



# Hexal Protocol

*A Peer-to-Peer Market Block-Chain*

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*“Decentralized E-Market by creating a platform which is powered  
by individuals in par of Block-Chain”*

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## **Abstract**

Our concept is a continuation of “legacy Bitcoin” by Satoshi Nakamoto. Not in its use and neither in its purpose as cash system but as an ideology of social context and technological solution. A human, peer-to-peer market, which is addressed to e-commerce and commerce alike.

By creating a decentralized independent market tool for success and safe operations within the market, in a free view expression. Thus, removing all available barriers that amount to enormous yearly spending's, which are less likely to deliver value.

Our solution eases further market online adoption, with involvement of crowd and Block-chain system which validate vital parts as locations, crowd employees and order tracking mechanism. In this regard, we create a “Generation Y” which is a specific class of employment with social interaction and customer sentiment to support shop owners in the online market. With a token that performs as a tool and as a performance behaving assets.

*“A **decentralized system** is one which requires multiple parties to make their own independent decisions. In such a **decentralized system**, there is no single centralized authority that makes decisions on behalf of all the parties.”*

In a small abstract, it is impossible to understand Opal in its true form. Thus, by having an outlook of the related industries mentioned below, we can explain from where the notion of Opal derived and why it may be an ultimate solution.

# 1. Introduction

## 1.1 Overview

The initial major Block-Chain innovation is “Bitcoin”. A digital currency experiment with a flavor of freedom, and libertarian move with decentralized means against unnecessary authorities. By far, is the first successful attempt to change the economic system. Furthermore, following the realization of opportunities and capabilities of such essential technology that operates bitcoin it may be used for all kinds of inter-organizational purposes. Causing a wave of new companies that have as an aimed to improve or replace the initial protocol of bitcoin.

Until the next step was paved by Ethereum, famous for its “*smart contract*” which have embodied the second-generation of Block-Chain system. The operation of which, is to translate financial instruments, like loans or bonds, directly into Block-Chain system. This had turned out in to be the creation of so called “Tokens”. Now, the Ethereum “*smart contract*” has managed to improve the acceptance and usage of block-chain even further, after bypassing some undesirable event.

Furthermore, new innovation has been created from the argument question, which is: “*Proof of Work. Why should the largest computing power control the decisions and if it is, isn't it a centralized authority all over again?*” Pointing a probable issue to the original libertarian move and at the same time it can create an additional solution.

Then, the block-chain ideology has recreated proof system to a new behavior which is known as “*Proof of Stake*”. Miners were used to create data centers, now in the new systems, they had replaced those centers with complex financial instruments, for a similar or even higher degree of security. Proof-of-stake systems are far better distributed and better at electricity cost. Finally, referring to the issues of scaling, which involves the increasing number of users in the system and maintaining efficiency.

***“Block-chain use, is as infinite as the human imagination.”***

## 1.2 Crowds Block - Chain Behaviors

Block-chain has been perceived and understood as the next economic evolution. This argument maybe comes true in the long term. Note to be taken, that the majority of crypto-investors who participate in trading, are the ones of a young age and most probably had never invested. They are driven by hopefulness, in order to be a part of better economy.

The “*old school*” investors and business experts have address the trend of crypto-currencies as a speculative technology, which wants to disrupt the previous business aspects. With this regard, they have referred to this type of investment as another economic bubble.

Currently “23.01.2018” by fact, the market is having downtrends and retrospectively looks like a deflating bubble. Taking into consideration that, the market is a wild west and currently without any regulations. Meaning that, none can be found liable for any actions of fraud and/or theft. Thus, making the “*old schools*” investors correct.

Now that block-chain has familiarizing population, with its ability to deploy unique systems that have never been designed, this is the point of inception. Block-chain is not ready by any means, “*it will be abused before it finds its proper use*”. As long as companies are financing projects that cannot be accomplished the abuse will continue.

