algorithm by establishing the grounds to create machine learning (ML) models. The process involves several aspects like technical representations, processes, types of tools, system design, and a whole new variety of concepts that are specific to training data only. The workflow of managing these databases is outlined in the diagram below:

5 "PGHD" (Patient Generated Health Data) data refers to companies who provide health and fitness "apps" to consumers such as Fitbit, Apple Watch, and Peloton.

HJUI seeks to become a conflict-free, highly transparent, and highly efficient transactional platform for every HDM database that exists (including the data collected on behalf of our Testing Solutions clients and users), and to provide a monetization mechanism in a way that does not alienate consumer relationships or large companies or run afoul of an increasingly complex regulatory environment. We estimate that the number of global HDM Profiles that HJUI can assemble and bring to market is more than 2 billion pro files today, representing an annual transaction volume potential more than $50 billion for our data using Clients and individual Contributors.

All our services are HIPAA compliant (consumer data is de-identified and only used with a-priori consent) and privacy is additionally guaranteed by file-level and server-level encryption; along with a decentralized blockchain distributed network.

Market Signals

Our choice of target market and offerings is informed by several important market signals.

First, the *cost of genomic and biomarker testing has plummeted*, making genomic/lab data capture economically efficient for virtually any consumer brand to invest in testing solutions with attractive ROI indicators.

Second, consumers have embraced *at-home health testing and engagement* outside of the clinical setting which means that consumer brands can effectively and safely engage with customers related to genomics and other health data collection. Brand- sponsored testing campaigns will also drive a new era of customer relationship dynamics that add enormous value to brand equity and differentiation.

Many companies (notably 23andMe.com, Ancestory.com, Everlywell.com, LabCorp) have made direct-to-consumer ("DTC") DNA and biomarker wellness testing mainstream, a vital predicate for any group to be able to utilize healthcare and genomic data in their strategic planning and corporate growth. Consensus estimates for the total number of DTC biomarker tests that have been administered worldwide approach 100 million;[7] and the current at-home biomarker testing market is approaching $2.0B in revenue, with growth of 10-15% CAGR. In 2019-20, we also saw the emergence of significant new DTC DNA testing ventures with consumer data "ownership" at the center of their value proposition.[8]

In addition, the advent of Patient Generated Health Data (PGHD) via a wide variety of consumer health ventures that deliver applications, sensors, and products (e.g., FitBit, Apple Watch, Peloton) is resulting in the collection of a wide variety of highly useful personalized health and demographic data elements.

Third, an era of *"personalized consumerism"* has taken hold among consumer products and many other companies. Differentiating products based on scientifically sound correlations between health indicators and product effectiveness is the gold-standard for personalization claims by brands. The COVID 19 Pandemic has also boosted healthcare consumerism, and people are starting to seek new avenues of care, using 2020-21 as an opportunity to work on health goals and re-examine priorities.

Fourth, we are living in an era of tension between consumers and those who collect or mine their data, often without disclosure and most certainly without compensation to the individual contributing the source of the data. Creating economic incentives for consumers to share their data, and for buyers of data to respect the terms of these sharing transactions, will ensure a strong

and uninterrupted flow of consumer data to marketers and researchers which will result in larger data availability and lower sector costs. It is clear that the majority (>50%) of consumers are very willing to sell their healthcare data (Murugesu, 2020).[8]

Fifth, direct feedback from the many consumer brands we've had discussions with indicates they want an outsourced solution. Brands are aware of the upside that exists within the "biomarker and genomics paradigm" [9], yet they have practical concerns about the particulars of execution. Very few are enthusiastic about building out end-to-end genomics/biomarker/HDM diagnostic ecosystems. What Consumer Brand companies are asking themselves is clear: How, exactly, do we put HDM data from our customers to work from a deployment and operational perspective?

Sixth, with the advent of the current COVID pandemic and crisis, it is more apparent than ever that homecare, telemedicine and data analytics, and prevention of chronic conditions (such as diabetes, cardiovascular disease, cognitive impairments, cancer, immunity, obesity, and even aging/skincare) via potential lifestyle changes is of paramount importance and interest to individuals. It is a known fact that patients/users are much more likely to "change behavior" if they are presented with scientifically valid information about themselves, especially genetics and nutritional information.[10] In addition, nearly 70% of healthcare providers want to continue having telehealth visits, with most noting that it has improved their ability to offer better care. Digital healthcare creates more data for a better, more personalized experience. When a patient visits a doctor in the office, their visit is likely recorded with a few notes. But a telehealth visit makes it easier to collect much more data, including exactly who a patient talked with, what they talked about and what needs to be addressed in the future.

Consumer Brands and other Corps are motivated primarily to cost-effectively "put the data to work", as it relates to their specific company, with no strategic interest in over-controlling the data they collect or the technologies behind the collection and diagnostics of HDM data. As a result, HJUI can serve this function for these Brands and simultaneously avoid an entire set of objections that exist within the life sciences and pharma sectors where proprietary databases and technologies are considered strategic assets.

