



**PHARMEUM**

Blockchain - Reinventing Data &  
Healthcare



[www.pharmeum.io](http://www.pharmeum.io)

# Our Journey Today

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Today, you will travel through an exciting experience of knowledge. Together, we will explore –

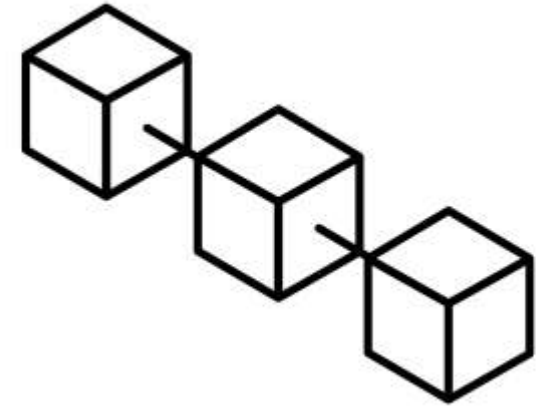
- 1 **Blockchain and Data** explained
- 2 **A working** Blockchain example
- 3 The **myths** of Blockchain
- 4 **The future is now**






# What is Blockchain?

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- ⊞ Blockchain is a **data structure**, with the records of transactions distributed across several computers transparently.
- ⊞ Transactions are grouped in **blocks** which are then paired with a cryptographic hash to the previous block in a **chain** sequence.
- ⊞ Enabling trust in the **integrity of data**, without requiring a centralized third party.
- ⊞ Trade and trace any **asset of value**, digitally.



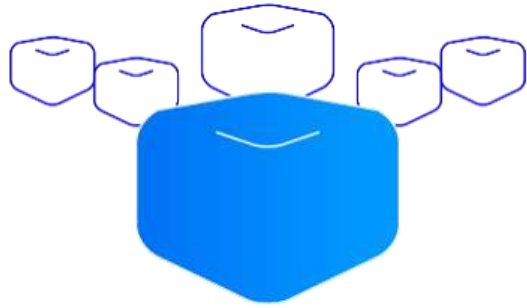
# Blockchain Examples

Bitcoin	Ethereum	Pharmeum
		
P2P Network	dAPP Platform	Data Network
Public Blockchain	Public Blockchain	Permissioned Blockchain
Decentralized Value Transfer	Decentralized Apps	Data-powered Apps



# Data is a Currency

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In the past two years,  
**90%** of the world's  
data was created



One person's Health  
Data is valued at over  
**\$1000**



More than **52%** of  
smartphones gather  
health data

Since data scandals, such as Facebook-Cambridge Analytica, regulatory bodies are encouraged to focus on user-centric ownership of information.



“Well, I think it is working. There may be other currencies like it that may be even better. But in the meantime, there’s a **big industry** around Bitcoin.”



“I think Bitcoin has succeeded on the level of a **new currency**, but the payment system is somewhat lacking.”

“The world ultimately will have a **single currency**, the internet will have a single currency. I personally believe that it will be **Bitcoin.**”



“(Blockchain) is the **biggest opportunity** we can think of over the next decade.”