*“Yes, youth should take initiatives to invest and understand financial behavior for a better outcome”.*

New technology always serves the benefit towards the humanity unless, some people exploit such technology in a deceptive manner by abusing its process, in order to cause financial suffering and psychological traumas.

*“Bitcoin was created with the purpose of locking out current economic frauds. But it has not locked out business economic crimes, such as pyramids or other deceptions”*

## 2. Opal Markets Disruption

### 2.1 Retail

Retail is a type of business, which is usually owned and operated by a **retailer**. However sometimes it may be owned and operated by a manufacturer or by someone other than a **retailer** whose merchandise can be sold primarily to ultimate consumers. Retailing, involves the process of selling consumer goods or services to customers through multiple channels of distribution to earn profit. Retailers satisfy the demand which is identified through a supply chain.

Some of the earliest retailers were itinerant peddlers. The term "*retailer*" is typically applied where a service provider perform small orders of a large number of individuals, who are end-users, rather than large orders of a small number of wholesale, corporate or government clientele.

Centralization of retail is found at the spatial dependency that refers to the habit of consumers shopping in certain areas. Effectively, location has the largest contribution in customer acquisition. As the phenomenon shows, consumers buy goods and services away from their own location. The observation is linked to several psychological customer behaviors.

What does that mean for business owners in fair respect? Arguably, cost of leases for location are inflated by landlords. This fact brings us to the effect of financial debt of such businesses. Pushing the "*break even line*" for business owners even higher, without taking into consideration other costs. This, such business model may only result to lower profitability for the majority, with a few exceptions as some viral successful brands that last longer but eventually retrench faster.

In the Internet era, location is irrelevant because the technology have broken the barriers of distances. Meaning that, locations of centralization and business that are binding to such behavior are unreasonable paying any costs<sup>1</sup>.

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<sup>1</sup> Such as a lease

## 2.2 E-Commerce

*E-commerce* - is a transaction of buying and/or selling online.

*“Electronic commerce draws on technologies such as:*

- a) mobile commerce;*
- b) electronic funds transfer;*
- c) internet marketing;*
- d) inventory management systems;*
- e) automated data collection;*
- f) systems supply chain management;*
- g) online transaction processing”.*

Modern electronic commerce, typically use the World Wide Web for at least one transaction per life cycle, although it may also be used by other purposes such as sending or receiving an e-mail. Often, e-commerce transactions include the purchase of online goods or services, music, and to a less extent, customized/personalized online liquor store, inventory services. There are three areas of e-commerce:

- a) online retailing.*
- b) electric markets.*
- c) online auctions.*

***“E-commerce is search engines with a cover”.***

Centralization of e-commerce is similar to retail centralization. As it was specially replaced by a traffic dependency. By listing products, customers will go through search engines in order to conclude to their vendor. This means that, algorithms are forming the traffic paths.

As the popularity of e-commerce grows, the market saturates from similar vendors. Search engines are based on codes and cannot separate products with similar descriptions, but they can separate different customers. Separating similar products is better performed by human and is not replicable yet by any technology.

Reasonably, under such circumstances, delivering the right product to the right customers has become a major challenge. In regards of technological limitations, previous centralization faced a problem at retail level and now it has been replaced with e-commerce centralization problems.

## 2.3 Generation Y

Newborns between 1977 – 1994, are the largest cohort since the baby boomers. Gen Y is worldwide known for their technological wisdom and apathy to previous businesses. Growing up in one of the most technological accelerated times, as it can be seen in a joke of *“Floppy Disks at breakfast, CD at lunch and USB at dinner”*. Leaving the sense of *“I have seen and done it all”*.

This impact is directly related to Social Media platforms and online communication. Here we have identified the last centralized component which is *“life without technology and internet communication is unfathomable”*. Gen Y centralized dependency is far stronger, than retails and e-commerce combined, by eradicating the traditional employment approach and showing more preference as to self-employment, ownership, freelance, unstructured schedule, social media employment “insta-famous” and hobby-based broadcasting channels.