Speed to Market Advantages

HJUI is in the process of striking alliances for commercial rights and lab services to a broad portfolio of
IP and tools that allow us to go to market with our personalized AI solutions in an accelerated manner. Our initial revenue traction is not dependent upon a long trek through an initial product development cycle since this has been completed and validated. In addition, we have started

discussions with major universities to help capture the original user base for our products and services. [Arizona State University (ASU) Corporate Alliance with HJUI finalized, May 2022]

The following commercial assets are examples of which will make up our initial product offerings.

Product, Testing, and IP Portfolio

HJUI has its own USPTO Patent Application covering a Healthcare Data Exchange and DataDAO: USPTO #63/306,197**.**

We are also in discussions with numerous providers of additional IP and commercial rights related to multiple healthcare and consumer product category testing designs, diagnostics algorithms/machine learning and AI; along with other generalized IP that enables a broad expansion of products, markets, and functionality over time.

Large Existing and Growing Biomarker/DNA database and analysis

We are in discussions with numerous suppliers for a combination of license and commercial rights to existing DNA, healthcare records, and clinical sample databases with user records that currently support our diagnostics model (Hospital Groups, Academic Centers, etc.). These databases include some of the largest existing Cannabis THC-related DNA sets.

Cost-advantaged Biomarker/DNA testing lab access

We have established a multi-year, long-term laboratory services relationship with a number of high-capacity and fully certified (CLIA, CAP, New York State Approved) testing labs that will serve as our biomarker and DNA testing vendors; an also for an initial customer base for our app. The terms of our engagement provide highly cost-advantaged economics and an immediate capacity to process thousands of tests per week.

Products with 12+ months of commercial feedback:

Testing programs that relate to our initial market segments (wellness, cosmetics, cannabis, and nutrition to start) have been commercialized for several years, in part by our founding team members, and provide multiple insights into consumer perceptions of how these tests performed. The founding team has over a decade of experience in laboratory developed DNA and biomarker testing, data analysis, AI recommendations, and ML algorithm development.

These assets will enable HJUI to achieve initial revenue (Fiat and Token) traction with a set of products in

our Testing Solutions business within 2-4 months, a process that would more typically take 2+ years and millions of dollars on R&D spend.

The $HJUI Token, DAO, and Fiat Economics

The HJUI X DAO as an organization will record its membership, rules and responsibilities on an immutable ledger enabled by blockchain technology.
Its charter and evolution will be public and unchangeable. Joining the HJUI X DAO will require resources and community membership, in the form of $HJUI Tokens, to either participate or vote. Initially the HJUI X DAO will be granted governance over only certain parts of HJUI X, while the majority of the decision-making power will remain with the founding team. Full autonomy
will be ceded to the HJUI X DAO as it evolves over time and until control is fully decentralized.

Organization structure

1. HJUI Inc will manage the HJUI Inc treasury, marketing, sales, relationships, any fiat currency purchases of lab services, biomarkers or HDM datasets and user NFT's; and development of the decentralized HJUI Exchange (HJUI) and Mobile Applications.
2. HJUI Exchange (HJUI) is a decentralized health data exchange formed by multiple pools controlled collectively by an overall DAO. Initially the HJUI X treasury (from the 80% of FIAT and the repurchase of $HJUI tokens) will be controlled by HJUI Inc. Once governance has been
   developed control will be handed over to a DAO collective. Eventually each pool may itself become a DAO (DataDAO) with its own treasury and unique set of rules. The HJUI X DAO will the fi at
   currency and repurchases of $HJUI tokens; and the $HJUI token distribution to both the pools and the bandwidth pool when necessary (including replenishing this pool).

DAO, FIAT and the $HJUI Utility Token

All transactions on the HJUI will be made using the native $HJUI token. Fiat will be introduced to the ecosystem when a business purchases access to an HDM DATA pool, or via user biomarker purchases, or from payments to the app subscription service. The fiat will flow through the ecosystem as follows

1. 20% of the fiat will be added to the HJUI Inc treasury.
2. 80% of the fiat will enter the HJUI DAO treasury. Initially it will be entirely used to either place a
   bid in the open market 30% under the price at that time or paired with $HJUI and added to the DEX liquidity pool to help deepen and stabilize the market. As this DAO treasury grows, these parameters will of course be subject to change by the DAO.
3. $HJUI tokens equivalent to this amount of fiat (80%) will be taken from the staking and data rewards pool and distributed to the DATA pools. This will ensure that the majority of tokens are released only when FIAT enters the ecosystem. When the staking and rewards pool is depleted, the $HJUI tokens will be purchased from the open market as required.
4. The 80:20 ratio will move to 100% HJUI X and 0% HJUI Inc in step with the full decentralization of the organization as the build-out is completed.

