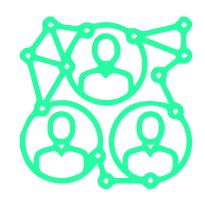
## Crypto 3.0:

## Collective Knowledge Protocol & Proof of Brain (PoB)



The crypto world is supported by a network that has revolutionized the world for at least the last 10 years. This network, Blockchain, as its name indicates, is a chain of blocks where transactions that are validated in nodes are recorded. These transactions are unalterable because they have codes (hash) that link them to what are called proofs of work or Proof of Work (PoW). Every time a market agent, for example, acquires or sends a Bitcoin or its fraction, Satoshi, from his digital wallet to another, that transaction is recorded in the Blockchain network through the interaction of Nodes or interconnected computer networks. That is, these Nodes contribute their computational power to "mine" by solving complex algorithms. When the systems deliver the results, the transaction is registered in the Blockchain network and as compensation, they receive a fractional unit of Bitcoin, depending on the number of resolutions and contributions from their nodes, they have delivered.

This mining and compensation mechanism worked efficiently until the number of miners (miners) and the number of Bitcoins and other crypto to be mined, came together at a saturation point. It became more and more necessary to put more computing power into operation to obtain less and less amount of crypto tokens. This generates consequences such as the following:

 Increase in the price of inputs and equipment (hardware) necessary to be able to mine, due to exponential competition



• Increase electrical consumption geometrically, forcing miners to use high-cost cooling and heat dissipation technologies. This created a spiral of increased mining costs that drove smaller operators out of the market, concentrating production on large players, which called into question the decentralized and democratic philosophy that was intended to be given to the crypto world in general and to Bitcoin, particularly from the beginning.





- It produced a negative confidence bias in the theoretical support of Bitcoin, which explains the fall in its valuation from a maximum of almost USD 68,789 in December 2021 to its current price of USD 19,483 at the time of writing these pages. It can be said that, in relative terms, for those who entered this market during the past year, their capital suffered a loss of 70%.
- A significant issue is the cost of transactions. This has been even more evident in the case of Ethereum, a network in which the price Average commissions skyrocketed 1,360% from early June to early 2022, from just \$2.80 to \$40.19.
- Each transaction that is registered in the Bitcoin or Etherscan network (on which the transactions of the ERC20 tokens and all its variations are processed, among the main ones, Ether) must process a greater number of mathematical problems posed to validate them, so it also, their costs and the time required to confirm them increased. For example, the sending from one digital wallet to another in Bitcoin can take up to more than an hour while those of Ether, from 20 to 30 minutes.

This generated the appearance of lower transactional price alternatives such as Solana, Polygon, Avalanche, Cardano and others.

What underlies the analysis is that there is a natural congestion in each of the networks due to its difficulty of scaling based on the Proof of Work. A solution to this problem was the development of the validation mechanism called **Proof of Stake or proof of participation**.





# Proof of Stake: the EVOLUTION



As a solution to the inconveniences generated by the use of the Proof of Work for the validation of the transactions, the administrators of the Etherscan network created in the year 2011, the Proof of Stake system. This is based on the use of software instead of hardware (which has a positive impact from the environmental point of view), reduces the cost and transaction times. Mining is done by acquiring less expensive shares of crypto that can be processed by easily accessible software. Those who accumulate (stake) a greater amount of crypto, have a higher chance of registering validation blocks in the network and receiving rewards in the same crypto. This, while significantly speeding up transactions, may cause those with greater financial capacity to "hog" more registrations and again, undermine the concept of decentralization implicit in the crypto world.

In the month of September 2022, the MERGE (union) of the PoW and PoS system on the Etherscan network was announced, as the EVOLUTION of the validation and reward mechanism for miners, in search of making transactional processes more efficient. The immediate positive effect has not yet occurred and it is expected that in stages, the optimal operation of the PoS will be reached within the next 24 months.



- Requires Lots of Energy
- Miners validators



- Less Carbon Footprint
- Aleatory validators

The conclusion is that both PoW and PoS have pros and cons that, from one place or another, create questions rather than certainties regarding the growth and potential of cryptocurrencies and decentralized tokens in the future.





## the REVOLUTION

#### **Proof of Brain**

Proof of Brain is nothing more than using the most powerful data processing and information accumulation power in the world, which is the human brain. In this way, each person in the world can pass, if they choose, a validation NODE.



