ARKEYTYP™ & AKT KEY TOKENOMICS
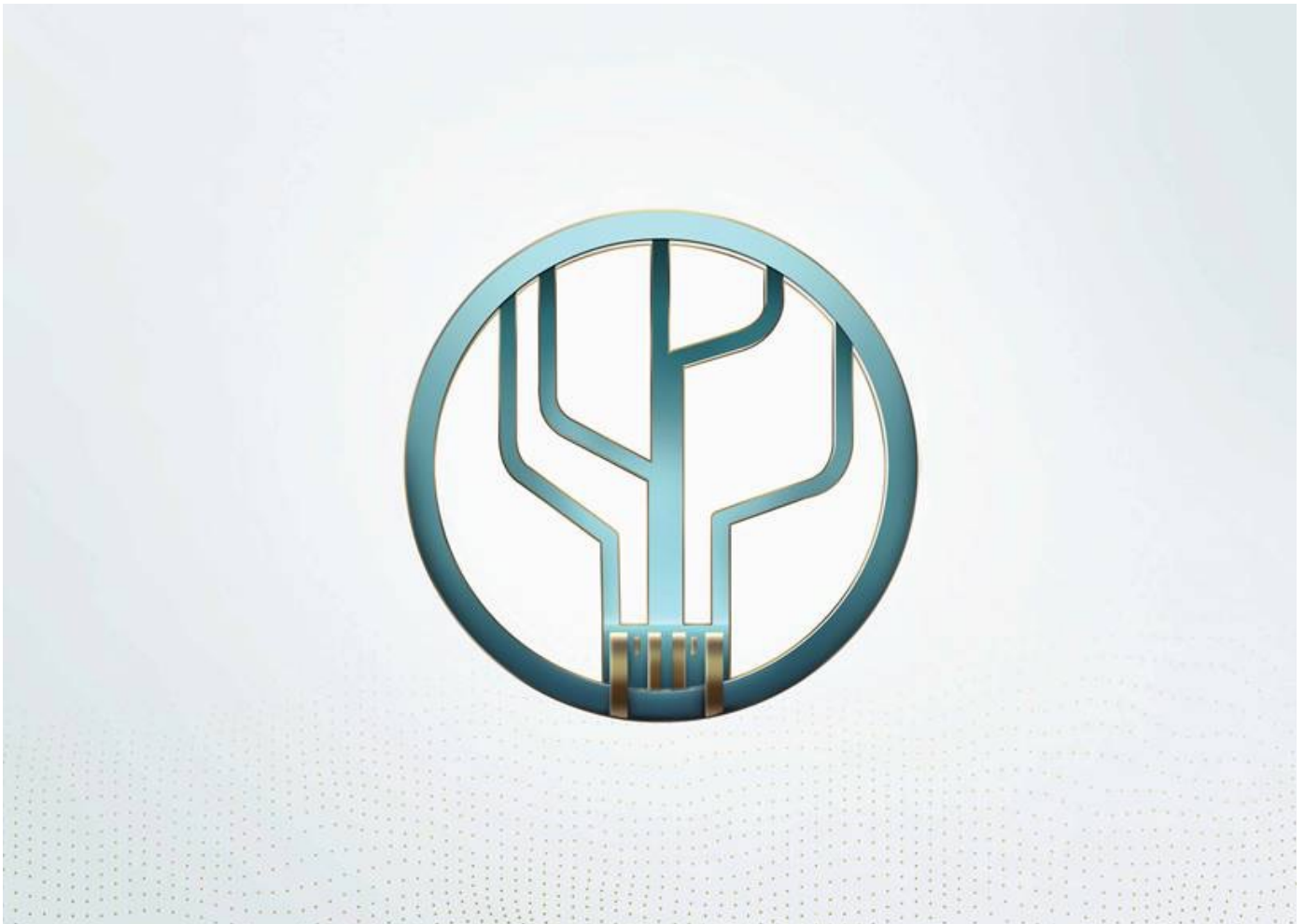
A Decentralized Application for Identity & ROI Marketing

"HID Keycosystem - Vision and Roadmap"

Nicholas Lyons
05.16.2017

Arkeytyp™ is a Decentralized Application for Identity & Return On Investment Marketing (ROI = activation & engagement) that is designed to enable mass market consumer adoption of both private and public blockchain technologies which reward the users, developers and investors with a stable unit of account ($1 marketing inventory), medium of exchange (marketplace campaign currency) and investable store of value (inflation and network effects) for verifiable human interface and automated smart contracts. Arkeytyp™ is creating a financially stable, environmentally friendly cryptocurrency ("AKT") with a sustainable business model.

PLUG IN / TURN ON / OPT IN / OPT OUT

An AKT Key is a **USB apparatus device**, US Patent no. 9,009,374, which upon **PLUG IN** securely and automatically navigates the user via the Human Interface Device ("HID") protocol to remote content, and/or the initiation of a task or other process. Without requiring mass storage or power, each AKT Key activates upon plug in to a smartphone, tablet or computer. Arkeytyp™ is a simple patented technology that resolves many engagement issues faced by Marketers and Consumers

AKT keys enable a simple consumer grade 'first experience' or on ramp to the blockchain and cryptocurrency. The Arkeytyp™ technology is verifiable, cost effective, secure and easy to use. A simple physical user experience that rewards, incentivizes and addresses crypto issues of Trust (Branded), Transparency (Clear Offers), and multiple effective routes to Businesses and Consumers through Paper, Post & Packaging (Distribution). Each Arkeytyp™ Key is evergreen to avoid environmental waste and paper obsolescence.

AKT Keys are a simple, personal and secure link. Each Arkeytyp™ Key is enabled with an encrypted unique ID (or "OTP"), that unlocks blockchain content (public / private key protocol) or smart contract. Arkeytyp is designed to be the Mass Market Consumer Blockchain on-ramp **TURN ON** that rewards and incentivizes collaboration between brands, creatives, technologists and consumers.

Arkeytyp™ is developing a "Keycosystem", a patented platform, key and token technology that offers a simple secure verifiable stable token as a reward to the consumer for **OPT IN** engagement and activation. Arkeytyp™ assists Brands build real relationships to create and share lifetime value (LTV) Brand loyalty through a Stable and Speculator coin.

Arkeytyp™ growth is supported by operating an environmentally friendly paper replacement solution (**OPT OUT**) utilizing existing Brand activation budgets. The Keycosystem provides multiple solutions which subsidize currency distribution costs and build network effects whilst minimizing cost friction.

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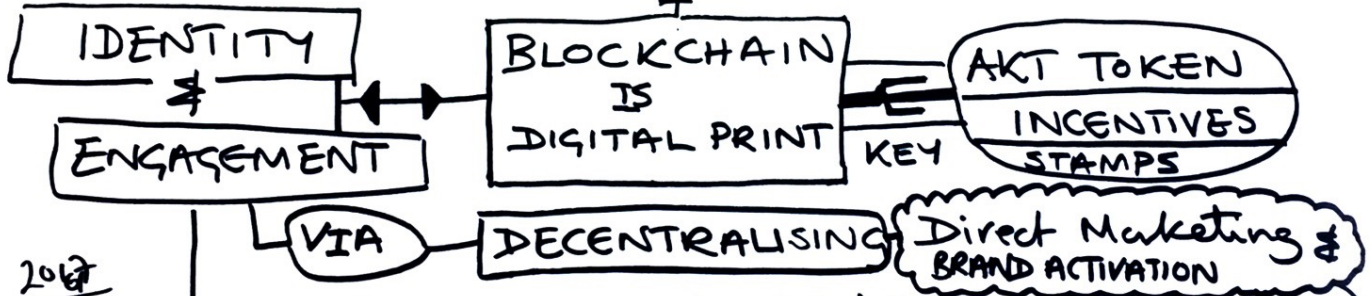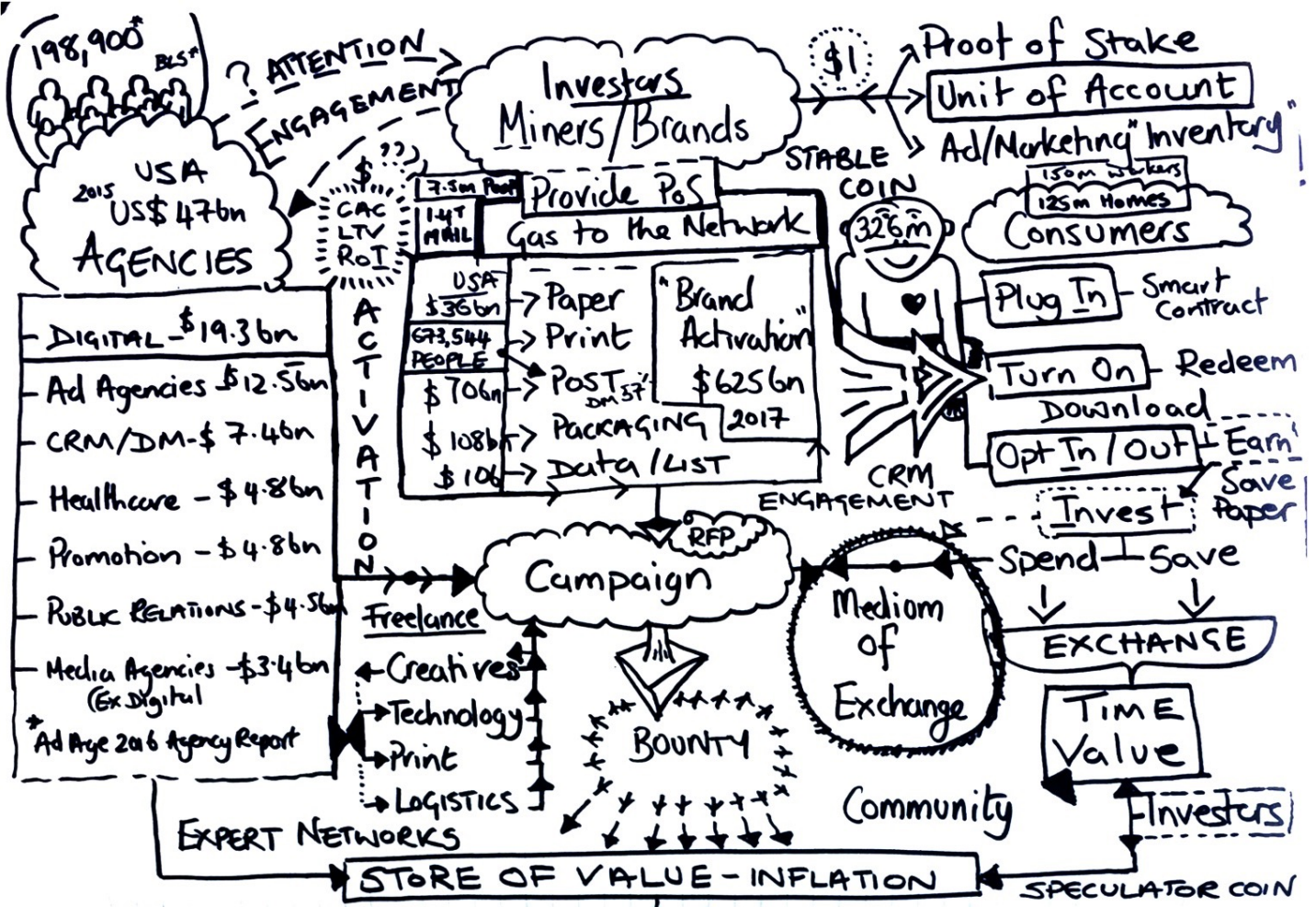## CAUTIONARY STATEMENT REGARDING FORWARD LOOKING STATEMENTS

This Memorandum contains forward-looking statements. Any and all statements contained in this Memorandum that are not statements of historical fact may be deemed forward-looking statements. Terms such as "aim," "anticipate," "assume," "attempt," "believe," "can," "could," "continue," "develop," "envision," "estimate," "expect," "forecast," "future," "goal," "intend," "likely," "may," "might," "plan," "potential," "predict," "probable," "project," "seek," "projection," "should," "usually," "will," "would" and terms of similar import (including the negative of any of the foregoing) may be intended to identify forward-looking statements. Not all forward-looking statements, however, may contain one or more of these identifying terms. Forward-looking statements in this Memorandum may include, without limitation, statements regarding:

- the plans and objectives of our management for future operations;
- a projection or forecast of the value of the Token, capital expenditures, dividends, capital structure or other financial items;
- our future financial performance, including any such statements and analysis of financial condition and the results of operations by our management; and
- the assumptions underlying or relating to any statement described above.