Tokenomics - Utility

Overview

The $HJUI token will be required by all parties to transact within the HJUI ecosystem. New individual users earn $HJUI by sharing their HDM data within HJUI and then use those $HJUI tokens to direct where they

want their HDM data to be mined. A user staking their $HJUI to a pool is exercising their choice to contribute their HDM data, and expert knowledge and/or outcomes, under the conditions and parameters and rewards set out by the DATA pool creator. The minimum $HJUI staking requirement for a HDM data seller to participate in a pool is initially set as a multiple of the number of variables required to enter that pool. Where DATA pools have favorable terms, it is anticipated HDM data sellers will bid above this minimum in order to participate. On the HDM data buy side, organizations (or even individuals within the pool) defi ning pool parameters will also offer a $HJUI reward for participating. The marketplace will determine whether this reward is sufficient to attract HDM data sellers to share their data. The tokenomics have been designed to ensure that as the institutional or user demand for HDM/healthcare data and data-mining grows within our ecosystem, individuals are increasingly incentivized to keep sharing their up-to-date healthcare HDM data. In addition, due to cost-effectiveness, data richness, and competitive pricing, large companies are also incentivized to use HJUI .

The HJUI will handle a large amount of HDM health data and is expected to become the go-to place for

transacting this data. Utilizing outcomes from mining all this data will provide significant value-add product and lifestyle (ie nutrition) recommendations for all parties alongside a more equitable distribution of big data economics. Contributors and content providers can expect to, for the first time, obtain revenue whilst achieving better outcomes.

HJUI Utility Token - Examples

1) $HJUI 's principal utility is to permission and direct a user's data to DAO pools. DAO pools are at the intersection between the pooled data of multiple users and parties interested in leasing this data. The users own the DAO pools as they have voting rights proportionate to the $HJUI they send to the pool. The additional token rewards they receive from participating in the pools may be used within the app to purchase personalized health insights, personalized products, telemedicine consults or even more lab work.
2) Joining the overall HJUI X DAO will require resources and community membership, in the form of $HJUI Tokens, to either participate or vote
3) In addition, all transactions on the HJUI will be made using the native $HJUI token. (Provisional prices already available in this whitepaper).
    a. Users pay HJUI for biomarker/genetic and other lab tests.
    b. Users pay HJUI for the app subscription service (different levels).
    c. Use HJUI tokens to direct where/what entity can mine user data.

d. Large Corp/Organization will partially pay in HJUI tokens for participation (trials, product reviews, etc.)

e. User payments of HJUI to receive diet plans, telemedicine/dietician consult, consumer personalized product recommendations and other services such as (future) Health Insurance.

4) $HJUI needed to purchase access to HJUI X knowledge Database and Database services

5) By using the $HJUI token people from across the globe can participate on an equal value basis both contributing to DAO Pools and obtaining the same rewards for the same currency within the by HJUI mobile application.

Individual users - Health Data Contributors

Users wanting to share and earn revenue from their HDM data will require the $HJUI token to participate in each pool. They may obtain $HJUI in 3 ways. i. by sharing their HDM DATA with HJUI , ii. through
rebates/rewards or iii. they may purchase it on the open market.

1. Acquiring the $HJUI token

i. Users will receive the $HJUI token for sharing their HDM data within the HJUI app.
The number of $HJUI tokens a user can earn from the *initial sharing* of their HDM data is estimated to be about 100. See example table below (non-inclusive) for initial $HJUI HDM data compensation. In the future these levels will be set by the DAO:

HDM shared		**$HJUI paid**
DNA-Genomics Test, or EHR		**30**
Demographics questionnaire		**10**
Biomarker tests		**10**
Disease/illness		**5**
Connecting apple health or similar		**5**
Medications		**3**
Allergies		**3**
Outcome updates (each)		**1**
Health questions		**0.2**
Consumer Preferences (each)		**0.2**
Product preference data (per selection)		**0.2**

ii. Rebates for purchases. Users will receive a rebate of $HJUI tokens in return for purchasing lab services such as DNA or biomarker tests, or telemedicine/other services like future Health Insurance. Examples:

Service Purchased	Price	$HJUI rebate
DNA test	**$99**	**25**
Laboratory tests	**Varied**	**10**
Genetic/biomarker personalized diet plans	**$10**	**5**
Nutritional reports	**$10**	**5**
Skincare; and cannabis/other synergies and recommendations	**$5**	**3**
Telemedicine	**$99**	**25**

iii. Rebates for subscribing. Users wishing to be premium app members will receive a monthly rebate of 5 $HJUI tokens in return for a $4 monthly subscription. Premium app members will have access to the entire contents of the app including diet plans, personalized advice and suggestions/product recommendations as they become available.

Utility of the $HJUI token

For individuals

The principal use of the $HJUI token for individuals will be staking in the data pools to direct the use of their data. A secondary use will be spending $HJUI on products and services within the app.