## 2.4 Evolution of Customers

Firstly, it was based on the power of displaying the goods, separating competition over characteristics and descriptions. Display of goods included invitation to treat, meaning that business was open for bargaining. That exactly was the current era's sentiment, desires amplified over thrilling bargaining to capture valued displayed goods. Interesting to see, how human involvement had an impact in the later evolutions. As the only negative aspect was the shoplifting.

Secondly, is the media product stimulation through mass broadcasting. By stimulating customer's desire, in order to throw an adventure of physical search to find what was perceived valued through media. Rewarding the "*hunting*" by reflecting the effort and confidence through the product. Most satisfying spot in history. With the negative impact of over consumerism hitting alarming numbers.

Thirdly, are the "*hype*" factor and the evolution of tech and introduction to E-commerce. With the breakthrough of ".com" and post bubble stability, the internet has become the norm of amazement and unique findings. As well as the idea that anything that can be found online is automatically considered to be cheaper. Raising the sales of who had made the experience of searching more smoothly. Later, the involvement of various channels caused E-commerce to look like a free for all chaos. Advertisements in every corner, pop-ups, promotional newsletter, bias bloggers, bias bloggers and all forms of social media bias advertisement. Pretty much, a saturated market full of competition, where winners are defined only by deceiving customers or buying their way into the spot lights of traffic and short term fame. The negative impact is the abusing aspect, whoever was more productive and creative in an industry, is loved the most. In addition, increasing all types of cyber-crimes that can be stretched from theft to manipulation.

Fourthly, and the most current one, is the app-sales through smart phones. Such evolution has not replaced the previous way of selling but instead become a side existence. As sales take place in parallel of E-commerce, nevertheless they occur spontaneously by customers that seek to achieve maximum flow of time and avoid any kind of advertisements. Such evolution isolates each vendor and creates expensive solution. Also, it has entirely removed all the feelings that were examined in previous evolutions. Negative aspect of that, is the fact that it has become a zero sum game and the monopolistic applications limit the flow of shared markets.

## 2.5 A.I. but not C.I.

Every time when such technology arises in the world, there is always one thought in everyone's mind. The dystopian thought of an automated world, full of cyborgs and little to none human interaction. Even worse, the idea of human being obsolete and extinct.

As far as we understand, this is a great sci-fi movie or series, heck we would watch it. In reality we can foresee a human evolution through technology. More likely, a merge that removes computing autonomy and human limitation. There are tasks that humans by far have a natural advantage. After all, a computer cannot operate by consuming a cookie as energy but a human can. Vice versa, computing task is far more efficient and consumes electricity. Both resources are energy and both fuel complex actions.

The more we understand that artificial intelligence is not solution but the combine intelligence might be. Then, we move faster towards the next revolutionary industry. Assuming, we have mastered the current one in the span between the next one, unless we collapse on rushed steps.

***"Wisdom and computing are left and right, that's how we walk"***

### 3. Opal web 4.0 Platform

#### 3.1 Crowd-source Partners

At first thought it is obvious, that the dynamics of crowdsourcing does not relate to the notion of traditional employment. Plug in the wisdom of Gen Y along with crowdsourcing and social media integration with a frictionless smart phone app. It might be the single and the most desirable type of employment. Gen Y creationism takes over with their hobbies, by nourishing a product of their knowledge in their location, like is their own. Product sentiment is enhanced, trust is recovered and customer service is maximized. Such pattern fills the gap between generations through technology, as well as giving a chance for Gen Y to be around products that they know the most, instead of acquiring debt to start a similar business. Potentially, combining the activity with other profitable activities they can stack up, maximize their self-branding income.