Forward-looking statements are not meant to predict or guarantee actual results, performance, events or circumstances and may not be realized because they are based upon our current projections, plans, objectives, beliefs, expectations, estimates and assumptions which are subject to a number of risks and uncertainties and other influences, many of which we have no control over. Actual results and the timing of certain events and circumstances may differ materially from those described in the forward-looking statements as a result of these risks and uncertainties.

We believe that it is important to communicate our expectations of future performance to our investors. Events may occur in the future, however, that we are unable to accurately predict, or over which we have no or limited control. We caution you against putting undue reliance on forward-looking statements or projecting any future results based on such statements. When considering our forward-looking statements, you should keep in mind the risk factors and other cautionary statements in this Memorandum which provide examples of risks, uncertainties and events that may cause our actual results to differ materially from those contained in any forward-looking statement. You should not place undue reliance on forward-looking statements. Each forward-looking statement speaks only as of the date of the particular statement. Except as otherwise required by applicable law, we disclaim any duty to update any forward-looking statements, all of which are expressly qualified by the statements in this section, to reflect events or circumstances after the date of this Memorandum.

The Medium is the Message
Arkeytyp™ a secure Token for the Token Economy

198,900+ BLS

? ATTENTION →

ENGAGEMENT

Investors Miners/Brands

$1

→ Proof of Stake
→ Unit of Account
→ Ad/Marketing "Inventory"!

2015 USA US$47bn AGENCIES

STABLE COIN

$ CAC LTV RoI

7.5m Post
1.4T MAIL

Provide PoS
Gas to the Network

326m

150m Seekers
125m Homes
Consumers

- DIGITAL - $19.3bn
- Ad Agencies - $12.5bn
- CRM/DM - $7.4bn
- Healthcare - $4.8bn
- Promotion - $4.8bn
- Public Relations - $4.5bn
- Media Agencies - $3.4bn (Ex Digital)

* Ad Age 2016 Agency Report

A C T I V A T I O N

USA $36bn → Paper
673,544 PEOPLE → Print
$706m → POST DM 37¢
$108bn → Packaging
$10b → Data/List

"Brand Activation" $625.6bn 2017

CRM ENGAGEMENT

Plug In — Smart Contract

Turn On — Redeem

Download

Opt In/Out — Earn

Invest — Save Paper

Spend — Save

EXPERT NETWORKS

Freelance
→ Creatives
→ Technology
→ Print
→ Logistics

Campaign RFP

BOUNTY

Medium of Exchange

Community

EXCHANGE

TIME Value

→ Investors

STORE OF VALUE - INFLATION

SPECULATOR COIN

IDENTITY &

ENGAGEMENT

BLOCKCHAIN IS DIGITAL PRINT

KEY

AKT TOKEN

INCENTIVES STAMPS

VIA

DECENTRALISING

Direct Marketing & BRAND ACTIVATION

2017

100.7m Adults Catalog Purchase

149.4bn Volume DM

9.8bn Catalogs Mailed

① Fin Services & ② CPG

2.5 Bn Coupons Redeemed

8.9b min Data

Re-Engineering the Cost of Customer Acquisition - CAC Model

Re-Defining Brand Activation - CRYPTO INCENTIVES

Removing Rent Seekers - AGENCIES

Rewarding Market Participants - Human Engagement

Saving Precious Resources - Nature - Paper Water Pollution
- Time
- Money ⎱ Major REAL Consumer Drivers

START HERE

ARKEY TVP KEY = On Ramp to the Blockchain for Mass Market (228m) Americans

1.0 THE MEDIUM IS THE MESSAGE

Marshall McLuhan is famous for coining the term *'The medium is the message'*.

> **What he meant by this was that the mechanism for delivering content is absolutely critical to the way that content is received and interpreted – in fact, he suggests it is more important than the content itself.**

Despite all our technological advancements advertisers often paraphrase the words of John Wanamaker (1838-1922), *"Half the money I spend on advertising is wasted; the trouble is I don't know which half."*

Machine learning and artificial intelligence ("AI") are the core technologies empowering the fourth industrial revolution. These technologies, which are predominantly owned and controlled by corporations are enabling the convergence of multiple trends; automation, democratization, personalization and decentralization. The same technologies are transforming our comprehension of media, politics, philosophy, economics, environment & human behavior.

If the Web 1.0 "Liberated information" and Web 2.0 is "Software Ate the World" then the blockchain and its cryptocurrencies will "Revolutionize society" by enabling decentralized ownership of Web 3.0 and a fundamental redistribution of value.

Cryptocurrency by its very nature promotes community, ownership, engagement and collaboration. Web 3.0 will unleash a beneficial economic and societal network effect causing realignment of previous network effects owned or monopolized by centralized governments and corporations.

> **The Arkeytyp™ blockchain exists to enable a secure verifiable proof of human engagement for marketers seeking verifiable RETURN ON INVESTMENT MARKETING (ROI-M).**

These converging trends highlight increasing need for humans to claim their unalienable SOVEREIGN DIGITAL IDENTITY RIGHTS (**SDI-R**). These are rights that secure individual sovereignty to control and monetize all digital communications, personal privacy and archetypal Identity. Without owning and controlling these rights it is conceivable that you could be prevented from monetizing your Identity in the future without the permission of centralized authorities.

The Arkeytyp™ blockchain enables mass market enfranchisement or on-boarding of these SDI-Rs, building a verified human network; an effect kick started by using existing corporate/brand budgets residing in environmentally unfriendly physical media of paper, post, print, and packaging. It is digital print in the truest sense of the original innovation. The blockchain is not just faithful reproduction; it is an immutable verifiable record.

Arkeytyp™ enables an explicit, verifiable, actionable, automated, smart contract; a transparent relationship between multiple counter-parties. A valuable, stable currency that is smart, appreciates in value, rewards activation and incentivizes engagement.

Redesigning and redefining the mechanisms for establishing trust and transparency between corporations, governments and citizens will become the basis of Web 3.0 and the future decentralized "**Economy of ME and WE**".

The greatest challenge will be how to explain this revolutionary technology. These technologies are powerful, unseen, intellectually intimidating to understand and use. The mainstream American consumer is wary of adopting new technologies and products.

Many Technology market participants are unaware that of the 326 million citizens, 125m households or 150m workers that constitute the U.S.A. 228 million Americans, live paycheck to paycheck or with less than $1,000 of savings. These Consumers do not have time to evaluate new invisible technologies. These consumers need an interface that is simple, secure and an accessible user experience ("UX") that doesn't take too much precious Time and Money.

The big disconnect: Executives and consumers are seriously misaligned

Factors driving customers' willingness to try companies' digital CX initiatives

Executive ranking		Consumer ranking
Improved sense of control	1	1 Takes less time
Customer's digital savvy	2	2 Improved convenience
Improved convenience	2	3 Faster results
Ability to self service	3	3 Easier processes
Easier processes	4	4 Less expensive
Takes less time	5	5 Digital savviness
Curiosity	6	6 Ability to self service
Faster results	7	7 Improved sense of control
Less expensive	7	8 Curiosity

Source: IBM Institute for Business Value, Executive survey n = 600; Consumer survey n = 5,895.
Note: Multiple instances of the same ranking number represent a tie.

There is a very large long tail opportunity to address in Physical to Digital (P2D) and valuable community to build. There are 7.5 million people employed in the US $1.4 trillion mailing industry, 670,000 people work in the US$70 billion USPS, 200,000 work in the US$47 billion marketing agency industry servicing a US$625 billion activation marketing industry..

Arkeytyp™ is a Decentralized Application for Identity & RoI Marketing (activation & engagement) that is designed to enable mass market consumer adoption of both private and public blockchain technologies which reward the users, developers and investors with a stable unit of account ($1 marketing inventory), medium of exchange (marketplace campaign currency) and investable store of value (inflation and network effects) for verifiable human interface and automated smart contracts.

Arkeytyp™ adoption offers a win, win, win proposition; economic benefit, environmental conservation and social impact that we know as **Conscious Capitalism**.