Spending $HJUI Tokens

The $HJUI token can be used to purchase additional knowledge and services in the HJUI X ecosystem (see tables above for suggested pricings). Examples:

-Laboratory tests
-Genetically personalized diet plans
-Nutritional reports
-Skincare, Cannabis, other consumer product recommendations/services
-Telemedicine/dietician consult
-Other services (Insurance, etc.)

For businesses

The principal use of the $HJUI token for businesses will be staking to and rewards for data pools in exchange for the right to mine user data. Businesses will also be incentivised to hold HJUI for access and discounts to HJUI X.

Access and discounts on HJUI

	$HJUI	Nominal Holdings
Tier 1	100,000	Access to HJUI
Tier 2	250,000	Additional 5% fee savings
Tier 3	500,000	Additional 10% fee savings
Tier 4	1,000,000	Additional 15% fee savings and premium services

Consumer Packaged Goods groups (CPG's), large pharma, healthcare groups, insurance companies, tech companies, or any other corporation (or individual data user) wishing to transact on the HJUI , will benefit

from holding the $HJUI token as set out below. Businesses will have several options regarding health DATA purchases on the HJUI . A fee of 20% of the value of the agreed DATA price will be levied by HJUI for each bid minus the discounts below.

- Access to the HJUI to buy and sell digital healthcare HDM information, in lieu of/or in combination with, using **fiat currency** to purchase services
- Reduced fees when buying and selling healthcare HDM information
- Access to premium services such as white-label testing options
- Access to the HJUI Discovery Platform
- Access to the HJUI Knowledge Base
- Product preference data

Transactions costs

Phase 1 - Polygon

During phase one HJUI will launch on the L1 Polygon

Network.

Entering Pools

FIAT from the HJUI treasury will be used to purchase and maintain a wallet with a MATIC balance.

The smart contracts for entering data pools from both Users and Data buyers will call this address for payment.

Rewards

Rewards will be batched and sent to users wallets every time they reach a multiple of 20

Withdrawing the $HJUI token

Users will be entitled to one free withdrawal of $HJUI tokens to another Polygon wallet each week. The payment for this will be taken from the HJUI Inc Matic wallet

Phase 2 - Constellation Hypergraph

Once the Polygon (matic) - Constellation (Dag) bridge is available the backend of HJUI will run on Constellations network allowing unlimited wallet to wallet transfers, free staking, and real-time reward distribution. This will be funded by running a bandwidth pool where users are rewarded for staking the DAG/$HJUI with $HJUI tokens

DATA pools

Pooling/Staking $HJUI Tokens

DATA pools (DataDAO) may be created by entities wishing to buy specific data sets, or by users with data commonalities collected and shared together/with each other.

Staking $HJUI Tokens to the Data Pools

Data Sellers/Individuals *Minimum 1 $HJUI stake.*

Stake size initially set by HJUI X at 1 $HJUI per variable. As HJUI X matures this will be superseded by a bid system where users will bid against each other to participate in pools. More lucrative, better incentivized pools will create higher bids and more interest from this group of data sellers.

Data Buyers/Businesses*: Minimum 1 - No maximum $HJUI stake.*

i. DATA buyers create pools and set parameters. Parameters might include lease time, payment terms, pool size, specific demographics etc. Individual users wishing to contribute their HDM healthcare data will stake their $HJUI tokens to specific demographic *DATA pools* which will release their data to these pools. The staking of tokens is analogous to consent and represents control of their data at all times. Some possible examples-

Eg 1: A CPG (data buyer) would like the HDM data of 1000 post-menopausal females who live in Kansas and who have uploaded their biomarker and DNA data. Lease term is 3 months, and it offers 100 $HJUI per user. There are 4 variables so users (data sellers) must stake a minimum of 4 $HJUI tokens to participate. Individuals wishing to enter this DATA pool will need to stake their 4 $HJUI for 3 months. Once the pool reaches 1000 participants the stake will be locked in for 3 months (up until this point they can withdraw it). After 3 months the user will be able to withdraw 104 $HJUI tokens (their initial 4 + 100 earned).

In the future data sellers may actually choose to bid higher than 4 $HJUI tokens in order to guarantee participation in this lucrative pool.

In this case the top 1000 bids would be accepted when the deadline expires. Should pools become very competitive HJUI X will move to a system where the average of the 1000 bids is taken and those who bid above this average will have the number of tokens they bid in excess locked for 3 months

Eg 2: An insurance company wishes to see the raw data for all HJUI users. Pool parameters would be the
total number of HJUI users, lease of 1 month, and payment terms of 5 $HJUI
tokens. There are no variables so users (data sellers) would only need to stake 1 $HJUI to participate in this pool. Once staking commences, the pool is locked and at 1 month the user receives 6 $HJUI tokens. The Insurance Company could also offer group health insurance to the respective pool.