This concept, together with the transaction validation mechanisms on the blockchain network, led us to devise the possibility of connecting our brains to a digital platform (Datium) so that, through the interaction of users answering questions generated by artificial intelligence and in turn, creating questions that can feed back to the miners, who get as a reward, a unit

crypto account (\$MDCx, an acronym for Medicalx). In this way, the Proof of Brain was born together with the creation of a database of organic exponential growth and simultaneously starting the era of the Collective Knowledge Protocol.

In other words, the Datium/MDCx ecosystem has the potential to put into operation the largest validation NODE network on the planet: 7,600 million human beings sharing information and verifying the quality of each transaction, receiving cryptocurrency as a reward for their activity mined.





## Why are the Proof of Brain and the Collective Knowledge Protocol the "killer application" in the crypto and blockchain economy?

The brain test linked to the collective knowledge network for transaction validation and reward mechanism for those who participate in the network (miners) has the following outstanding characteristics:

## -Unlimited scalability.

The Proof of Brain does not require the acquisition of hardware or software to be able to mine and obtain rewards in crypto. The information processing and accumulation "engine" is found in each human being that connects to Datium and participates in it. The growth capacity of the database, particularly in the healthcare industry, is literally geometric and almost infinite. We expect Datium to reach a total of 100 million data (questions and answers) from health professionals (doctors, nurses, technical and administrative assistants, etc.) and patients. These data, through the application of Big Data software, will be converted into information that, in turn, by implementing scientific data analysis systems (Data Science) will produce the necessary knowledge for critical decision-making by the economic agents of the industry and the governments. It will be these who at the beginning, acquiring with \$MDCx the information produced by Datium, together with the associated networks that accept \$MDCx as a means of payment and the investors that identify \$MDCx as an investment vehicle (evaluating the growth of its value). as the Datium database expands), give rise to the supply and demand dynamics of the currency.



Eventually, we hope \$MDCx will become the mainstream payment method in the healthcare industry and thus complete the value cycle of the information generated by the ecosystem that uses the Collective Knowledge Protocol and the Proof of Brain Validation System.





## -ZERO environmental impact.

The PoB provides energy (brain electrical pulses) to the validation network (answers to Datium questions), does not consume it. The miner must not acquire any hardware (which pollutes) nor must he connect it to the electrical network.

Datium/MDCx is a biotechnological conception that for the first time combines crypto technology (blockchain and validation protocols) as a means of data extraction. Since its inception, the ecosystem is designed in order to avoid the use of polluting materials and reduce the impact on the environment to a minimum.

Datium/MDCx will make a dynamic calculation of the carbon footprint caused and will compensate it through the acquisition of green bonds to neutralize the use of the system.

#### -Monetization of Information

The concept of the Collective Knowledge Protocol involves using the information stored in human brains as a tool for organic knowledge production. For this to happen, the agents (miners) that connect to Datium must have a clear and precise motivation. This is what MDCx was designed for. MDCx is the unit that represents the value of the data contributed by the miners. Every time one of them answers or asks a question for others, they receive as a reward a certain number of MDCx that is accumulated in our own digital wallet opened for that purpose.

The MDCx can be accumulated (stake), transacted on the exchange platforms where it is published (defi exchanges) or used in the consumer networks of health products and services, validating its function as a means of payment.

It can then be said that MDCx is a monetized knowledge unit (UCM). The UCM is divisible in fractions of 1000, so 1 MDCx= 1000 UCM. There is a direct correlation between the value of MDCx and FIAT coins. For today's case, in the private pre-sale series, 1 MDCx is equivalent to USD 0.5680.

For the launch of the public series, MDCx will have an equivalence of MDCx = 0.5680 USD (see MDCx Tokenomics WhitePaper).





### -Interoperability.

The Collective Knowledge Protocol and the means of crypto compensation through Proof of Brain have the ability to be implemented in any type of activity and be interconnected with each other, allowing miners to use the crypto obtained by their function as validation NODE in a network in another that uses the same protocol.

#### Conclusion



The combination of the Collective
Knowledge Protocol with the Proof of Brain
Validation System and \$MDCx as a means
of compensation for mining, makes the
Datium/MDCx ecosystem the new
development paradigm of the
crypto-blockchain economy. Its initial use
in the health sector allows for rapid
growth and expansion of use by its users
and participating agents, but we
understand that due to its power and
simplicity, in a short time it will be of
standard use for all human activities and
industries related to information and its
use as a critical decision mechanism.