2.0 FROM ATTENTION ECONOMY TO ENGAGEMENT ECONOMY

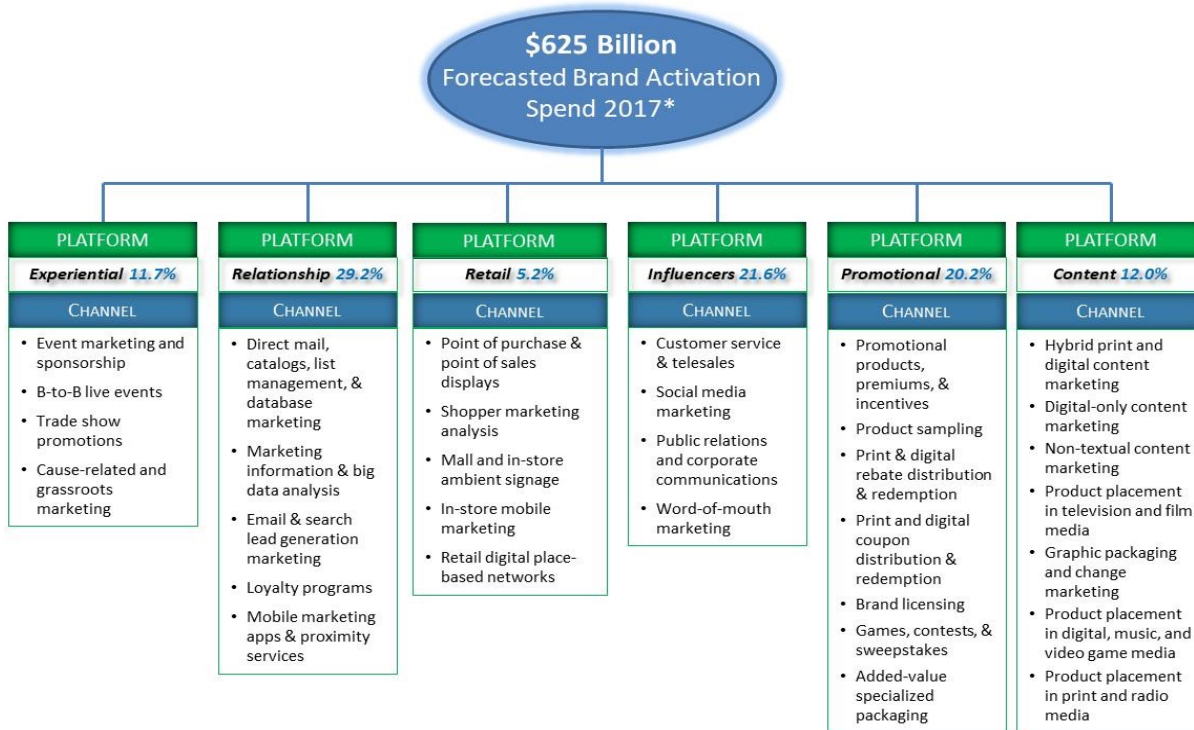### *Web 2.0 - Liberation of Information to Web 3.0 - Decentralized Applications*

In its current form, digital advertising is broken. Marc Pritchard, chief brand officer at the world's largest advertiser, Proctor and Gamble, has spoken unambiguously about the problems of a murky and often corrupt system of buying and selling online advertising; ad fraud; the problem of view-ability; opaque financial dealings of agencies; the issue of brand safety; the head-spinning number of third-party toll takers standing between advertisers and publishers; and the arbitrary and unreliable methods used for measuring ad delivery. In a recent article, Marketing Week says:

> ***"Pritchard believes that next generation will be mass one-to-one marketing. That is the promise digital has always held, but so far it has failed to live up to it."***

Combine this with the increased use of ad blockers, which according to a new report from PageFair, at the end of 2016 there were 615 million devices utilizing ad blockers worldwide, a growth rate of 30% over 2015, and reaching the target customer and having them engage is increasingly difficult.

The consumer faces its own set of problems with the current system: malvertisements and privacy violations are rampant; mobile advertising consumes massive amounts of the average consumer's data plan and compromises battery life; and there is a preponderance of unwanted, misdirected ads which reduce the likelihood of the consumer engaging with those offers of actual interest. Consumers are providing **valuable** data about themselves without being properly compensated for this data, which in turn is being resold without their permission, they are effectively being blackmailed by content providers which require release and consent through the terms and conditions associated with access to that content, that few if any consumers read or understand.

$625 Billion Forecasted Brand Activation Spend 2017*

PLATFORM	PLATFORM	PLATFORM	PLATFORM	PLATFORM	PLATFORM
Experiential 11.7%	*Relationship 29.2%*	*Retail 5.2%*	*Influencers 21.6%*	*Promotional 20.2%*	*Content 12.0%*
CHANNEL	CHANNEL	CHANNEL	CHANNEL	CHANNEL	CHANNEL
• Event marketing and sponsorship • B-to-B live events • Trade show promotions • Cause-related and grassroots marketing	• Direct mail, catalogs, list management, & database marketing • Marketing information & big data analysis • Email & search lead generation marketing • Loyalty programs • Mobile marketing apps & proximity services	• Point of purchase & point of sales displays • Shopper marketing analysis • Mall and in-store ambient signage • In-store mobile marketing • Retail digital place-based networks	• Customer service & telesales • Social media marketing • Public relations and corporate communications • Word-of-mouth marketing	• Promotional products, premiums, & incentives • Product sampling • Print & digital rebate distribution & redemption • Print and digital coupon distribution & redemption • Brand licensing • Games, contests, & sweepstakes • Added-value specialized packaging	• Hybrid print and digital content marketing • Digital-only content marketing • Non-textual content marketing • Product placement in television and film media • Graphic packaging and change marketing • Product placement in digital, music, and video game media • Product placement in print and radio media

* Estimated from ANA and PQ "U.S. Brand Activation Marketing Forecast (2016 – 2020): Key Findings Report"

2.1 The Economy of Me & We

"You give but little when you give of your possessions. It is when you give of yourself that you truly give." from The Prophet (1923), by Kahlil Gebran

> **We are utilizing our limited time and attention (a valuable scarce resource) on online activities for which we do not get paid…we are the product!**

It was Alvin Toffler that first described this trend in his book, Revolutionary Wealth (2007), calling it the "non-money economy". Here are some excerpts that were not obvious in 2007:

"The non-money economy may well create as much value as the money economy."

"More and more companies in the money economy are externalizing labor by requiring customers to perform tasks previously done for them by employees."

"We call this externalization of labor the "third job."

"Your first job is the one you get paid for when you go to your office or factory and get a paycheck every week or month."

"Your second job is taking care of yourself, your children, your parents or your home, cleaning up or doing the dishes."

"The third job is the work being "outsourced" by the producer not to India or the Philippines, but to you, the consumer, from the friendly companies all around you."

## 2.2 How Can Me & We Partner Brands to Improve ROI?

Loyalty, Advocacy, Consumption, Subscription, Support & Marketing

This can be accomplished by removing the guesswork for brands. Explicitly expressing our price and purchasing preferences, sharing historic purchasing decisions and future purchasing desires. One can effectively price ones consumption value and become a subscriber to life; the 'Dollar Shave Club' of everything. You are part of a community and its network effects.

This collaboration and community network effect at scale can also yield collective bargaining benefits. Over time data network effects and purchasing decisions can be organized to provide the consumer a simple choice architecture across two simple vectors a) price and b) speed.

> Arkeytyp™ literally has the "Key" to open the door to a more cost effective, secure, easy to use bridge, solving many of the issues currently faced by advertisers and consumers and one which enables the consumers' first experience of the blockchain and cryptocurrency. A simple UX that rewards and incentivizes and addresses; visibility, education, explanation and distribution. Each Arkeytyp™ Key is evergreen to avoid waste and paper obsolescence as backend content is maintained in real time.

Arkeytyp™ is developing a "Keycosystem", a patented platform, key and token technology that offers a simple secure verifiable token as a reward to the consumer for engagement and activation. Arkeytyp™ builds real relationships to create lifetime value ("LTV") brand loyalty through a stable coin and speculator currency. Arkeytyp™ can provide this by operating a paper replacement model or operating within existing brand activation budgets thereby delivering multiple solutions which serve to subsidize the distribution costs and build the network effects of a cryptocurrency without cost friction.
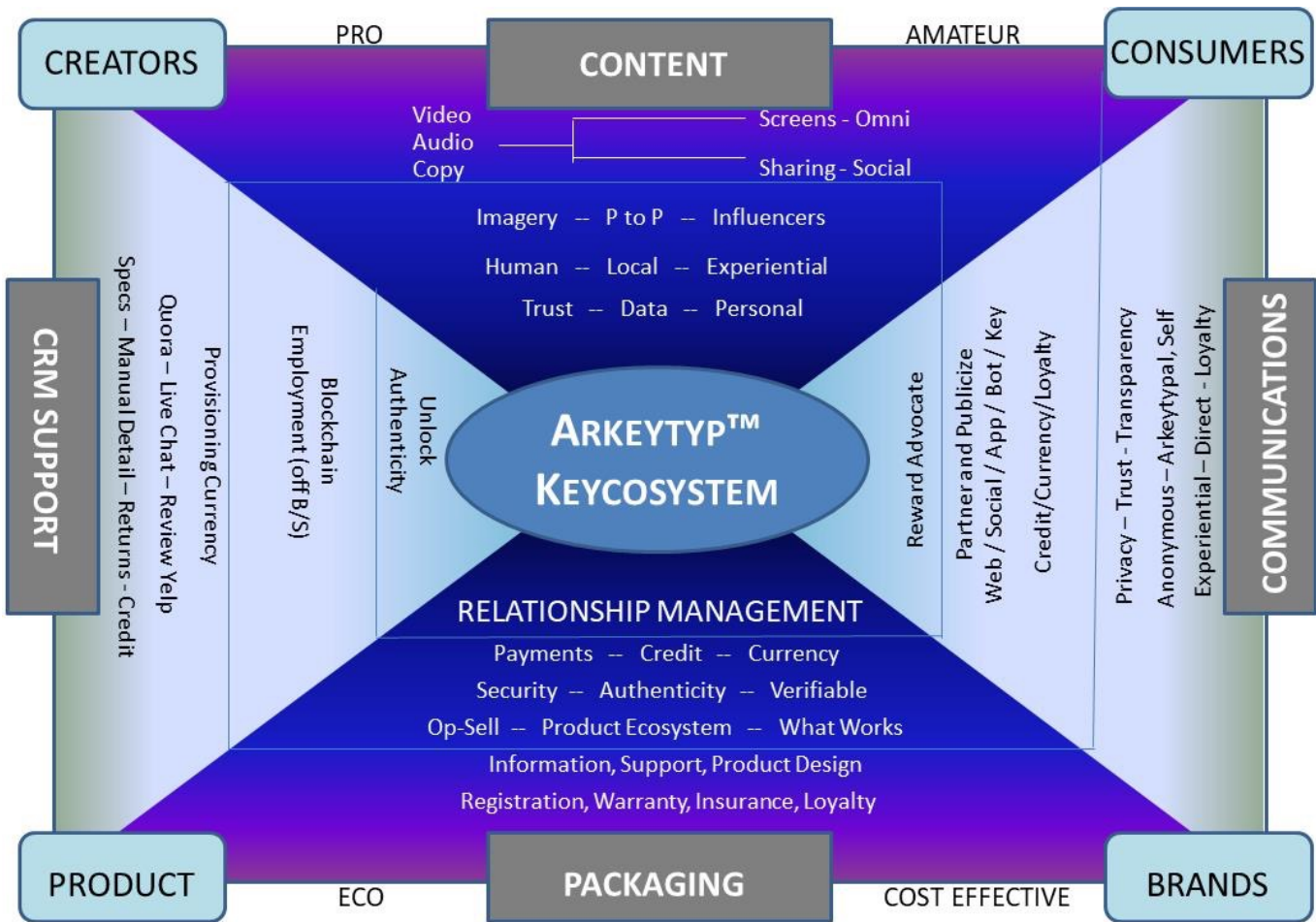
2.3 Valuing, Spending and Speculating

As Bill Gurley noted in "The Dangerous Seduction of Lifetime Value Formula":

"Lifetime value is the net present value of the profit stream of a customer. This concept, which appears on the surface to be quite benign, is typically used to compare the costs of acquiring a customer (often referred to as CAC or SAC, which stands for Subscriber Acquisition Costs) with the discounted positive cash flows that will come from that customer over time. As long as the sum of the discounted future cash flows are significantly higher than the SAC/CAC, then people will argue it is warranted to "push the accelerator," which typically means burning capital by aggressively spending on marketing.