Eg 3: A fast moving consumer goods company wishes to mine the data of 100 male users over the age of

30 with HDM data, and male pattern hair loss who use their product “Regrow”. Rewards are 100 $HJUI tokens at 6 months (and possibly direct product coupons) providing users also complete a short 3 month and 6 month outcome survey. Minimum stake 5 $HJUI based on 5 variables. User receives 105 $HJUI tokens at 6 months.

In this way DATA pools will compete against each other for users' HDM data and tokens. Furthermore there will be competition within the more lucrative pools where users bid against each other to participate. If a user wishes to share their HDM data within multiple DATA pools but has insufficient tokens, they will of course have the option to purchase more from the open market.

ii. Data sellers set DATA pool parameters. Users may group together and define their own pool parameters. For instance, 100 females aged between 50 and 60 with a history of breast cancer who lived near a certain power plant may form a DATA pool with terms of just 1 $HJUI tokens over 12 months as they would like a research program to mine their data.

iii. Additional information. In addition to the specific DATA pool parameters, data buyers may wish to incentivize DATA pool contributors to share additional data on a daily/weekly/monthly basis. Incentives will be paid into the specific DATA pool as the additional data is shared and distributed at the end of the term. If the data is not provided as per the terms of the pool some or all of the users' staked tokens may be forfeit.

iv. Bid for single user DATA. In the future we anticipate HJUI X facilitating the exchange of users/ individuals, and HCP/Physicians NFT’s. The human genome/healthcare data is inherently non-fungible as a non-changing representation of an individual’s “most fundamental and personal data,” and is well-suited to be an NFT because it allows a person greater control over the monetization, ownership, sharing, and access to their HDM information. In addition, an HCP/MD practice setting, with valuable outcome data, can be especially relevant in the context of the pharmaceutical industry. The complexity of patient access to medical data and the extent to which such information is useful for biotech and pharmaceutical companies is outlined here

v. HJUI pool. All users will be (with permission) auto enrolled in the HJUI data DAO pool. This pool will be used by HJUI Inc to mine users' data and offer insights. To participate users will need to stake between a minimum and maximum amount of $HJUI and will receive quarterly rewards in $HJUI tokens for doing so. This pool of $HJUI tokens will also be used to facilitate bandwidth on the hypergraph network if
necessary

The APY will be paid in $HJUI . These tokens will come from the staking and data rewards pool. This pool will be replenished in 2 ways-

1. HJUI X will intermittently purchase $HJUI from the open market using fiat from the 80% buyer fees entering the HJUI X DAO treasury.
2. All tokens exchanged by users for additional laboratory tests/services etc, and knowledge, will be sent to this pool

Individual Users will be enabled to mine data for a fee

This fee will be paid in FIAT and distributed as per the fiat flow model outlined above.

Token Distribution and Fundraising Activities

$HJUI tokens will enter circulation in 5 ways, via

1. Distribution in return for a user's HDM data
2. Rebates for purchases from HJUI lab and health services (app, telemedicine, etc.)
3. Staking rewards
4. Various fundraising activities that contemplate issuance of tokens, team and advisor tokens: dependent on vesting periods/release schedules
5. The use of marketing and exchange liquidity tokens

	Allocation	Tokens
Fundraising Activities	16%	40,000,000
Team	8%	20,000,000
Advisors	5%	12,500,000
Marketing	15%	37,500,000
Coinbase Earn	2%	5,000,000
Staking & Data Pool Rewards	35%	87,500,000
Exchange Liquidity	10%	25,000,000
Foundation	9%	22,500,000
TOTAL	**100%**	**250,000,000**

Community Rewards

The core tenets of HJUI X are fair and equitable distribution of revenue to all parties. In total, 250,000,000 $HJUI tokens will be minted.

In keeping with rewarding our community for fundraising, contributors will be offered rewards for participating as set out below:

Contribution rewards

$2000 - $4999: DNA Test.
$5000 - $19,999: DNA test. Lifetime premium App membership.
$20,000+ DNA test. Lifetime premium App membership. Free blood panel.

Fundraising Activities

HJUI expects to raise funds in a private equity investment by certain investors. In connection with those investments, the various investors will also be provided with a veto right over the issuance of $HJUI tokens unless they are granted a pro rata portion of approximately 40,000,000 $HJUI tokens upon certain token or
platform events.