#### 3.2 Safe Delivery

In e-commerce, “*safe product delivery*” means that, it should be in perfect condition, without any scratches and at a desire time. This will result to a consistence of satisfied customer. Now, when goods have been delivered by crowd-source partners, a “*selfie*” with satisfied customers shall be capture, which will create moments for the customers sentiment. In order to systematically maintain such relationship, we depend on block-chain hashing as digital finger print combined with users personal code “Human Hash” in each step. By distributing the ledger that the job is done.

As example: buyer signs the order. The order is received and picked up, signed by crowd-source partner. Vendor sign the order pick-up and finalizing with buyers signing on receiving of the product. This is a mechanism to proof delivery and return functions. Customers can try product or ask for help in regards of setting up.

#### 3.3 Map Depth

Separating locations is irrelevant for customers or shops. Separation is needed for the crowd-source partners in order to avoid crossing into disputes with each other and customer shortage. The map depth provides valuable data, trends for products and consumer behavior by map with consumers data but sheer volume instead.



## 4. Velocity Economics

### 4.1 Characteristics of Value

Through the characteristics of money, we understand a lot, despite the fact that in crypto market is the least desirable subject. Unfortunately, nexus is too strong to be ignored.

Scarcity: availability is limited. Value is linked to supply in respect to demand

Acceptability: are widely acceptable. Value is based on trust over parties exchanged

Recognition: were everyone recognizes value

Portability: easily variable

Homogeneity: every unit is exactly like the other units

Stable Value: nominal number remain the same, one coin is one coin, one cent is one cent

As we can see, some characteristics do imply in the crypto sphere. In fact, they amplify the characteristics of value. Product transactions are also value based, as money value is only the medium of exchange. Value of products is estimated by the combination in respect to customers. Customers do not always agree with companies or even between them. Unfortunately, the portraying of products value often is inflated on company efforts to create awareness. Causing temporary hype.

Modern approach to the value is deriving through legitimacy and respect, as we see Gen Y becoming the current market mover. Gen Y characteristics are making the traditional value obsoleted in both money and product. But the Gen Y is susceptible by their own creation and references. As an example we brought some creators from various corners. Casey Neistat, a crafty colorful creator that has refined daily blog and sunglasses id for this generation. Alecmonopoly, a unique far sighted artist, that describes lavish lifestyles through his iconic art. Lewis Hilsenteger, the magician that refines unboxing in a perfect execution with excitement that accompanies perfectly the majestic moments of each product. We could honor thousands of creators that express social value of all sorts, Food, Cars, Fitness, Travel. All those creators are related to the value due to Gen Y, as the generation that have been bombarded with noise from previous generations businesses. The only thing that they have not seen in an accelerated pressure is their own creations, as it is clearly the least abused value, it means that it is the only value left.

### 4.2 Intangible Value

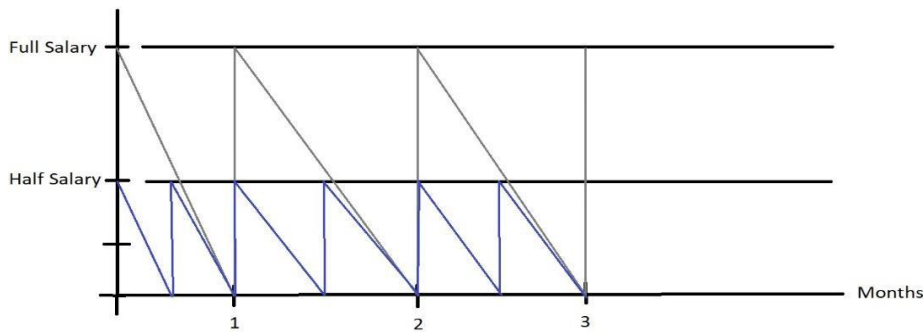
First, how about a measurement definition “*A quantitatively expressed reduction of uncertainty based one or more observations*”. The least uncertainty we are about a measure is the lack of errors that indicts the number is exact. Therefore, both intangibles and tangibles are aligned to the factor of certainty for value identification. Now implying by using unfortunate case; Bitcoin was introduced as a mean for transaction. Currently we are uncertain for its efficiency due to some forms of delay and cost alike. Then, it was used as digital gold, by safely storing its value. We may be uncertain by storing value, as the volatility is hard to bare for the majority also with additional cyber security concerns formed in occasions. Then, the underlying technology “block-chain” is perceived as revolutionary. Moving forward, we come to the point of uncertainty as to the aspect of the electricity concerns, rival crypto currency’s with evolved versions of block-chain. Virtually, there are significant errors but code is ever evolving and as far proportions refer to current time, they are not certain for future errors, therefore results are not future fair for a living code.