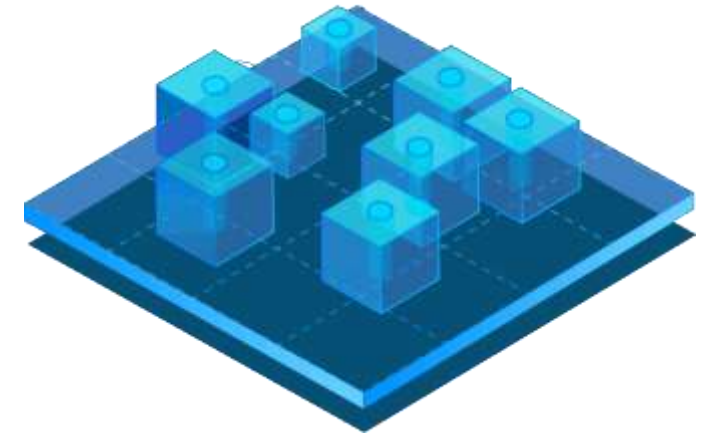




# What makes it secure?

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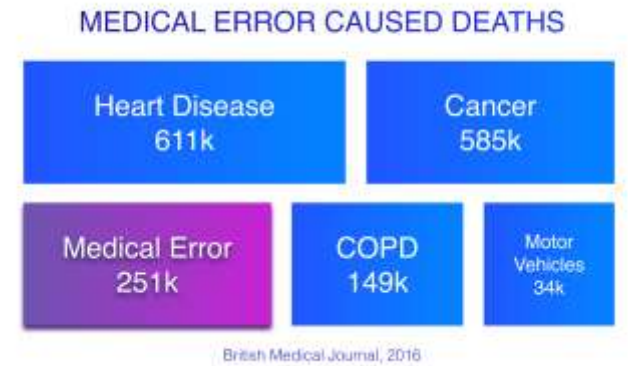
- ⊞ Blocks are connected to each other in a chronological “**chain**”
- ⊞ Once timestamped, the Block is **immutable** – it is unchangeable
- ⊞ These record of transactions are replicated across several computers in a **decentralized** way (nodes)
- ⊞ To maliciously rewrite any transaction, the entire hash would need to be recreated, affecting **all** other Blocks after it



# The Problems

The Digital Healthcare market is projected to be valued at **\$379 Billion USD** by 2024. Digital Healthcare is rapidly increasing, with mobile health applications growing in revenue by **~15%** each year.

- 1 **Medical Errors** – The 3<sup>rd</sup> largest cause of death.
- 2 **Data Regulations** – Privacy laws are evolving to become more user-controlled.
- 3 **Data-dependency** – Almost every new Digital Healthcare application solution feeds on data.
- 4 **Security of Medical Data** – Health Data is worth more to cyber-criminals than credit card information.





# Why Healthcare?

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The single most valuable information type is Health Data. Forbes estimate its value to be around **\$200-1000** per person.

Over **83%** of Healthcare organisations believe that AI and Digital Health will give companies the 'edge'.

For this to be created, a massive amount of data needs to be accessed regularly.

The current, centralized data-stores are incapable of supplying this information.

Blockchain can be used to supply data to AI and other technologies, with true **privacy** and **scalability**.



# Blockchain use-cases

Blockchain's usage goes far beyond that of Bitcoin and Banking alone.

Below are a few **powerful** examples:

- 1 **Electronic Health Records**
- 2 **Decentralized Data Monetization**
- 3 **Artificial Intelligence & Applications**



# Developed Example

The platform for data-fuelled decentralized applications and artificial intelligence



# The Vision

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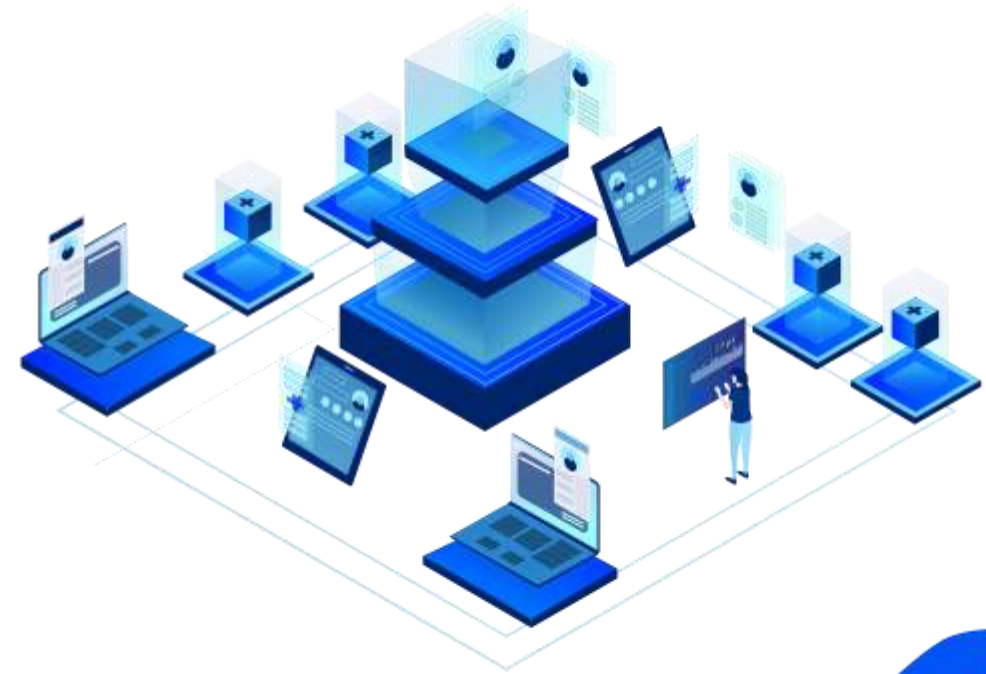
Pharmeum is a **data-powered** network to fuel next-generation AI and Healthcare Applications.