Seed	6c = 7,000,000	$HJUI Tokens - Raise $420,000
Private sale 1	9c = 26,400,000	$HJUI Tokens - Raise $2,376,000
IDO's	16c = 2,000,000	$HJUI Tokens - Raise $320,000
HJUI NFT	4,600,000	
		$HJUI Tokens - Raised $250K

Minimum Raise: $3,100,000 from the sale of 40,000,000 $HJUI Tokens
Market Cap at IDO with DEX liquidity added at $0.20: ~**$1,200,000**

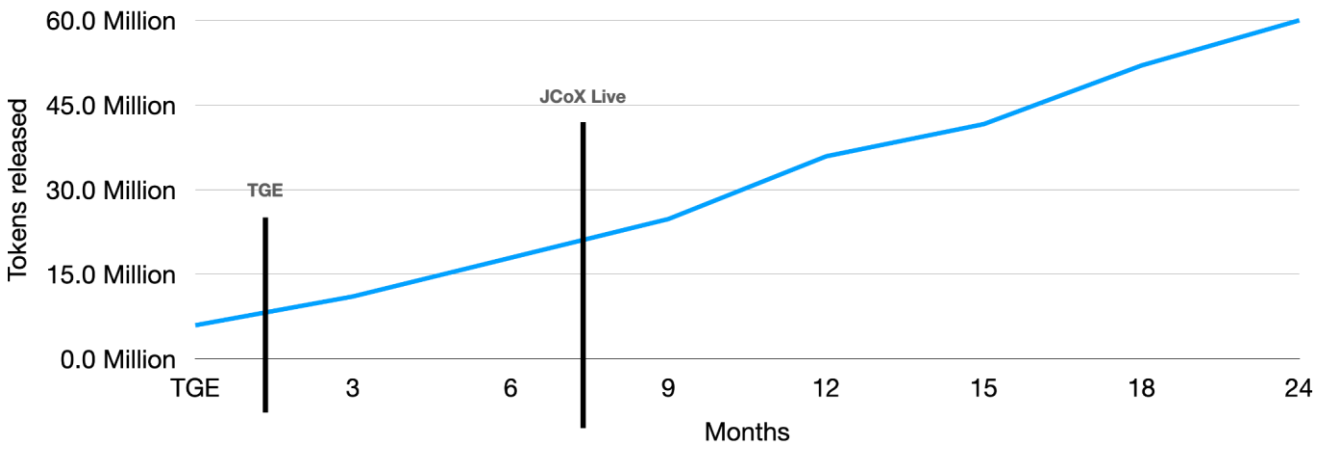
First HJUI NFT:

Vesting Schedule

The lock up periods and distribution of $HJUI tokens have been set to coincide with periods of increased market liquidity whilst ensuring sufficient tokens are in circulation to facilitate HJUI X on launch day. In addition, the tokens released will need to be claimed with a maximum value of 1Ether per 24 hours
claimable.

	TGE	Month 3	Month 6	Month 9	Month 12	Month 15	Month 18	Month 24
Seed			25%	25%		25%	25%	
Private Sale 1	15%	15%	15%	15%	15%	15%	10%	
KEJC NFT	Airdropped to holders in tranches. Completed over 12 months							
IDO	100%							
Advisor							Released on milestones. Completed by 36 months	
Team					30%		30%	40%
Circulating supply (millions)	5.96	11.07	17.93	24.79	35.9	41.61	52	60 (excluding advisor tokens)

Private Sale, IDO, NFT and team token distribution Graph (excluding advisors)



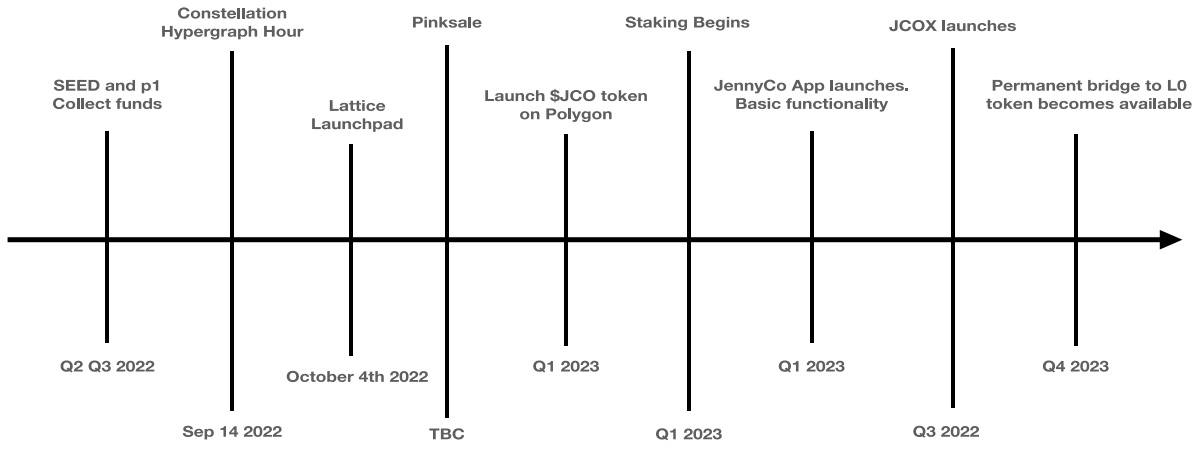
Timeline of events

Phase 1 Q1 2024
Begin presale funding
Build Proof of Concept

Phase 2 Q2/Q3 2024
Complete minimum viable product
Complete presale funding
Expand team dev team
Bring on marketing team