## **MDCx.finance**

#### Financial Structure

#### **Public Series A Class**

USD 1,000 Million equivalent in \$MDCx a will be issued and published in DeFi exchanges as:

Uniswap (v3)

DODO.

PancakeSwap (v2)

Curve (Ethereum)

Uniswap (Polygon)

Kwenta.

Uniswap (v2)

Balancer.

- -5% will be put up for public sale: USD 50 Million equivalent in \$MDCx
- -From the above, swaps will be distributed by Private Series (A) as follows:
- -1% will be allocated to Swap by holders of Private Series corresponding to AVT/Odyssey (0.75% out of total monetary base)
- -6% telemedicine platform (0.30% out of total monetary base)
- -30% acquisition of healthcare financial service providers (1.50% out of total monetary base)
- -20% development of Datium business model (1.00% out of total monetary base)
- -10% distribution for founders (0.50% out of total monetary base)
- -19% applied to marketing and merchandising (0.95% out of total monetary base)
- -95% of the issued volume remains as a reserve for future placements and support of the Staking Pools.









#### Investments Pools

## Investment vehicles are enabled:

#### **Private Series Class B**

- Official start of pre-sale November 1, 2022
- Investors will be granted a 20% Price premium on the purchase of MDCx (\$MDCx 1.2 of Public Series for each MDCx of Private Series) during the months of September, October and November

#### **Private Series Class A**

On December 1 at 12AM, the Publica \$MDCx series will be officially published in the selected exchanges and the swapping process between MDCx and \$MDCx will begin. Buyers of \$MDCx will have the following placement options to be fully positioned in \$MDCx to follow the evolution of the "mother" currency that correlates its value with the development of the Datium business model. In this model, access fees or withdraw are not charged.

-Access to Investor Pools

#### **Datium/MDCx Investment Vehicles**

• Staking Pool 60 days: 212% APY

Staking Pool 90 days: 267% APY

Staking Pool 180 days: 400% APY

Staking Pool 360 days: 1200% APY

There will be daily staking Pool two months after issuing public



#### Valuation Control Mechanism \$MDCx

The XiloCoin will be issued for the Daily Staking Pool. The \$MDCx/XiloCoin pair will allow devaluing the value of the accrued interest amounts in \$MDCx on the invested capital.





#### **Entry and Exit Fees**

Access Fee: 15% Withdraw Fee: 15%

#### **Airdrop Policy**

- Follow an account on social networks.:
   USD 500 equivalent in \$MDCx
- Share or retweet one of your posts, including hashtags: \$1,000 equivalent in \$MDCx
- Send or receive a transaction (using a particular cryptographic platform or wallet):
   USD 1,000 equivalent in \$MDCx
- Create an account and register to receive updates: USD 5,000 equivalent in \$MDCx.

**POWERED BY** 

#### **Trading Contest**

A trading contest will be launched with a prize of USD 10,000 equivalent in \$MDCx.

#### Lottery

A lottery will be implemented where those who have weekly balances of \$MDCx greater than the equivalent of USD 50,000, will be able to win double \$MDCx.



## **DATIUM** Roadmap

2020 • April





Launch Project Idea and Basements Datium - MDCx

2022 • November



Launch Private Sale MDCx

December

Launch Pre Sale MDCx

2023 • February



LAUNCH PUBLIC SALE MDCx

March

Launch CureMD Integration in Datium

December

Launch Clinical Simulators & PPE

2024 • Continue bulding...



The large healthcare database in the world







#### **DATIUM Clinical Simulators**

## Continuing Medical Education Program (PEMC)



DATIUM's Continuing Medical Education Programs are based on the concept of virtual practice on real clinical cases extracted from prestigious certified publications such as the Lancet, New England Journal of Medicine, JAMA and many other specialties in particular.

The analysis team selects the clinical cases to be incorporated into the Artificial Intelligence platform, linking them with the MDCx compensation system, using the challenging criteria, that is, those in which the patient presents a pathology that is the object of potential diagnostic and diagnostic discussion. therapy. In this way, from the presentation of the case, alternative decision trees are developed so that professionals can, according to their criteria, request different types of diagnostic studies, order practices and prescribe medications not provided for in the original line of treatment.

Each decision-making branch generates the opening of new scenarios and results regarding the evolution of the patient who is the protagonist of the case.