"The Lifetime Value of a customer to a Brand" is represented by the LTV formula below whereby the *"rule of thumb" is that customer acquisition cost (SAC/CAC) should be no more than one third of the lifetime value of the user."*

$$LTV = \sum_{X=1}^{n} \frac{ARPU_x - Costs_x}{(1 + WACC)^x} - SAC$$

- ARPU (average revenue per user)
- Avg. Cust. Lifetime, n (This is the inverse of the churn, n=1/[annual churn])
- WACC (weighted average cost of capital)
- Costs (annual costs to support the user in a given period)
- SAC (subscriber acquisition costs, sometimes referred to as CAC = customer acquisition costs)

In a blockchain micropayment enabled world, the CAC budget can now be allocated more efficiently.

2.4 The Money Could Go to the Customer.

If you are a company that spends millions and millions of dollars on marketing, wouldn't you be better off handing that money to the customer versus handing it to a centralized third-party (rent seeker) who has nothing to do with the future life-time value of the customer?

Providing a better value-proposition to the customer is much more likely to endure goodwill than spending on marketing (the Dollar Shave Club model). A heavy marketing spend necessitates a higher margin (to cover the marketing spend), and therefore a higher end user price to the customer!

So the customer is negatively impacted by the presence or need of the marketing program. Plus, a **margin umbrella** now exists for competition that chooses to undercut your margin model with a more efficient customer acquisition strategy (such as giving the customer the money).

> *"More and more money will go into making a great customer experience, and less will go into shouting about the service. Word of mouth is becoming more powerful. If you offer a great service, people find out*." – Jeff Bezos"

Arkeytyp™ is designed to help brands make the customer experience better by making communication more direct and compensating the customer for their time and engagement.

2.5 The Network Needs a Stable Unit of Account & Medium of Exchange

In order to work with a) global brands and their budgets and gatekeepers, Chief Procurement Officers (CPOs) and b) build a network of creatives; we need to create a stable coin that can be accounted for under US GAAP (as Advertising Inventory) and relied upon for payment of production services (Campaigns). In order to do this effectively we should use the token as an endogenous measure of the stable price.

We need to find a **service inside the network** that is known to have a **roughly stable real-value price**, and measure the price of that service inside the network as measured in the network's own token.

Examples of such services in other currencies include:

- Computation (measured via mining difficulty);
- Transaction fees;
- Data storage; and
- Bandwidth provision.

The problem with these services is that none of them are very robust against rapid changes due to technological innovation.

A slightly different, but related, strategy, is to measure some statistic that correlates indirectly with price (e.g. response: conversion rate), usually a metric of the level of usage; one example of this is transaction volume or bounties. This is an inherent strength of our patented Arkeytyp™ approach and token:

a) Paper, post & packaging pricing does not change rapidly (commodity pricing because almost all technological advantage has been competed away);
b) The mail is legally protected and capped in terms of cost and unlimited in US geographic coverage (mailboxes are node equivalent);
c) This sets a stable inflation protected benchmark for AKT miners /investors /brands (Stamps are the "Gas" to fuel the USPS as electricity is to Bitcoin network); and
d) We have a patented Keycosystem (granted) and a formidable team to protect our members' ongoing interests.

2.6 The Arkeytyp™ Flywheel

All participants **need** a censorship resistant, verified secure human ID to prove engagement and complete their first blockchain smart contract the reward for the paper click - the **PLUG-IN.**

The word "advertise" comes from the Latin *advertere* which means to turn to or TURN_ON. Download the Arkeytyp™ application to begin a direct respectful permissioned branded Real Relationship.

Post **PLUG-IN** initial interaction permits the user to communicate a) that they would like to **OPT IN** to Arkeytyp™ secure digital ID ROI-M communications and/or b) **OPT OUT** of any further paper communication from that brand.

The benefits of this explicit communication are that much like a printed or digital entry into a centralized system of record, there is now an immutable record (ledger) documenting a real relationship, a verified human engagement that rewards and delights, to earn invest or save time and money (precious resources) on the blockchain that is verified by you and not intermediated by any centralized third party.

The underlying magic of our token is to align incentives across all stakeholders to both *hold* the token and *spend* the token.

The challenge for every Decentralized Application ("DApp") initially is creating a network by on-boarding the users, core developers, third-party developers, investors, and service providers.

You need network participants to *hold, spend, invest, create or earn* tokens.

In the same way LTV variables tug at on another, currencies have ***interdependent*** not independent variables, so if token incentives are overly simplified they can be corrosive over the longer term (greater fool theory in Bitcoin arguments) unless the network members have truly aligned incentives. The traditional LTV limitations can be overcome when the value of the cryptocurrency network (inflation) can be shared amongst all its members.

The Arkeytyp™ physical token has inherent currency enhancing characteristics. It is a stable unit of account (physical direct marketing inventory that can be accounted on a Fortune 500 brand balance sheet), a medium of exchange (a stable coin useful for marketplace currency payments between freelance creatives, agencies, and marketers) and investable store of value (inflationary money multiplier bounties and network effects via the speculator token) for verifiable human interface and automated smart contracts.

Our token increases in value as the utility of the underlying project, campaign, or response and conversion bounties increase.

The blockchain enables transparency in the Keycosystem. Participants can see the RoI of a public campaign, response rate and conversion rate efficacy. As such it will be possible for the currency to appreciate to reflect the ARPU of the network and the growth opportunity. The downside protection for AKT is that it will be difficult for the token to drop below the $1 physical Key price (stable token basis)

Each participant of the Keycosystem is now aligned to increase the value of the token.

These network relationships increase the value of the token as demand for the tokens exceeds supply, and drives up the price of the speculator token. These market forces and network effects enable projects that fund more development (more developers, entrepreneurs, miners, participants, etc.) which create better projects and more paper replacement opportunities, content or campaign inventory to go into the network. Projects won't be established on unknown networks, and networks won't develop without projects. Arkeytyp™ will become synonymous with trust and transparency.

To kick start the network, campaign sponsors give users partial ownership of the network to their early adopters. This new ownership model solves the chicken-and-egg problem. These users then use the token to transact on the platform or to vote on decisions (via proof of stake).

With proof of stake, users will have more of a say in the governance of the campaign or project. This decision-making process allows the campaign or project to become more viable as it promotes behaviors that benefit all participants in the ecosystem. Users are then incentivized to hold onto their token, or speculate on campaigns with RoI bounties which in turn drive up the token price.

Because of the continued network effects of success, it becomes an attractive investment for investors. Current investors also hold onto their tokens anticipating future price increases or successful campaigns, further promoting issuance or constraining supply. New investors drive up the demand for the stable token, the utility or success of deployment into campaigns, drives up the price of the speculator token.

Through decentralized autonomous applications / organizations, tokens now allow projects to work with millions of marketers, thousands of developers, and hundreds of entrepreneurs. Something that was previously only saved for big companies with billions of dollars can now be decentralized.

Speed of execution will become an important competitive advantage and moat for this new breed of organizations. Understanding token network effects will be crucial to evaluating projects and protocols moving forward. Without it, most of these projects are just crowdfunding mechanisms without leveraging the power of decentralization.

Calculating Arkeytyp™ Token Value

Calculating the implied future value of the AKT Token is straightforward. Consider that currently the *minimum* price a brand can deliver a direct mail piece to a consumer is c.$0.36c (this assumes a high volume mailer 8m+per month, no cost for list rental). Direct mail industry benchmarks suggest an open rate of 1% and a conversion rate on those pieces opened of 15%. This would imply an average customer acquisition cost ("CAC") of $240. This is based on a typical 2016 direct mail rates which assumes Businesses are rational market participants spending US$45+ billion on 150 Billion direct mail pieces per annum (sent via US Postal Service).

Now consider the Arkeytyp™ Key. Based on the historical results Arkeytyp™ technology has an average open rate in excess of 20%, if we assume a 15% response rate in DM (to be conservative) with the same conversion rate of 15% this would imply a CAC of $16, or a potential Bounty value (CAC Saving) on the campaign of $224.

Smart autonomous payments allocate these CAC savings / Bounties amongst the network members that had contributed stable coins into the Campaign (Brand / Investor / Miner) and to Arkeytyp™ for the use of its core IP, but the underlying value capture (margin umbrella) available for redistribution is still significant.

Arkeytyp™ plans to initially set the price of an Arkeytyp™ Key and Stable coin to Investors/Brands at $1 per Token to act as both a unit of account and medium of exchange. The Store of value and inflation opportunity in the Speculator coin is directly related to the success of all the campaigns, the growth of the network, protocol and expansion of the permission environment.

3.0 YOU CANNOT HAVE FINANCIAL INCLUSION WITHOUT DIGITAL IDENTITY

Storage, authentication, authorization and audit are key when creating a digital identity and different biometric or physical factors as a means of authorizing and authenticating contain appealing properties to create a frictionless digital identity.

Identity theft is an increasing problem, and the blockchain can provide secure provenance for digital identities.

3.1 Trusting Third Parties With ID Verification is A Bad Idea

Society has evolved in various directions over the past few years, and both online and mobile experiences are playing an ever-increasing role in our lives. That being said, most of customer internet usage still takes place near a computer, especially crypto, and most services and platforms being used do not scale properly on mobile yet.

But there is a certain drawback to most of the features and platforms consumers use on a daily basis: they all need some form of **verification** or registration before they can be used properly. One thing that has become clear is that using just a username and password to access any service is far from sufficient these days.

Consumers are forced to submit documents – such as an ID scan, copy of passport and even a copy of a credit card – to third party services for verification purposes. All of these documents are then stored on centralized servers, where they become a favorable target for hackers and hoodlums. For the end consumer, identity theft is a serious problem.

> **Issuing identity verification through blockchain technology allows consumers to verify their identity while there is no centralized storage of identity documents involved.**

> **Using a digital token issued on the *blockchain* to perform identity verification sounds simple in theory, but is a lot harder to pull off in the real world.**

In terms of using this token, the user would send that token to the service or company they are using and sign off on the transfer with their private key.

Doing so would allow the customer to keep the information confidential, rather than relying on a third-party service or platform to store that data. All of the information associated with that token would only be visible for the sender and intended recipient.

To provide an additional layer of security, an **oracle** or **escrow**-type service could be implemented, where a computer verifies the customer's identity by getting access to the ID token. Once the identity has been checked, that token is then sent back to the owner, and the business or platform is notified of a successful user verification procedure.

Blockchain-based verification would bypass the need for centralized services, additional storage capacity and it could even remove the human element from the verification procedure altogether. The Arkeytyp™ platform provides the user with all of these features.