Private **Blockchain** technology is used to exchange the value of everyone's data with data-demanding applications.

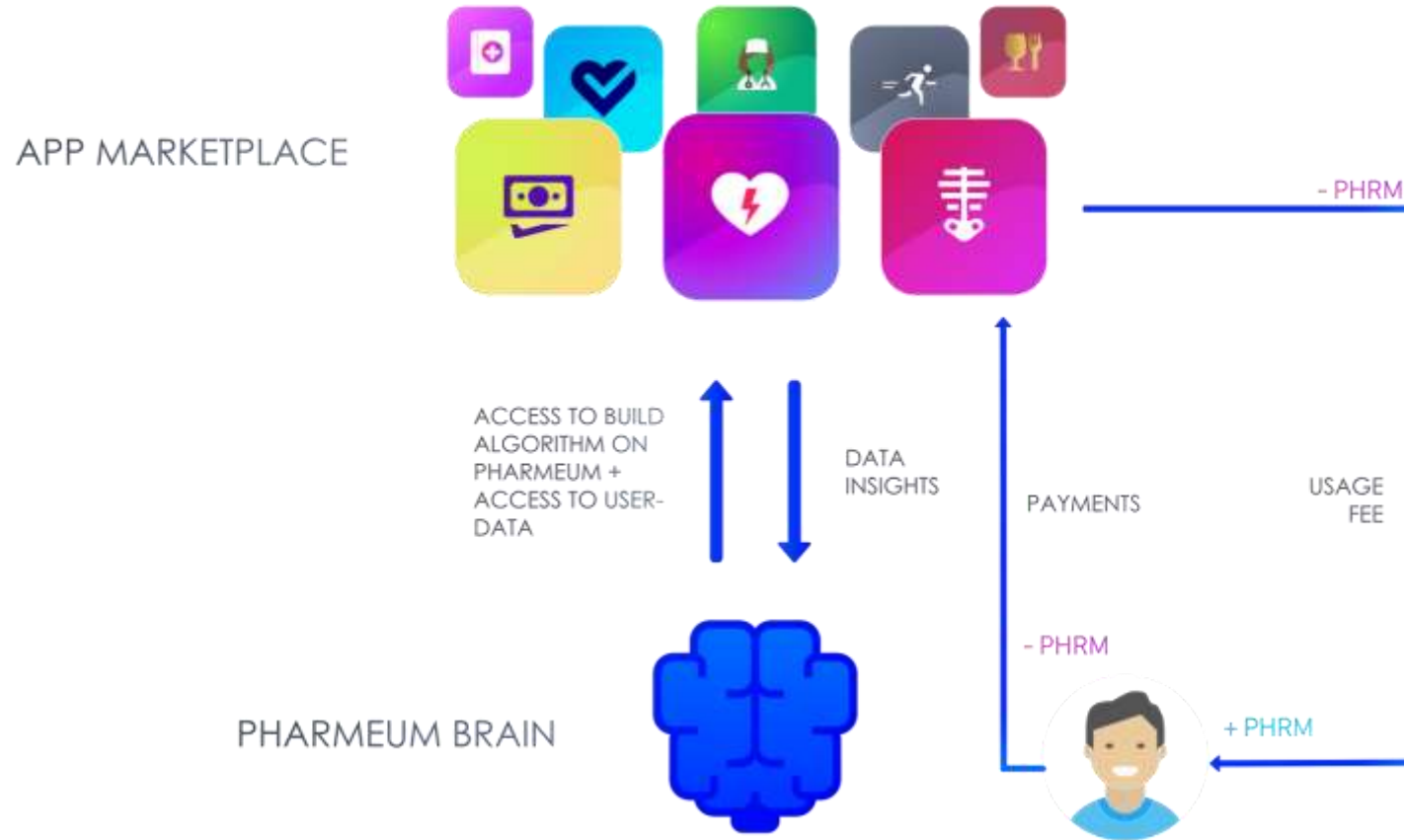
Data is at the core of all digital Health applications, including AI, Supply-chains, and TeleHealth.