The case is presented interactively and in real times of evolution, closing at its conclusion according to the decisions that the doctor has taken during it.

Each response and decision that the doctor makes during the Clinical Simulator exercise is linked to the receipt of MDCxR in his DATIUM account balance. In turn, each of the data collected during the practice is transferred to DATIUM's Artificial Intelligence analysis system and processed using Data Science, Machine Learning and Semantic Matching tools to inject it into DATIUM's exclusive Collective Knowledge Protocol.





## As time passes, **Clinical Simulators** for different specialties will be incorporated into the **DATIUM/MDCx ecosystem** periodically, among the main ones:

- Allergology
- Anesthesiology
- Angiology
- Cardiology
- Endocrinology
- Stomatology
- Clinical Pharmacology
- Gastroenterology
- Genetics
- Geriatrics
- Hematology
- Hepatology
- Infectious deseases
- Aerospace medicine
- Sports medicine
- Family and community medicine
- Physical medicine and rehabilitation
- Forensic Medicine
- Intensive medicine
- Internal Medicine
- Preventive medicine and public health
- Work Medicine
- Nephrology
- Pneumology
- Neurology
- Nutrition
- Medical oncology
- Radiation oncology
- Pediatrics
- Psychiatry
- Rheumatology
- Toxicology













The professional, once registered, enters the area of the Continuing Medical Training Program (PCMC)

Once there, a list of clinical cases in which you can participate is displayed. In the description, a brief abstract is specified and the amount of maximum MDCxR that you will be able to obtain by participating Once finished, you can return to the home control dashboard where the certificate that verifies your participation in the PCMC appears.

#### Basic clinical cases

https://www.nejm.org/doi/story/10.1056/feature.2017.01.11.56

https://www.immunopaedia.org.za/clinical-cases/infectious-diseases/case-of-recurrent-meningitis/ https://www.immunopaedia.org.za/clinical-cases/drug-response/25-year-old-female-presents-with-persisten t-flu-like-symptoms/







## Improvement of Quality and Lifetime Disease Prevention Program

## (PPE) DATIUM

The DATIUM Disease Prevention Program is a coherent set of chained actions built from a needs assessment, seeking the creation or adaptation of activities aimed at meeting the realistic objectives outlined as program goals to be implemented.

DATIUM's PPE are specific training actions, incorporation of healthy habits and monitoring of predetermined objectives for patients in all therapeutic classes. As in the Clinical Simulators for professionals, the PPE is integrated into Datium through the implementation of Artificial Intelligence, Data Science Analysis, Machine Learning and Semantic Matching tools and the MDCxR response and follow-up reward system.

#### The objectives of the PPE DATIUM are the following:

Following a clinical model we can classify prevention into Primary prevention. It is oriented to healthy people, it deals with preventing the disease from occurring. Its particular objectives are the promotion of health and the prevention of diseases.

Universal prevention: aimed at the entire population without distinction or identification of those who are at risk, benefiting the entire community with messages and programs.

Specific prevention: these are actions aimed at avoiding a certain disease.

The best known measure is the application of vaccines. We can also mention:

- Administration of vitamin D to prevent rickets.
- Addition of iodine to salt to prevent goiter.
- Adequate calcium intake to prevent osteoporosis.







#### Secondary Prevention.

Its objective is to prevent diseases from progressing and avoid damage or complication. These goals are achieved through early arrest and proper treatment.

Strategies for systematic arrest (also called Screening) and disease prevention are based on the demonstration that tests and interventions are practical and effective.

Almost all of the 7 screening methods are based on procedures that are easy to perform and inexpensive, biochemical (such as cholesterol measurement), physiological (such as blood pressure), radiological (mammography) or tissue sampling (such as blood smearsPap smear).

#### **Tertiary Prevention.**

It deals with treating the disease itself, trying to achieve a cure or that it does not progress avoiding the sequelae. Corresponds to rehabilitation, both physical and mental and social. Primary Care must be programmed and evaluable, action based on health programs with clearly established objectives, goals, activities, resources and control and evaluation mechanisms.

It is particularly important that primary care evolve in accordance with the orientation and content of the new policies, strategies, and action plans of the different health subsystems in which it is carried out (Public Sector, medical mutuality, and Health Insurance Companies).

#### **Extension of definition of Preventive Programs**

A prevention program is a coherent set of chained actions built on the basis of a needs assessment, seeking the creation or adaptation of activities aimed at meeting the realistic objectives outlined as goals of the program to be implemented.