Phase 3 Q3 2024
Launchpad offerings
HJUI NFT
launches
Phase 4 Q2 2025
TGE of the $HJUI token on ERC20 to encourage facilitate liquidity and exchange access Release permanent cross-chain bridge from ERC20 to L0 $HJUI
Launch the mobile app
Launch staking

Phase 5 Q3 2025
Launch HJUI X, the HJUI data exchange Partnerships



Use of funds

HJUI will use the money raised in the various fundraising activities for:

1) Continued community build-up, user and marketing
    a. Acquiring more contributor/user base via university student and crypto community
    b. Acquiring more Token user base

2) IP and legal filings

3) Staff hiring
    a. Marketing
    b. Technical

4) Website and report white labeling/initial biomarker *product launch* for at-home use
    a. HJUI Website; Mobile app
    b. Nutrition, Skincare, Cannabis, other, report launch and white label

5) Initial portal (and app) development
    a. Outside contractors: AMA, ASU, Sigma Chrome, SteadyDynamic, etc.
    b. User database and portal access, normalization, and cleaning

6) Mobile/AI application development
    a. White label/modify AI and mobile app to HJUI specs

7) Business Development with CPG's, Pharma, DOD/VA, Tech Companies, etc

Marketing and PR

The initial consumer focus would be encouraging engagement and conversation on well-managed channels such as Reddit, Discord, Medium, and Telegram; and with certain reputable influencers. We are also targeting the students at major universities (ie ASU, UCSD, Tulane). In addition, we will use publishing sites such as CoinSchedule; which helps with press-related visibility. HJUI will use these channels to raise awareness amongst potential investors and node operators within the community; including tried-and-true healthcare advertising formats:

1. Purchase paid search advertising.
2. Publish product-centric blog posts and press releases
3. Discussion of products on social media.
4. Send marketing emails to users and consumer databases

Through its specificity, healthcare consumer marketing is an interdisciplinary field because it uses certain concepts, methods, and techniques specific both to classical and social marketing. Today, major CPG/Pharma organizations focus on content to win the race of digital supremacy. Content marketing strategies for the healthcare data field are not just about blogging and producing tangible results; digital marketing (and marketing via crypto metaverse) is the way to bring this process to a completely new level.

At present, digital content helps build positive brand impressions. The use of new digital marketing strategies is essential to maximize the efficiency of marketing expenses and generate higher return rates. By applying innovative health marketing principles to HJUI marketing initiatives, we will be able to better position our service offers to consumers and CPG's. To understand the impact of marketing strategies on the quality of healthcare services, it is important to understand today's wellness consumer who prefers to look for healthcare information online.

With digital marketing, almost everything can be tracked and measured. Healthcare professionals and healthcare organizations no longer need insight to what works and what does not work.

As the marketing progress grows, organizations are moving towards more digital approaches to remain relevant to consumers. Digital marketing expenses have been the highest of all time, with healthcare companies spending over $2.5 billion on marketing, estimated at $ 4 billion by 2020 (Health Works Collective, Digital Marketing Dominates Healthcare Advertising,

In this context, 44% of the marketing costs for health-related products and services are dedicated to mobile

and digital platforms. TV advertising costs have dropped to less than 33% and are expected to continue to decrease, as the cost-effectiveness of placing a product or service on TV seems to no longer justify the investment.

The way consumers use the internet to find health and wellness services evolves in favor of smart devices. With more than 80% of the users who frequently use smartphones, to identify services, it is essential to reconfigure marketing initiatives to better fit the era we live in.

As we grow, our profile will launch officially to consumers and CPG's at relevant industry events and evangelize our new means of trading consumer healthcare data digitally (Dr Nova has particular expertise in this area as he has spoken at over 500 Medical, IT, AI and other industry functions including CES, TED, Nutrition World, Re-Work AI, etc.). We've assembled advisors from the most significant healthcare and blockchain businesses in the world to raise our profile at the C-Level across our future clients.

We are partnering with industry boards like the Healthcare Data and Analytics Association (HDAA), Food and Nutrition Board (FNB), American Dermatology Board (ABD), American Medical Cannabis Society, and many others.

We will also develop a community of engineers and future datapreneurs graduating from Higher Education building applications and solutions on the Hypergraph, intending to supply our clients with engineers trained to build on the HJUI .