### 4.3 Economic Theories in relation

True value is found in processes of value re-creation. Purchasing Education, is regarded as acquiring value, that you can always make use of and which does not run out.

Velocity of money is referring to the deviation of Gross Domestic Product (GDP) of a country and the money supply. How fast circulation occurs in relation to price levels and to perceived value.

Salary in shorter periods velocity.

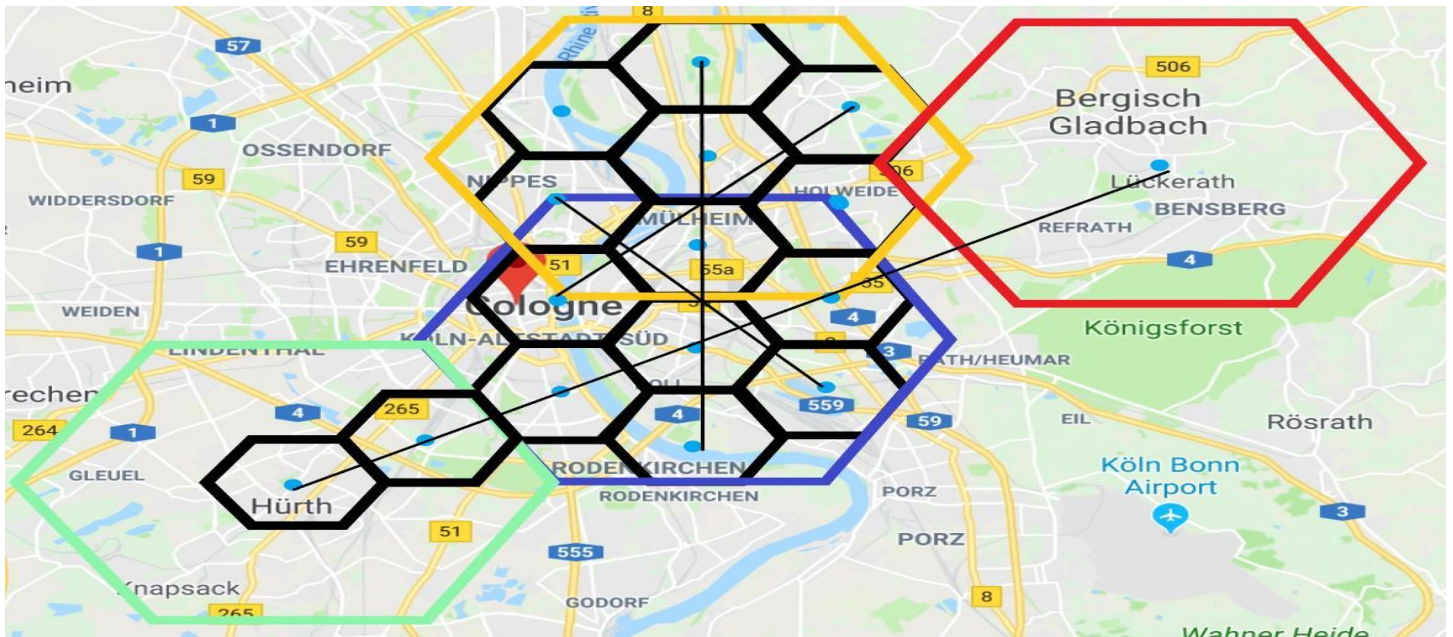


Micro Transactions velocity is the modern equivalent of velocity. Subscriptions are mostly in the sphere of micro payments. For example, “*Netflix*” and “*Spotify*” are perfect example. Customers are not hesitating to perform inexpensive services for the benefits. Despite the fact that, costs are compound on renewals date, public is not paid in segments but pays in segments. Here we see inefficiencies.