3.2 Issue

Whether it's the US government assigning Social Security Numbers or Google letting you select an email address, there needs to be a way to create new identities and assign identifiers.
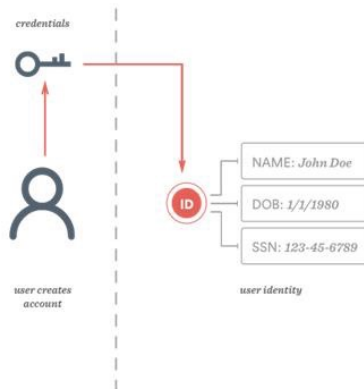
*Identities need to be created or issued.*

3.3 Store

Identity data needs to be stored somewhere. Usually this is a private centralized privately owned database with administrator-controlled access, but technologies like IPFS and Blockstack are examples of new models for data storage and retrieval.
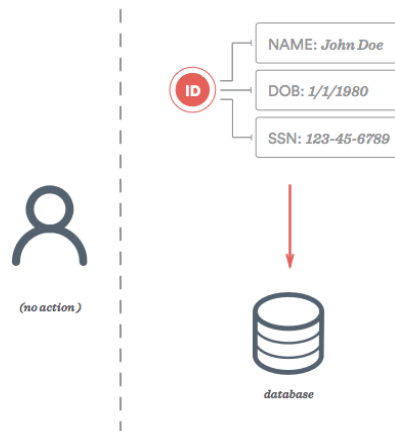
*Identity data needs to be kept in a secure manner.*

3.4 Authenticate

Individuals need to prove they are who they say they are when attempting to assert their identity. This is done using one or more factors of authentication: something you know (a password), something you have (an Arkeytyp™ or mobile phone), or something you are (photo or fingerprint). For example, think of what happens when you present your drivers license at a bar or airport. The person inspecting it looks at your photo, then at you, to make sure you're the person represented on the card.
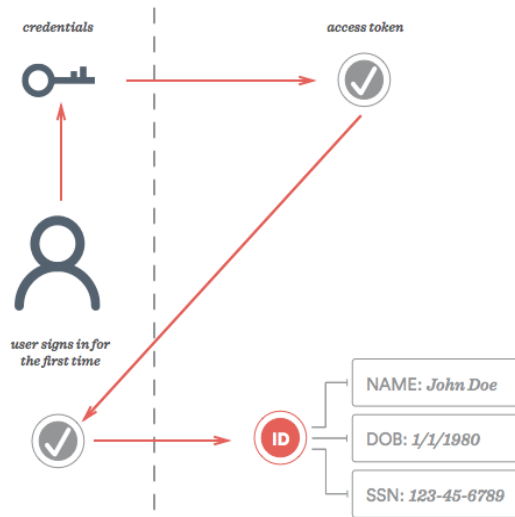
Individuals need to prove they are who they say they are.

3.5 Authorize

Once they've authenticated themselves, individuals are authorized to perform certain tasks. Whether it's being able to access the transaction history for your bank account or being able to enter a bar, identity systems get utility from enabling you to take actions and interact with people or businesses based on knowing who you are or certain information about you.
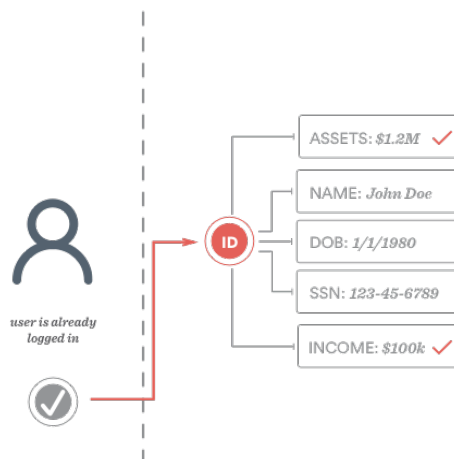

Individuals are given permission to access services or perform tasks based on identities or attributes.

3.6 Recover

Stolen wallet or forgotten password? Individuals need a way to regain access to their identity data, should they lose it.

(Note: This is often the part of the process where the usability vs security tradeoff is most stark—protecting an account with a random 32-character password and fingerprint isn't much good if "recovery" can be done using your zip code and the last four digits of your social security number. Conversely, asking the average user to print a recovery key when they create their account is absurd
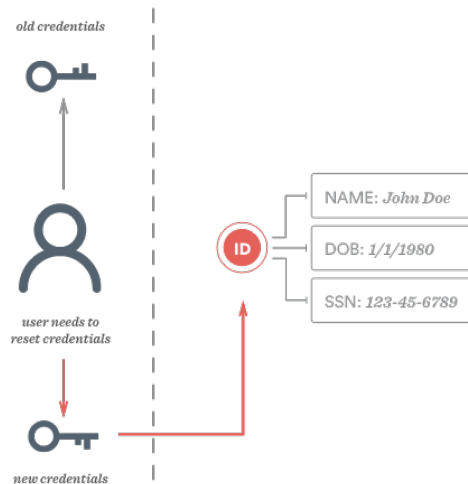
*Individuals need a way to regain access to their identity data.*

3.7 Update

Users or administrators need to be able to add, remove, or edit attributes associated with an identity. Pieces of our identity information change over time: an address gets changed, a new degree is earned, a drivers license expires, etc. Digital identities need to evolve along with the people they represent.
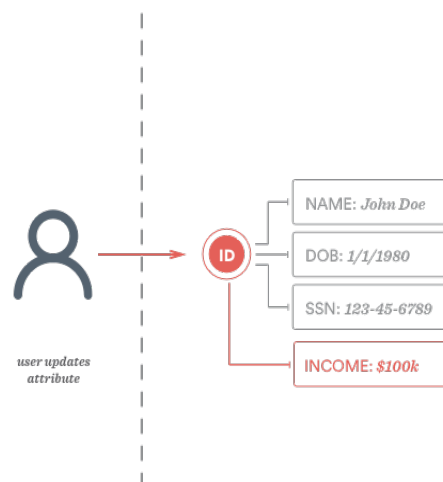
Individuals can add/remove/edit attributes associated with their identity.

3.8 Audit

How can someone check that your identity data is accurate? In the context of regulated industries such as financial services or health care, identity data and the process by which it is recorded and accessed need to be auditable by relevant government institutions. For user-controlled identity systems like PGP, code is open source and trusted parties that host data (e.g., Keybase) ideally go to great lengths to enable public auditing.
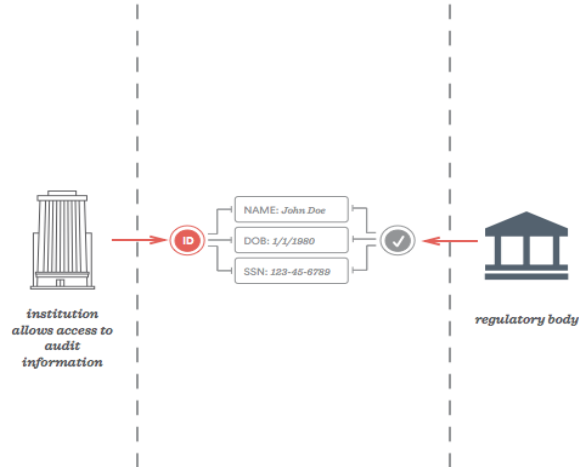
The validity and integrity of identity data should be auditable by specified parties, such as regulators, users, and other institutions who rely on accurate identity information.

4.0 THE BLOCKCHAIN & CRYPTOCURRENCY

**Blockchain is the most significant invention in the
history of the world since the Internet.**

The blockchain is a ledger that is immutable, distributed, and cryptographically secure:

- **Ledger** means that it's a historical record of trades;
- **Immutable** means that once a trade is added to the ledger, it is permanent and unchangeable;
- **Distributed** means that everyone gets a copy of it (and keeps getting updates as they happen); and
- **Cryptographically secure** means that that everyone can trust what's in it.

In the technical realm of the blockchain, the concept of a cryptocurrency token is well understood. **It represents a programmable currency unit that is bolted to a blockchain, and is part of smart contract logic in the context of a specific software application**.

But what is a token, really?

A token is just another term for a type of **privately issued currency**. Traditionally, sovereign governments issued currency and set its terms and governance; in essence directing how our economy works with money as the exchange medium for value.

With the blockchain, we now have new types of organizations who are issuing their own currency in the form of digital money as cryptocurrency, and they are setting their own terms and rules around its operations, **in essence creating new self-sustainable mini-economies.** What was once the purview of governments is now in the hands of the many.

In the business realm, we can define the token as:

A unit of value that an organization creates to *self-govern* its business model, and empower its users to interact with its products, while facilitating the distribution and sharing of rewards and benefits to all of its stakeholders.

A cryptocurrency is therefore a Blockchain based asset that makes a DApp possible. If you buy a cryptocurrency you should be able to argue for why the DApp is valuable.

The **first DApp was a decentralized payment network**, and that network's cryptocurrency was called Bitcoin. In general, a DApp **allows you to do something you can already do today (payments, computing, storage) but without a trusted central party.**

Just as Bitcoin is (notionally) a DApp for payments, Ethereum is a DApp for computing, and Filecoin is a DApp for storage. **Arkeytyp™ is a DApp for Identity & ROI Marketing (activation & engagement).**

5.0 THE FUNDAMENTAL ANALYSIS OF ANY CRYPTOCURRENCY IN THREE QUESTIONS.

You **can't** argue that for **everyone** Bitcoin is *"better"* than Visa, Ethereum is *"better"* than Amazon EC2, Filecoin is *"better"* than Dropbox. In fact, measured on most dimensions—speed, cost, UX, features, governance—DApps are **worse** than their centralized counterparts. But on one critical dimension—**censorship resistance**—DApps are not only better, they are arguably the **only** solution. Censorship resistance means that the transaction is **unstoppable** as long as the DApp's fee (denominated in the cryptocurrency) is paid.

*Thus, the fundamental value of a DApp = how much a given user group **needs censorship resistance in a given market**.*" Adam Ludwin, Chain

Q1. Who are the people that require censorship resistance?

Humans that own or work with or for corporations. Humans who utilize creative agencies & marketers and humans that consume branded products and services in the real world

Q2. Why do they need or want censorship resistance?

Ownership and identity are unalienable human rights in the real world and a pre requisite for an individual to legally monetize their time both offline and online.

Time is the human scarce resource. You cannot buy more time at the end of life but you can make time. Humans are hard wired to save time, and desirous of making more money during work time to spend time on their free time. There is therefore a virtuous circle with societal network effects if you own and control your Identity to monetize your time both in the virtual and real world.

Money is best defined as a store of time held in future decisions or "life optionality" It generally follows; that the more money you have, the more time is stored in the future decisions, judgements or life options you own.