Initial Team and Board of Directors

Michael Nova MD (HJUI Co-Founder, Board Member, and CEO)

- Background in Computer Science, Medicine, and Genetics. Founder of numerous companies and the inventor of many genetic testing assays and mobile AI applications,
- Acknowledged expert in the field of human genetics, artificial intelligence, blockchain, crypto distributed apps, and consumer healthcare. Executed many large company business alliances (eg. IBM, PepsiCo, Nestle, Medco, United Healthcare)
  Founder/CEO of drug-discovery company Discovery Partners Inc. (Nasdaq: DPII), $150M IPO.
- 2006 World Economic Forum (WEF) Technology Pioneer Award Winner; and the Physician-Of-Record for
- the first person to have their entire genome sequenced by Illumina (2009).
  Dr Nova has 32 issued patents in the subject areas of Artificial Intelligence, Genetics, Wireless Peer-to-Peer
- Decentralized Data, and other technologies.

Jenny Diggles MBA (HJUI Co-Founder, Board Member)

- Strategic advisor for companies and VIPs with expertise in tech, international business development, medicine, politics, blockchain, cannabis, and crypto currencies.
- Entrepreneur with track record of building successful businesses on the edge of emerging industries
- Requested and selected by Apple to participate in their first TV show to showcase a mobile App she developed
- Saw Cura Cannabis through an acquisition by CuraLeaf (OTCMKTS: CURLF) and developed strategic relationships and introductions for CuraLeaf.

Linden Leadbetter, MD MBA (Head of Token Economics)

- Background in derivatives, crypto and algo trading. Previous head of Europe for Bear Stearns Bank
- Medical doctor with a fellowship in genetic medicine
- Expert in crypto tokenomics, DAO, and innovative use cases
- Dr. Leadbetter received his M.D. from Nottingham University. A BSc (hons) in Physics from Durham University. An MBA from Trinity College Dublin

Steve Carter, Ph.D (Chief Scientific Officer, Healthcare)

- CEO of Zulia Biotech, developing novel therapeutics for the treatment of neurodegenerative diseases
- Managing Director for Intrepid Life Sciences, development of new biotech/data companies from university-based technologies.
- Previously he has served in various leadership positions with Vicapsys Life Sciences, Valeant Pharmaceuticals, Biochemics, Harvard Medical School, Glaxo Wellcome and the National Cancer Institute-Frederick Cancer Research Facility.
- Dr. Carter received his Ph.D. from the department of Biochemistry and Biophysics at Iowa State University, and completed a ,fellowship in molecular virology and served on the research faculty at the Yale University.

Manish Vishnoi, MS CS (Chief Technology Officer)

- Extensive knowledge of healthcare software systems and platforms, including data, AI, and compliance
- Co-authored publications highlighting use cases of HIPAA blockchain technologies in healthcare applications
- Over 5 years of software development leadership for global enterprises (Oracle, United Healthcare, Cisco)
- Master of Science in Computer Science from leading blockchain group at Arizona State University.

Board of Directors (4)

- Michael Nova
- Jenny Diggles
- Steve Sansom

Steve is the founder and chairman of The Green Square Capital Advisors, Green Square Family Office, Green Square Strategy and Green Square Wealth Advisors in Memphis, TN. He was previously a founder and member of the board of directors of Center Coast Capital Advisors, one of the largest independent investors in U.S. mid-stream energy infrastructure assets. Center Coast Capital owned and operated a publicly traded energy infrastructure company traded on the New York Stock Exchange(CEN). Steve currently serves on the Executive Advisory Board of Brown Brothers Harriman Capital Partners the middle markets private equity investment group at Brown Brothers Harriman & Co. in New York, NY. Steve graduated from Harvard Business School.

- Admiral William Owens (Chairman, Kyrrex Exchange; Chairman WIPRO):

Bill was the CEO of Nortel Telecommunications and the CEO/Chairman of Teledesic LLC, a Bill Gates/Craig McCaw company bringing worldwide broadband through an extensive satellite network. Bill was also Chairman and Senior Partner of AEA Investors Asia. He has been a board member of 23 public companies. Currently, Bill is also on the Board of Directors at Wipro Technologies.

United States Patent Office (USPTO) filed patent: **63/306,187**
Title: HEALTHCARE DATA EXCHANGE
Inventors: M. Nova, J. Diggles, L. Leadbetter, S. Carter Assignor:
HJUI , Inc.

Summary

The HJUI DAO will provide the benefits of decentralized networks, Privacy and HIPAA/GDPR Compliance, DeFi and rewards to the first programmatic DOA healthcare data utilization and exchange. The company uses artificial intelligence (AI) to curate and generate recommendations for users, and to help corporations gain insights into consumer behavior, outcomes, and preferences. The goal is to improve results, increase personalization, and lower costs in the healthcare industry, while also giving individuals more privacy and control over their data.

Our vision will allow for a cheaper, privacy intact and more efficient ecosystem, where *all* participants stand to gain by working together to create a fair value exchange for healthcare data and information.

We are building a healthcare data exchange that can facilitate decentralized transactions in real-time allowing for substantial cost savings due to lower reliance on cloud servers by using a state channel and HGTP to transfer and process large amounts of data, outcomes, recommendations, and transactions.