Pharmeum aims to solve the world's **demands** for user data within HealthTech, through **scalability and privacy**.

Pharmeum will enable Health Records and data-centres to create a **revenue stream** from their users data. Everyone around the world will be able to become a part of global AI and Healthcare innovation, whilst **passively earning** crypto for their contribution.



# PHRM Token Economy



# PHRM Cycle

All stakeholders **interchange** PHRM Coins as a single 'language' of value transfer.

Below is the **cycle** of PHRM:

- 1 Applications **purchase** PHRM to pay for the listing fee
- 2 Based on their data-demands, the listing fee is **divided** between all users, as a passive reward-stream for their data
- 3 Users can hold PHRM within their in-app wallet and use PHRM to **pay** as an in-app payment within the applications
- 4 This PHRM is stored by the listed application, the ongoing listing fee is **deducted** from this balance





# Benefits of Blockchain in Healthcare

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- ⊞ Interoperability
- ⊞ Security
- ⊞ Decentralization
- ⊞ Scalability
- ⊞ Selected Confidentiality
- ⊞ Trust



# Breaking the Myths

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## Myth

**Blockchain = Bitcoin**

**Blockchain can be used everywhere**

**Blockchain is 100% secure**

**Blockchain is the “Truth Machine”**

## Truth

Bitcoin is only one example of Blockchains use-case.

Many usages would benefit more from databases alone.

Only if the adjacent applications are secure. There's also a risk of a 51% attack.

Blockchain can only verify the transactions on-chain, not the truth of input information.



# The Future

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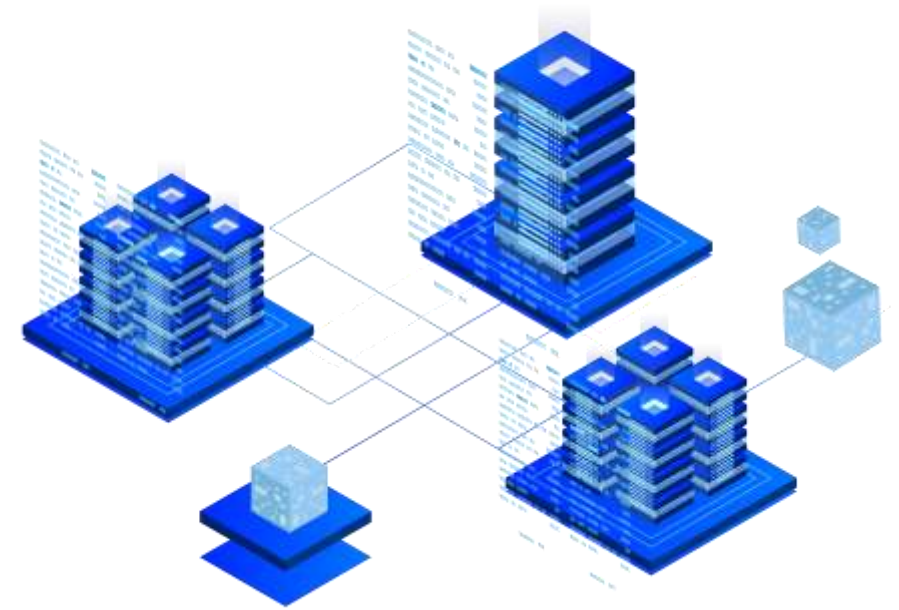
The future for Healthcare will be **dependent on data**.

The structure and decentralization of this is the foundation for **next-generation Healthcare**.

Blockchain's security demands to solve the global need for information is growing.

Through Blockchain; Smart Supply-chains, User-specific Apps, and Medical AI will finally become **accelerated**.

Get involved, you are early.



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