### 5.0 Hexagon City’s Web

Since the beginning of time, City’s where formed in hexagons. Due to the distance deviation for trade of goods (Approximately in walking distances). Forming an imaginary grid of communication between hour walking distances, day walking distances and week walking distances. That was the original web of communication, global market is divided by provinces as shown above.

The data from each hexagon, small to big, is different. With this regard, we improve communication through a hexagon grid based on block-chain recording. Decentralize market communication. Reachability and the view may be maximized for the free international market. Additionally, setting the structure for Block-Chain Web3.0 Grid's.



## 6.0 Combined Markets

### 6.1 Future of Markets

While creating our project, at the same time we have revived some sample of groups and we had realized that crowd tend to compare our solution with other well-known companies. In fact, we do not compete with any of the existing solutions, instead we aim to enhance them with consumer confidence. Crowd source partners have all the incentives to combine operations, as well have.

- 1) *Blogging the lifestyle*
- 2) *Blogging for tips*
- 3) *Transportation revenue using their car in between our operations*
- 4) *Supporting the growth of shops expansion by using warehousing operations in distant locations*
- 5) *Smartphone utilities from software companies*
- 6) *Social media combination in order to increase exposure for shop and crowd source partners*

Such list may be infinite. Gen Y has proven to us that it is impossible to list all the probable ideas that they can come up with.

The Market benefits from such activity may benefit in the following ways. Different type of businesses may sign a partnership with one of our crowd-source employee. In addition, by receiving an overall market exposure, naturally there is going to be an increase on traffic and customers product awareness. Thus, decreasing the need for additional spending.

## 7.0 Putting it all together

As we have examined carefully each component that is stated above, now is the time to combine all of those aspects together. In the “.com era” were the true evolution was the search engines and the projects behind them. Such search engines for satisfaction of customer may deal with, Shopping etc. In the “crypto era” operations are performed in block-chain. Such operations impliedly create the same outcome as of the search engine.



### ***“Freeing the crowded market”***

Our Solution is a united and unique platform that gives the ability to the shops to be listed on it upon signed agreement. They are not required to upload any products on the platform, as it would be done by the crowd-source employee, who will signed a contract with us, in order to provide a peaceful flow of interaction. Crowd-source, are people who will be acting as public figures. They will try to promote their own neighborhood shops. Based on this criterion, they will be spread into different locations as to collect as more small and medium businesses possible. The platform portrays the interaction of the crowd both as up loaders and as buyers. In this order, customers can get the clear picture of what the shop are look like and its location. As an example, one neighborhood might be globally popular for its shoes production but have lack of communication and delivery. With our Solution, both public figures and shops may become globally known.

The world has its eyes on natural trends and cultural appreciations. Most of them follow a certain trend that is present at that certain timeframe. How fashion changes from country to country.

By way of think of Opal as the great Solution by making the first steps to a new economy.

### ***“The Social Economy”***

Opal Platform provides the opportunity to the shop owners and Generation Y to combining strengths and effort. Completing the *Gap of Generations* and communication issues. In addition, solves market fluency issues through merging technology effortlessly. Trust in purchases arises. Creates virtual awareness of feelings. Last but not least, it assists to the freedom of movement.