"Money Value of Time" drives the behavioral economics behind Arkeytyp™:

a) Utility value based on earning and spending invested *in time* relative to an individuals or entities contribution, ability, education and opportunity; and

b) Commodity value which relates to an individual or entities investment, saving and Consumption contributions *over time.*

Time spent is how each individual chooses to exercise the unalienable rights referred to in the Declaration of Independence, life, liberty and pursuit of happiness. Owning the money value of time should enable better decision making. This will become even more pronounced in future with ML/AI removing human foibles (behavioral economics) from the purchasing / judgement /choice architecture process.

Brands attempt to *save time* for consumers by creating an emotional neural shortcut in users minds that associates brand identity with a good purchase decisions. The brand hopes the consumer will become habitual or loyal. Brands want to reward that loyalty for *time spent* that deepens the relationship by sharing value.

Consumers want to feel **they** have made the best possible purchase decision as justified by investigation and experience. Humans take great pride of ownership in the *time taken* making these decisions or "judgements" in every respect of life. Every purchase decision reflects the individual because "All judgement is Self Judgement" and therefore contains inherent identity data. Google and Facebook make 73c of every $1 advertising dollar spent selling the digital reflections of our identity, behaviors and judgements.

Once habitual branded neural pathways are plowed by repeated decisions (plasticity), Humans rarely desire to make change (**w***aste time)* as it would require them to admit error and re-process a prior judgement.

To **monetize time** therefore we need to protect the individual's sovereign identity rights and help the individual maximize his potential value by helping to make well informed decisions and by helping then to give them ownership of the identity. This requires humans (and their permission proxies) to own their online identity and content in the same way that they own real estate, cars and intellectual property. Each human has an LTV to contribute to a society or community and as such each has a value to other humans and brands. Now Arkeytyp™ can help us pay and get paid for it at an atomic scale.

Q3. Will this group of people grow in size over time? If so, why?

Yes, because the UX is simple and secure. Arkeytyp™ can partner brands through the user adoption lifecycle initially on their private or public blockchain. Users have an economic, financial, environmental and social benefit from taking control of their Identity and engaging with brands in productive relationships. It is a triple win strategy.

5.1 A valuable DApp is: one that **has found users** who are truly **harmed/oppressed/taken advantage of** by the intermediary in the market. And where, for whatever reason, competitive forces or government regulation either have not, or will not, solve the problem.

The Government is unwilling or unable to regulate these dominant market players under the current legal paradigm. Brands, agencies and individuals are increasingly obligated to protect their online and offline identities and reputations. They do this to protect their IP rights from thieves, counterfeiters and manipulative market participants or dominant competitors who erode market share or destroy value via infringement, subsidized competition, data and network asymmetry or "taxing or raking" advertising and marketing with little accountability.

The consumer (and her data) was the product in Web 2.0 (Facebook, Google, Twitter, Snap, and Pinterest) but **the medium is the message** in 3.0 and none of these media brands are neurally associated with the Trust and Transparency money demands. Apple and Starbucks are the closest equivalent branded "Challenger Banks" in terms of consumer Trust.

The technology now exists for these relationships to be decentralized or privatized by re-allocating resources, more efficiently between the key stakeholders in Web 3.0. Communities will learn to collaborate without intermediary rent seekers for best results.

Investors looking for a fundamental reason to buy cryptocurrencies **have to believe that decentralized apps will create value for people**. A cryptocurrency has **zero** fundamental value if the DApp has no value to a human.

5.2 The highest value strategy, protocol designers can engineer is to think about how to **engineer the evolutionary characteristics of their blockchains** — specifically, the **economic incentives** for anyone to come along and improve them.

The best engineered organisms can outpace others, even if they start smaller or later. **By harnessing their decentralized nature they can evolve faster than a centralized organization ever could.**

"Token networks align network participants to work together toward a common goal — the growth of the network and the appreciation of the token." -Chris Dixon
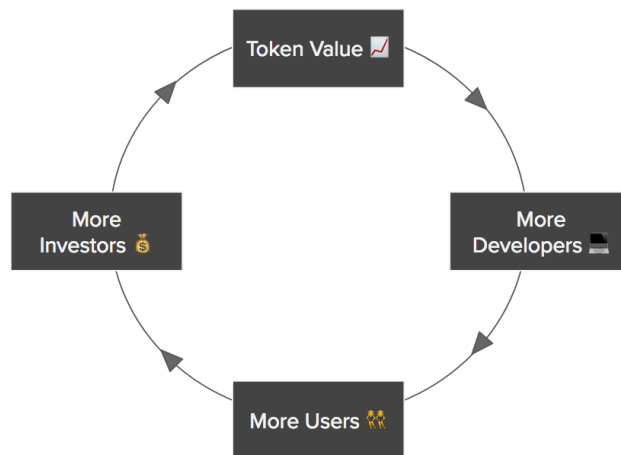
5.3 Token Network Effects

Token network effects occur when the growth of the network aligns with the appreciation of the token. **As the network grows, the token adds value to the platform and accelerates network effects.**

The most successful projects tie the token to the core action of the network's growth. By aligning incentives across all stakeholders, projects can reach escape velocity and leap frog centralized organizations.

6.0 ARKEYTYP™ RATIONALE & VALUE PROPOSITION

Arkeytyp™ is creating a financially stable, environmentally friendly cryptocurrency AKT and sustainable business model. It is designed to be the blockchain on ramp that rewards and incentivizes collaboration between brands, creatives, technologists and consumers. The AKT Key provides simplicity in the UX and a smart personal and secure ID that activates and engages upon plug-in to any USB device.

The AKT platform provides:

1. Private and secure blockchain asset for verified communications and smart contracts an enduring unit of account and evergreen physical to digital marketing inventory;

2. A secure verifiable medium of exchange between brands and consumers;

3. Improved consumer and community engagement and activation through the use of secure identity, bounties and rewards;

4. Fairly distributed cryptocurrency incentive model subsidized by existing budgets and environmental incentives; and

5. Transparent measurable RoI - engagement adoption and activation metrics.

The printing press laid the foundations for global communications and ushered in the first Information Age. New ideas and products were delivered to the world on paper. In 1994, the internet heralded a second Information Age and the death of paper. Despite this promise, the mailing industry; post, paper, print and packaging is a US$1.4 trillion market employing more than 7.5million Americans.

In 2017, at the dawn of the Connected Age, the brand activation market, which is defined as marketing that builds a brand's image and drives a specific consumer behavior or action, is estimated to be a $625 billion industry.

A subset of this market, direct marketing, which includes direct mail, catalogues, list management and database marketing, is estimated to be $66 billion, and is growing at 3% per annum.

The reason for this is because physical marketing prompts action, at the right price, even at the benchmark response rate of only 1%. Marketing economics are driven by customer acquisition costs ("CAC"), lifetime value of customers ("LTV"), and return on investment ("ROI") and consumer brands are becoming increasingly sensitive to the audited performance, efficacy and verifiability of all purchased media.

Consumers also understand that their attention, or the data generated by the collection and observation of their behavior, is valuable (c.$600 per capita per annum) which users are not benefiting from directly.

As new technology is introduced (Blockchain), consumers change the way they interact with brands. This is good news for marketers as **more channels and devices** provide more data which means brands can finally deliver on the promise of highly personalized, one-to-one marketing communications. By focusing on the needs of the consumer, brands can build value and loyalty that lasts a lifetime.

In this era of the Internet of Things ("IoT"), connected devices and an emerging blockchain, the combination of machine learning, programmatic advertising, smart contracts and secure direct response "nudges" will become increasingly important. Brands are looking to improve ROI, drive engagement and adoption of new unfamiliar products or technologies especially for mass market consumers who are not digitally sophisticated.

But access to all of this data is only half the solution. How marketers derive relevant insights and develop actionable plans from the data is how the real value can be realized. With the right technology, resources and data management practices, brands can build more robust profiles of their customers and reach them where when and how they want to be reached. Regardless of channel and with a true understanding of their behavior, marketers can "trigger" the desired consumer action at a specific moment in time.

"The days of giving digital a pass are over. It's time to grow up. It's time for action."
Marc Pritchard, Chief Brand Officer, Proctor and Gamble

6.1 The Arkeytyp™ Keycosystem, Platform, and Key

Arkeytyp™ is developing a platform which is designed to be the on-ramp to blockchain and cryptocurrency and is simple to use, personal and secure.

THE ARKEYTYP™ KEYCOSYSTEM

The ecosystem and community are important factors to a new decentralized currency. Arkeytyp's™ platform enables respectful permitted one-to-one relationships between Brands and the consumer, Arkeytyp™ builds trust through permitted opt-in communications building long-term value and loyalty for all members.
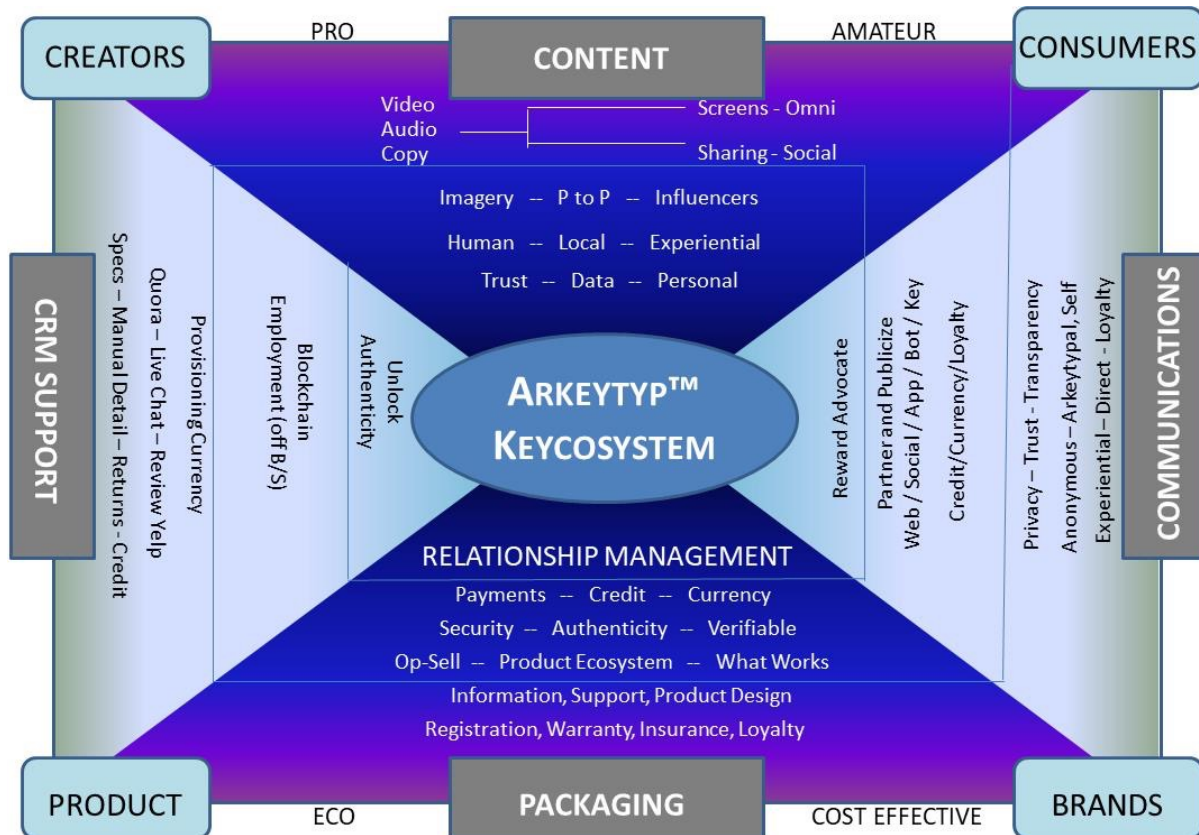
The diagram above depicts the Arkeytyp™ Keycosystem. Consumers are served by a digital ecosystem that fosters direct relationships between brands and consumers, with value and governance shared among the participants. Such an ecosystem offers a set of rich, diverse, brand experiences, consumer created content such as reviews, product tutorials or problem-solving posts as well as links to purchase products directly from manufacturers and brands.