They are developed in areas or domains where risk and protection factors are worked on. In them we find the individual domain, that of the peer group, the family, the school and work, the community and the socio-environmental domain.







Occasionally prevention is confused with a preventive program.

While prevention is a generic and broad concept, a preventative program is much more effective and systematic.

Prevention programs seek to introduce actions for early detection of a risk factor or disorder at a stage where it can be corrected or cured.

In order for these prevention actions to be considered effective, some guidelines related to the problem we are facing must be taken into account:

- \* It must be an important health problem both in its prevalence and incidence on the quality and quantity of life.
- \* It must have an effective response to the identified cases.
- \* There must be diagnostic and treatment resources available and accessible.
- \* The problem must have a recognizable latent period that allows action and reduces morbidity and mortality.
- \* Must have a known natural history.
- \* Tracking or early detection methods should be effective in proportion to their cost and risk.

To implement these tasks it is necessary to have clinical, epidemiological and morbidity and mortality knowledge of the target population.

Two strategic modalities of intervention can be proposed: the population one, which aims to reduce the mean values of the risk factors in the population as a whole, and the individual or high-risk one, which tries to identify 9 subjects who, because they have one or several of these factors, present a greater risk of suffering from the disease.





The first strategy is carried out through political-legal (institutional) measures and health education (councils or campaigns directed at the population), without it being necessary to know the characteristics of each individual.

The second is carried out preferably at the primary care level, through the timely detection of high-risk subjects and subsequent intervention and follow-up of these.

The complemented population and individual strategies seem to yield a higher cost-benefit ratio than if they are considered in isolation. These strategies may focus on one risk factor (colorectal cancer prevention) or several (cardiovascular disease prevention).

The DATIUM Disease Prevention Programs comply with the protocols for the incorporation and follow-up of patients according to the determinations of the WHO and all the health organizations involved.







## Competitive advantages of the implementation of DATIUM PPE



Users registered as patients in DATIUM and who participate in the Collective Knowledge Protocol through the questions and answers generated and managed by the Artificial Intelligence chatbots can voluntarily participate in an additional way, in the DATIUM PPE. This allows you not only to contribute even more information to the DATIUM database but also to accumulate more MDCxR in your account balances which can then be settled in MDCx.finance according to the regular system parameters

#### Beneficiary agents of the PPE DATIUM



#### Pharmaceutical Production Laboratories

- Taylor Made design for clinical marketing studies implementation.
- Exploration of specific therapeutic classes.
- Positioning of products in age, socio-economic and gender groups.
- Implementation of communication campaigns for target populations according to geolocation.
- Compilation of hyper-segmented information for research and development of new drugs.
- Launch of new drugs and sales and production planning with a high degree of precision.





#### Distribution chain

- Doctor-Patient-Dispensing Traceability
- Implementation of consumer incentives for early identification of diseases and benefits for purchase discounts through MDCx.
- · Long-term drug purchase projection according to patient participation
- Planning of financial incidence of purchases
- Ability to anticipate consumption according to communication campaigns, regions affected by the PPE DATIUM and socio-economic sectors linked to financiers.

#### Coverage Insurance

- Reduction of incidence of acute diseases
- · Chronic treatment planning
- · Reduction of invasive medicine
- Efficiency in scheduling purchases of inputs.
- Real-time information on the impact of the PPE DATIUM on the financial pipeline
- Precise allocation of required care human resources

#### Government

Launch of PPE DATIUM according to budget items related to disease reduction policies.

- Projection of investment in risk reduction according to State, national and international priorities.
- Tool for making strategic decisions in both epidemiological and budgetary terms.
- Generation of accurate information on the impact of prevention policies for the negotiation of financing with the effectors of the health system: producers of inputs, service providers, technology providers, distribution chains, health professionals, auxiliaries, etc.







## About US



## We are a multidisciplinary team of professionals

Doctors, psychologists, lawyers, economists, developers and programmers, who have been working for years in the area of technology applied to health.

### Datium was born as a response to a specific need in the industry:

have more information when making decisions that impact everyone's lives.
Leveraged on the knowledge contained by each of us as patients, professionals and industry agents, and based on the fact that we must be rewarded for what we know, this business model was born.

## Datium aims to transform the industry.

It is a large database of COLLECTIVE KNOWLEDGE that, through cutting-edge technology such as AI, will allow us to be more assertive. This, supported by conclusive statistical data for a better prevention – diagnosis and prognosis of health.