## **Solutions:**

**Opal x Colored:** The application that creates opportunities in to social employment. Individuals with various specialties can join. Those individual will have the ability to cooperate with shops, that they would like to join in the online world, in which tech do not stop to develop, instead of using multiple tools. Furthermore, the free expression of shops through out social media will give them the ability to show their own product and create their own client list. This may be followed by additional revenue through personal delivery.

**Opal x Reflect:** It is a simple Platform that hosts shops and individuals. Separating only by location and fine details of specific search. Through the platforms layout, there is a true feeling and reflection of how the shop looks inside and outside. Also, the culture of each location will be present, as there will be a live video streaming and often publications

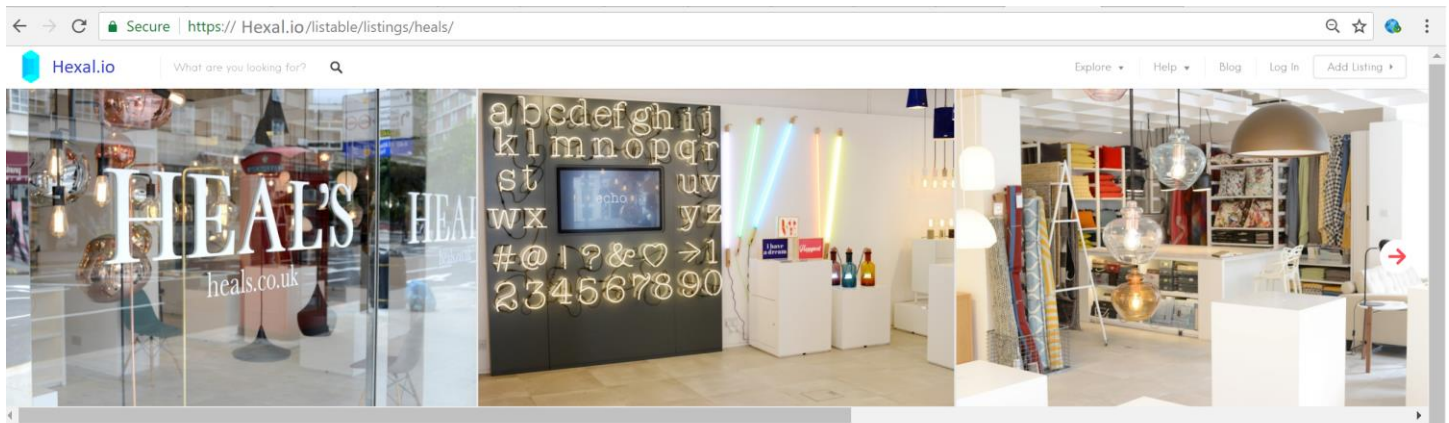
**Opal x Movement:** The ability to deliver the product exactly as it is exposed. Transferring the product in such a manner as to satisfy the customers on behalf of shop owner. Through individuals, the deliveries will revival the trust and sentiment of customers. The feeling that the customers experiencing online will become a part of their own reality.

**Opal x Shape:** The separation of locations through involved participants and their respective categories. Functioning as communication map and

Opal x Path: The function of purchase channels, as fiat currency, crypto currency. Crypto currency payment optimization, as storage or exchange to desired fiat.

Examples are followed on the next page:





[Listings](#)
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## Heal's

A new branch as a concept store

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The king of Tottenham Court Road's decor shops has unveiled an heir to the throne: a fabulous new lighting den in W2. The 200-year-old brand is styling its new branch as a concept store, but much of what's on offer here – an interior design team, a bespoke joinery service, a vast lighting range – speaks of old-fashioned retail excellence rather than innovation. A glorious art deco cinema building is a fine setting for the stylish store, and it's an ambitious acquisition in a market where so many are focusing online. That said, we're told a flash new website will follow too.

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Furniture / Home

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13 Results

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Designer furniture and lighting items

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**IT Hardware**

Tavistock Street

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A new branch as a concept store

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**House of Hackney**

British luxury shop at home

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