The Keycosystem gives users:

- Rights to program, develop or create features for the system or to "mine" things that are embedded in the system;
- Rights to access or license the system;

- Rights to charge a toll for such access or license;
- Rights to contribute labor or effort to the system Rights to use the system and its outputs;
- Rights to sell the products of the system; and
- Rights to vote on additions to or deletions from the system in terms of features and functionality.

For example these rights can be employed to;

- Compensate users for their attention to and engagement with ads and promotional content;
- Compensate a consumer for posting quality content;
- Identify a brand's best advocates within the community and encourage them to promote relevant products or services;
- Use the network to find consumers ready to participate in product sampling or market research; and
- Enable consumers to control and monetize their personal data.

The Keycosystem is designed as a marketplace for brands, creators and developers and encourage them to produce high quality, creative campaigns, and then exchange AKT currency for those campaigns and services.

The Arkeytyp™ Keycosystem will also allow brands to integrate their existing coupon & loyalty programs into the platform giving them the ability to exchange points into branded tokens and enabling consumers to trade for other corporate points or tokens based on a fluctuating market exchange rate.

The Keycosystem eliminates the need for trust in any centralized or single entity; however, it increases the trust level in brands by offering actual feedback and reviews from stakeholders who have purchased and utilized the product rather than relying on the information or disinformation created and disseminated by the brands and their competitors.

THE ARKEYTYP™ PLATFORM

The AKT Platform will be a Secure, Social, CRM, Support and Marketing (*SSCRMSM*) platform designed to:

For Consumers;

- Reward Loyalty and Engagement via secure Identity
- Improve customer verification, engagement and purchase experience
- Build a Social platform where users can advocate and support
- Share verified purchase reviews etc.

For Brands;

- Increase customer LTV and reduce CAC,
- Help to better engage with their customers and build a community around them,

- Help identify their fans and invite them to generate revenue,
- Get the best target audience for their ads, and
- Get in direct contact with the community to answer market studies.

Purpose & Characterization

Users can start earning tokens immediately upon activation of their account (token sponsored by the brands that in return get verified ID and rewards user engagement with the brand). Users then can continue to earn by:

- filling out the warranty form;
- reviewing the product;
- viewing a product tutorial;
- answering a product survey;
- posting a problem-solving solution to help other users;
- promoting the product through social media channels; and
- monetizing their personal data through the AKT Platform.

Earnable Currency

All members will be able to earn AKT Tokens actively or passively - simply by either performing valuable verified actions or downloading the "container" for mining multiple Branded currencies and coins. AKT Tokens will hold cryptocurrency value both inside and outside AKT applications. This makes it possible to transform attention, curation, and creation into real-world value simply by having a USB Internet connected device.

THE ARKEYTYP™KEY

Arkeytyp's™ patented AKT Key solution (think AOL CD for the Blockchain era) is a foolproof "connector" to activate targeted consumers. The network is open to all and decentralized. Building a decentralized system is a complex process, and the transition to it must be done in a measured and responsible way over time and must utilize technology that provides the security and utility to ensure its success.

Product Design

Arkeytyp™ connects Users directly via a unique hyperlink to a secure remote server to deliver a secure communication, register or authenticate user Identity, it is ubiquitous yet personalized and private. The user experience ("UX") is well understood. Everyone with a computer or phone has used the USB port, most of the world uses USB daily and USB is an open collaborative industry standard. Similar to paper it has a "Long Tail" and will persist as long as wired devices exist. The AKT Key is designed to interface with existing CRM implementations and clients can access reporting & data directly via the dApp.

Arkeytyp Secure Keys are intended to be used in the context of a web application in which the server wishes to verify the user's identity. They have the following design characteristics.

– **Easy for Users**: Using Secure Keys should be fast, easy, and "brainless". It must be difficult to use Secure Keys incorrectly or insecurely.

– **Easy for Developers:** Secure Keys must be easy for developers to integrate into their website through simple APIs.

– **Privacy**: Secure Keys should not allow tracking of any kind. In addition, if a Security Key is lost, it should be impossible for an attacker to get any useful information from a Security Key.

– **Security**: Secure Keys should protect users against password reuse, phishing, and man-in-the-middle attacks.

Patent Protection for Network

The Arkeytyp™ patent portfolio consists of 5 granted and issued patents and 9 patents pending filed in jurisdictions representing over 190 countries including the United States and the EU. These provide a broad range of coverage for the USB Arkeytyp™ in a wide variety of applications. This includes specific and detailed protection in the areas of print and promotional material, as well as a broader, comprehensive coverage of the concept of a patented apparatus that acts as a secure automated HID protocol device.

Security

AKT Secure Keys generate assertions that protect users against phishing and website attackers. While Bonneau et al. claim existing second factor schemes provide protection against phishing, they do so under the assumption that relay- based or realtime phishing attacks are hard to mount. We disagree given recent evidence of successful phishing campaigns against accounts protected by smart phone OTP credentials, hence we downgrade the protection for OTP-based second factors. Secure Keys generate unique key pairs per account and restrict key use to a single origin, protecting users against tracking across websites/linkability. Unlike other hardware 2nd factor solutions such as RSA SecurID, there is no trusted third party involved. Secure Keys, when used with TLS Transport Layer Security Channel ID, also provide resistance against man-in-the-middle attacks by letting servers recognize the presence of two different TLS connections. Finally, Secure Keys limit the users exposure to session riding by requiring that a Test of User Presence (TUP) is performed. Note that Secure Keys do not allow transaction confirmation via a trusted display, therefore clever attacker may still alter transaction details (e.g., transfer amounts)— though not without a TUP.

At a high level, AKT Secure Keys support the following commands which are provided to web pages as browser APIs.

– **Register**: Given this command, the Secure Key generates a fresh asymmetric key pair and returns the public key. The server associates this public key with a user account.

– **Authenticate**: Given this command, the Secure Key tests for user presence and exercises its private key to provide a response. The server can verify that the response is valid, and thus authenticate the user.

Registration. During registration, the relying party—the server— produces a random challenge. The user's browser binds the server's challenge into a Client Data structure. The browser sends the server's web origin and a hash of the Client Data to the Secure Key. In response, the Secure Key generates a new key pair along with a key handle.   The Secure Key associates the key pair with the relying party's web origin and then returns the generated public key, key handle, an attestation certificate, and a signature over: 1. the web origin, 2. hash of the client data, 3. public key, and 4. key handle. The web browser then forwards this data, along with the client data, back to the website. The website verifies the signature and associates the public key and key handle with the user's account.

Authentication. During authentication, the relying party requests that the Secure Key exercise a particular key, which has previously been registered for a user account. Specifically, the relying party sends the desired key's handle and a challenge to the web browser. The browser generates the client data and sends the hash of the client data along with the key handle and the web origin to the Secure Key. If the Secure Key does not recognize the key handle, or doesn't agree that it is associated with the web origin that requested the signature, it rejects the request. Otherwise, it produces a signature of the client data. The Secure Key signs two additional attributes: whether a Test of User Presence (TUP) succeeded, and a counter value. The counter value is a 32-bit counter that is incremented with every signature the Secure Key performs; its presence allows the server to detect potential cloning of a Secure Key, e.g., when the counter value appears to decrease from one signature to the next.

The browser passes the signature, along with the TUP and the counter value, to the server. The server then checks the signature against the public key it has registered and authenticates the user if the signature matches.

Device Attestation. Each Secure Key must provide an attestation certificate during registration. This allows servers to gate the use of a particular secure key (for example, if servers trust only certain Secure Key). A related desire is revocability: if a device or model is known to have flaws or have been compromised, a server might wish to not accept it.

Client Data. The client data binds the server-provided challenge to the browser's view of its connection to the server. Specifically, the client data includes the type of the request (register or authenticate), the challenge, and, when possible, the TLS channel ID of the connection. Binding the TLS channel ID allows the server to detect the presence of a TLS Man in the Middle. When a server receives a signed TLS channel ID, it can compare it with the TLS channel ID it observes in the TLS layer. If they differ, the server will be aware of the presence of a TLS Man in the Middle, and can abort the connection.

Test of User Presence. The Test of User Presence (TUP) allows the caller to test whether a human is present during command execution. This serves two purposes: first, it provides a mechanism for human confirmation of commands. Second, it allows web applications to

implement a policy based on that check, e.g. "Transactions for a dollar amount greater than $1,000 require confirmation," or "Credentials must be re-presented by a human being after 90 days."

TUP implementation is left up to the campaign client. One client might use a capacitive touch sensor, others employ a mechanical button, while another makes a device that stays powered up only a short time after insertion into a USB port, requiring the user to reinsert the device for every operation.

Cryptographic Primitives. For all signing operations, we chose ECDSA over the NIST P-256 curve. For all hashing operations, we chose SHA-256. The choice of the curve and hash algorithm was made because of their wide availability on embedded platforms. At this time we believe these primitives, which offer 128 bit security, to be sufficiently secure.

6.2 The USB and USB-C, are now the final port of the Internet Age. Plugging in a USB has become a known behavior as the power source for our mobile devices or a cable that transfers information simply and securely. The act of plugging in is now second nature to all of us. It is simple to use, requires no education, and at scale, is an economically viable consumer grade device. USB-C consolidates power, data, audio visual and more in one port. It is universal across desktop and laptop computers, mobile devices and tablets. These devices are the digital equivalent of your physical mailbox; the route by which the physical world connects to your digital life. Arkeytyp™ ("AKT"), has developed Arkeytyp™ Keys ("AKT Keys") which are the missing link in the evolution of physical to secure digital communications.

An AKT Key is a small patented USB device, which, without requiring mass storage or power, activates upon plug in to a smartphone, tablet or computer. It is a simple, personal and secure link. Each Arkeytyp™ Key navigates automatically to our cloud based Secure Social Customer Relationship Management Support and Marketing ("SSCRMSM") engine. Every Key has a unique connection and can be enabled with an encrypted unique ID (OTP key), that unlocks the backend content (public / private key protocol) or smart contract. They act as a secure verifiable bridge between brands and consumers. The machine learning engine programmatically serves a secure unique personalized branded communication, reward, coupon, or exclusive offer. They Key can also act as a re-order button, service bot loader, authentication protocol, and unlock crypto / loyalty currency. Each Arkeytyp™ Key is evergreen to avoid waste and paper obsolescence as backend content is maintained in real time. The Arkeytyp™ Key is a unifying physical Token that can be built into paper and incorporate QR, NFC, RFID.