## **Meet The Team**



Sebastian Ponceliz ECONOMIST / CEO

Economist specialized in cryptoeconomics, with more than 15 years of <u>experience in the</u> laboratory, health industry and corporate finances.



Ignacio Alonso

Business Administrator & Accounting
High caliber and dynamic business developer and operations executive.
More than 20 years of experience in international business development and a solid commercial vision within international organizations in Europe, Asia and Latin America. Experience in multi-project management.
Creation of companies and scaling them to large operations.



Jacqueline Preibisch
Business Development & Communications Manager

Psychologist with a Master in Cognitive Behavioral Psychology, with more than 15 years of experience in the Marketing and commercial area. Entrepreneur, I developed my own telepsychology company in 2019.







Guillermo Mendioroz сто

Automation anywhere, UI Path, Blue Prism. Database, SQL and Excel programming.



Andres Talgham

Financial Advisor

Public accountant, financial analyst, & entrepreneur.

10 years of experience in cryptocurrencies advising on DEFI projects, DAO focused on Farming and physical and virtual mining.



Jose Steven
Blockchain Advisor

Blockchain Advisor, Writer and CEO of the QG project He began his studies in cryptocurrencies in 2014. He currently has his own YouTube channel "Quieroganar" where he teaches Crypto classes and training to users.







#### Our ambassadors



Emiliano Levoratti

DOCTOR, PROFESSOR & RESEARCHER

More than 20 years of experience in the most prestigious cardiology care entities in the country. Member of the Argentine Cardiology Society, the Inter-American Cardiology Society, Ecosiac and ASECHO.



Ernesto Cespedes
Director Corporate Relations USA | LAWYER

Tri-lingual attorney and mediator. Adjunct professor (Medical Law) at Nova Southeastern University Shepard Broad College of Law



Eduardo Trinidad ECONOMIST

Economist and Business Administrator specialized in corporate finance and project management. Dedicated to tokenization of assets in Real Estate and healthcare industries.



Juan Cruz Ponceliz

Medical practitioner graduated from Hospital Austral. He currently works as a resident in General Surgery at that institution and in palliative care at HUA







## Datium.info / MDCx

### MAP











**Patients** 

**Doctors** 

**Pharma** 

Insurance

Goverment

Intelihealth Bookkeeping

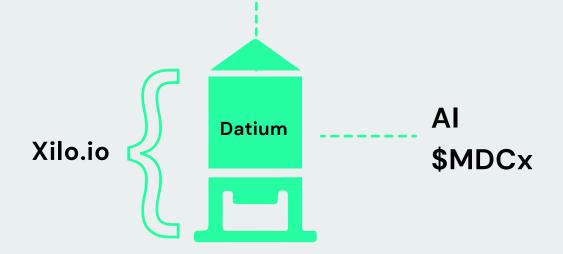
CureMD

Remedyx.io

MedBot.io

**PPEP** 

Intelihealth Billing



#### **Monefi Technologies USA**

| Intelihealth LLC  | Datium Corp.   |
|---|--|
| <ul><li>Billing</li><li>Bookkeeping</li><li>Eprocurment</li><li>xilo.io</li></ul> | <ul><li>CureMD</li><li>MedBot.io</li><li>PPEP</li><li>Remedyx.io</li></ul> |







# Determination of the MDCx price.

## Economic fundamentals, estimation method and its algorithm

#### The most important asset

The information (in every life scenario, but mainly, in the industry development) is intrinsically, the most valuable asset in the world and can vary depending on the context in which it is used. In general, information is valuable if it can be used to make better decisions, solve problems more effectively, or gain a competitive advantage.

For example, in business, information about customer preferences and behavior can be used to develop more effective marketing strategies, improve customer service, and increase sales. In science, information about the structure and function of molecules can be used to develop new drugs and treatments for diseases.

However, the value of information is not always easy to quantify, and it can depend on a variety of factors, including its accuracy, relevance and timelines, as well as the cost of acquiring and processing it. In some cases, the value of information may also depend on the specific needs and goals of the individual or organization using it.

#### Healthcare Industry and the value of information

The value of healthcare information generated by doctors and patients is immense. It can be used for a variety of purposes, including improving patient care, facilitating research, and informing healthcare policy decisions.

From a patient care perspective, healthcare information generated by doctors and patients can help physicians make more informed decisions about patient diagnoses, treatment plans, and medication management. For example, electronic health records (EHRs) can provide clinicians with access to a patient's medical history, including past diagnoses, medications, and lab results, which can help inform current treatment decisions.

Healthcare information generated by doctors and patients can also be used to improve population health. Large scale data analysis of healthcare information can be used to identify trends and patterns in disease prevalence, treatment outcomes, and healthcare utilization, which can inform public health initiatives and healthcare policy decisions.

Overall, the value of healthcare information generated by doctors and patients lies in its ability to improve patient care, facilitate research, and inform healthcare policy decisions, ultimately resulting in better health outcomes for individuals and populations.





It is not possible to establish a specific price for the information contained in the brains of doctors and patients. This is because the value of this information is highly subjective and depends on a variety of factors, such as the type and quality of information, the context in which it is used, and the specific needs of the individuals or organizations that use it.

Moreover, the information contained in the brains of doctors and patients is often protected by privacy laws and ethical considerations, which may limit its commercial use or sale. In many cases, patients have control over their own health information and may choose to share it only with authorized healthcare providers or for specific purposes.

That being said, healthcare information is a valuable asset for healthcare organizations, researchers, and policymakers, and there are many efforts underway to improve the collection, sharing, and analysis of this information. However, any pricing model for healthcare information would need to consider the complex ethical, legal, and social implications of valuing and trading in such sensitive data.



The **Datium** (www.datium.info) organization, has generated a mathematical model based on the Decision Tree Algorithm, isolating the regulatory and legal factors from monetary calculations, to provide the market with a solid anchor number and cutting edge and innovative economic analysis.

The MDCxR algorithm and how the price is calculated. A mathematical and dynamic knowledgebase for the future of the healthcare industry.

Valuing healthcare information contained within the brains of doctors and patients is a complex task that involves several variables, including the experience, expertise, and education of the individuals, the quality and sophistication of the information, and the demand and supply dynamics of the healthcare industry.

There is no one-size-fits-all mathematical model to put a price on healthcare information, and different approaches may work better for different scenarios. Some possible models that could be used to value healthcare information include:

- Cost-based approach: This model involves estimating the expenses incurred to acquire, maintain, and utilize the information within the brains of doctors and patients. This may include the cost of education, training, and ongoing medical research.
- Comparative approach: This model involves comparing the value of healthcare information contained in the brains of doctors and patients to the value of other assets or investments that have similar characteristics. For example, the value of healthcare information may be compared to the value of a medical device or a pharmaceutical product.





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Healthcare information generated by doctors and patients can also be used to improve population health. Large scale data analysis of healthcare information can be used to identify trends and patterns in disease prevalence, treatment outcomes, and healthcare utilization, which can inform public health initiatives and healthcare policy decisions.

Overall, the value of healthcare information generated by doctors and patients lies in its ability to improve patient care, facilitate research, and inform healthcare policy decisions, ultimately resulting in better health outcomes for individuals and populations.







- Income-based approach: This model involves estimating the economic benefits generated by the healthcare information, such as increased patient outcomes, reduced healthcare costs, and improved quality of care. This approach may be more applicable to valuing the knowledge of certain specialists, such as surgeons or oncologists, whose expertise contributes significantly to clinical outcomes.

Ultimately, the value of healthcare information contained within the brains of doctors and patients is subjective and may vary based on several factors. Still, mathematical models can be applied to provide a framework for assessing its value and help decision-makers make informed choices about healthcare investments.

We combined the above three approaches to develop a multi-factorial equation to obtain a genuine and accurate financial representation of the healthcare information as a measurable asset.

#### The Datium mathematical model

The decision tree analysis is a mathematical model that we applied to provide a framework for assessing the value of information provided by doctors and patients and help market agents make informed decisions about budget allocations in the healthcare industry.

A decision tree analysis is a mathematical model that portrays different possible sequence of events and the possible outcomes and utility (value) of each event. This model can be used to determine the optimal decisions by comparing the expected values of various options at each point in the decision- making process.

For example, in the context of healthcare investments, a decision tree analysis can be used to identify which diagnostic tests, treatments or interventions should be undertaken based on the information provided by doctors and patients. The model can include factors such as the likelihood of diagnoses, the cost of tests, expected treatment outcomes, and the potential risks and benefits of each option.

In the case of the MDCx price determination, we collect several key data from the oncological therapeutic line in the US market, which has been used as a reference for the total of the industry sector.

As a result of this process, decision makers can consider different scenarios, weigh the pros and cons of each decision, and make informed choices about healthcare investments. This model can be valuable for healthcare organizations, insurance companies and government agencies in making data-driven decisions in pursuit of the continuous improvement of the healthcare system.







## The market and social figures

To analyze and establish a precise price for the MKU (Monetary Knowledge Unit) which we call MDCxR (from Rewards), we took into consideration data from the oncological sector in the US. Below are the main variables and the number breakdowns that we used based on the algorithm described before (year 2021). At the end of the description, the rational for the MDCxR is shown:

- Average age of an oncological patient: 66 years old
- Average life cost until 18 years old: USD 2.123
- Average life cost between 18 years old and 66 years old: USD 3.189
- Average cost of oncological treatments: USD 150.107
- Total economic value of an average oncological patient (Z): USD 599.072
- Global R&D Investment: USD 193 Billions
- Total Budget of Oncological R&D in US (Y): 6.440.439.000
- Total currently number of oncological patients under treatment: 18.254.500
- Fundamentals of the MDCx DTA

The MDCx Decision Tree Algorithm (DTA) is a semi non-parametric supervised learning algorithm, which is utilized for both classification and regression tasks. The rationale to determine a specific monetary value for MDCxR is the measure of the positive impact on the reduction of mortality among the oncological population.

#### The method

The method utilized is the application of a reverse differential function and its first derivative, implementing the MDCxDTA process.

We assume that 1% of the total R&D budget (USD 64.404.390) can reduce a non-lineal proportion of 0.89% on the total number of deaths of the target patients, downsizing the number from 608.570 to 603.153 (5.417 lives saved). That increment of USD 64.404.390, in relation with the MDCx Decision Tree

Algorithm, and based on the economical impact of each patient value (df(x)=[Ln(y)+1%]/[Ln(z)-1%]), generates a final price of **USD 0.1172 per unit of MDCxR** 

The ultimate estimation is that MDCxR is (conventionally) 1/5 of the original published listing price of a \$MDCx (USD 0.5860).





#### **Proof of Brain validation** and the MDCxR role



Proof of Brain is nothing more than using the most powerful data processing and information accumulation power in the world, which is the human brain. In this way, each person in the world can pass, if they choose, a validation NODE.

The storage capacity of the human brain is estimated to be 2.5 petabytes, which is the same as 1,000,000,000,000,000 bytes, or 1,000,000 gigabytes, which is 12 times the storage capacity of NASA's Aitken supercomputer.

The storage capacity of all humans united (approximately 7.6 billion) is approximately: 7,600,000,000,000 gigabytes. EITHER:

7,600,000,000,000,000,000,000 bytes it is difficult to measure the power of processing and brain electrical impulses that can be translated into data, information, and knowledge.

This concept, together with the transaction validation mechanisms on the blockchain network, led us to devise the possibility of connecting our brains to a digital platform (Datium) so that, through the interaction of users answering questions generated by artificial intelligence and in turn, creating questions that can feed back to the miners, who get as a reward, a unit crypto account MDCxR, the reward token for all participants into the Datium ecosystem and the minimum unit of account to be fractioned the \$MDCx (an acronym for Medicalx). In this way, the Proof of Brain was born together with the creation of a database of organic exponential growth and simultaneously starting the era of the Collective Knowledge Protocol.

In other words, the Datium/MDCx ecosystem has the potential to put into operation the largest validation NODE network on the planet: 7,600 million human beings sharing information and verifying the quality of each transaction, receiving cryptocurrency as a reward for their activity mined.





Establishing a precise price for MDCxR is one of the biggest challenges of the Datium organization and the greatest achievement in terms of economic analysis to connect the healthcare industry, the information that affects its deployment and the financial outcome based on that data, of the decision makers.



#### **REFERENCES:**

- -American Cancer Society <a href="https://www.cancer.org/">https://www.cancer.org/</a>
- -Economic Stats <a href="https://www.upwardli.com/resources/new-to-america-what-is-the-average-monthly-cost-of-living-in-usa#">https://www.upwardli.com/resources/new-to-america-what-is-the-average-monthly-cost-of-living-in-usa#</a>:
- -Centers for Disease Control (CDC) <a href="https://www.cdc.gov/cancer/dcpc/data/index.htm">https://www.cdc.gov/cancer/dcpc/data/index.htm</a>