The Arkeytyp™ technology is most relevant where simple processes need to become smart and secure. Prime examples are in secure communications via direct mail, consumer packaging or at live events. Arkeytyp™ Keys are a scalable consumer on-ramp to exclusive content, smart contracts and the consumer Blockchain.

The combination of physical and digital information reveals unique customer opportunities for engagement that directly reward and incentivize engagement.

Our goal is to use our simple secure verifiable token to reward behavioral engagement and build branded loyalty currency, in the form of cryptocurrency, as a new form of long term distributed brand equity. At its core, Arkeytyp™ assists marketers to optimize response and conversion rates through machine learning and network effects across physical and digital channels. Arkeytyp™ delivers branded content in a way that makes a lasting impression. Our aim is to assist brands build a trusted relationship with consumers through programmatic ad targeting, machine learning and rich location data.

Arkeytyp™ has a proven track record of success distributing and monetizing the Arkeytyp™ Key, the carrier and distribution channel of our cryptocurrency. Our technology, in direct mail, has delivered 15 times the 1% response rate the direct marketing industry averages. Over 20 million keys using our technology, across multiple use cases, have been distributed globally with an average 28% response rate. We want to save precious resources and improve how we securely communicate ideas and offers.

The AKT Tokens have inherent utility;

7.0 THE MARKET & INDUSTRY TRENDS

THE MARKET

Several channels of distribution are accessible to the Arkeytyp™ Key. The diagram below illustrates the total global market and its components:

INDUSTRY TRENDS

In the past year, marketers have increased spending on data-driven approaches by 6.4% to a total of $163.7B. Though investment in digital media is rapidly growing (spending on display advertising rose by 23.3% to $24.9B and spending on search rose by 12.8% to $27.3B), direct mail continues to command substantial—and growing budgets—due to its continued efficacy, a less crowded inbox, rising postage costs and new ways to integrate messaging with mail, email and digital activity. (Direct Mail accounted for $50B of spending).

If we consider data to be the "fuel" that powers these efforts, marketers are lining up at the pumps, filling their organizational engines with the raw information as well as the refining elements (particularly analytics) to run their strategies and programs. Winterberry Group's proprietary data spend model shows that investment in data, including related services, analytics and technology in support of direct mail, email and display advertising grew at a rate of 7.3%, to $11.72B in 2016 with spending on data in support of display advertising and email growing most (26.6% and 12.7%, respectively).

While marketers will continue to invest in all media channels and supporting data, albeit at various rates, we expect an overarching trend to be a diminished focus on the channels themselves. Rather, practitioners will increasingly aggregate disparate data assets from across their organizations (and marketing silos) in an effort to glean insights that inform direct marketing and engagement strategies.

The situation for publishers has only worsened of late. According to an article by Mathew Ingram in the January 2017 edition of Fortune Magazine, "How Google and Facebook Have Taken Over the Digital Ad Industry", together they claim over 73% of online digital ad revenue, and an astounding 99% of all growth from 2015 to 2016 in US total online ad budget. While Facebook Instant Articles, Google AMP project and Apple News delivery channels, were supposed to be opportunities for publishers to extend reach and visibility, they actually reduced publishers' ability to control their brand narratives and manage their consumer relationships diverting attention to non-publisher properties over time.

Such companies can leverage network effects and economies of scale to apply intense pressure to smaller competitors while also stifling competition. As a result, large companies enjoy the compounding interest of incumbency, concentrating wealth and power in the hands of the few, often to the detriment of consumer privacy, user experience, and brand trust and almost always at the expense of new entrants to the marketplace.

Also costs applied by those dominant platforms reduce the opportunity of new brands and good products to emerge on the market and be visible to consumers. This increasing consolidation imperils consumer choice and concentrates wealth among a few major corporations that may grow to have outsized economic and political influence in society.

Organizations who are preparing budgets for brand advertising have multiple services and expenses, many of which are provided by third parties, which must be accounted for and increase the cost of advertising. These include: agencies, trading desks, demand side platforms, desktop and mobile network exchanges, yield optimization, rich media vendors, data aggregators, data management platforms, data suppliers, analytics, measurement and verification services.

As a result, these entities are motivated to create products that are valued on reach and perceived attention instead of those that are highly targeted and drive consumer engagement. If left unchecked, a few private companies are poised to exercise absolute authority over the digital services everyone uses, effectively eliminating consumer choice on a global scale.

7.1 The Addressable Market

$625 Billion
Forecasted Brand Activation Spend 2017*

PLATFORM	PLATFORM	PLATFORM	PLATFORM	PLATFORM	PLATFORM
Experiential 11.7%	**Relationship** 29.2%	**Retail** 5.2%	**Influencers** 21.6%	**Promotional** 20.2%	**Content** 12.0%
CHANNEL	CHANNEL	CHANNEL	CHANNEL	CHANNEL	CHANNEL
• Event marketing and sponsorship • B-to-B live events • Trade show promotions • Cause-related and grassroots marketing	• Direct mail, catalogs, list management, & database marketing • Marketing information & big data analysis • Email & search lead generation marketing • Loyalty programs • Mobile marketing apps & proximity services	• Point of purchase & point of sales displays • Shopper marketing analysis • Mall and in-store ambient signage • In-store mobile marketing • Retail digital place-based networks	• Customer service & telesales • Social media marketing • Public relations and corporate communications • Word-of-mouth marketing	• Promotional products, premiums, & incentives • Product sampling • Print & digital rebate distribution & redemption • Print and digital coupon distribution & redemption • Brand licensing • Games, contests, & sweepstakes • Added-value specialized packaging	• Hybrid print and digital content marketing • Digital-only content marketing • Non-textual content marketing • Product placement in television and film media • Graphic packaging and change marketing • Product placement in digital, music, and video game media • Product placement in print and radio media

* Estimated from ANA and PQ "U.S. Brand Activation Marketing Forecast (2016 – 2020): Key Findings Report"

BRAND ACTIVATION

Within the marketing landscape there is a subset known as Brand Activation. Historically, while advertising and trade promotion spend have been tracked, there has not been a comprehensive view of the total marketing ecosystem. Recently the ANA and PQ Media completed a forecast for brand marketing expenditures. "Brand Activation" is defined as marketing that both builds a brand's image and drives a specific consumer behavior or action. There are six platforms through which brands connect and interact with consumers to "activate" the brand:

- Promotions;
- Experiential;
- Retail;
- Relationship;
- Content; and
- Influencer.

Within these six platforms are thirty-two channels. The following diagrams depict these platforms and underlying channels, identify the market size of each, and highlights those channels within which Arkeytyp™ has an opportunity to capture market share:

Applicable Market by Channel

The chart below gives the segments of the addressable market which are applicable to the AKT Key and clearly demonstrates the continued viability of direct marketing, catalogs, list management and database marketing. These figures are further reinforced by data from the US Postal Service which indicates that of the $70 billion of mail it processes a year, over 150bn pieces or c. $45 billion is direct mail.

$593.8 Billion
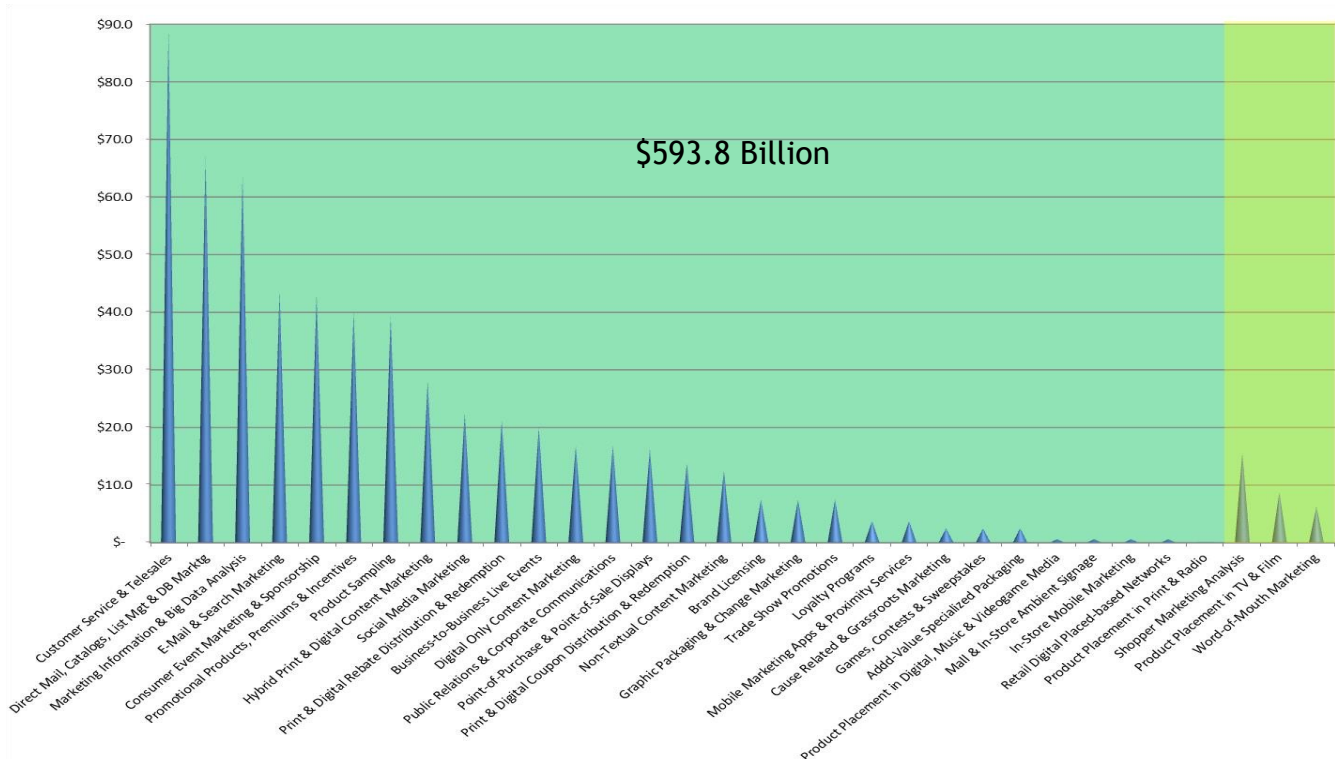
7.2 Initial Target Markets

Initially, the targeted segments will be US Direct Mail and those channels which are part of the US Paper Post Print and Packaging Market which combined represent over $250 billion of annual spending. The application of the Arkeytyp™ technology in these segments is more thoroughly described below.

7.3 Paper, Print and Packaging Market

Every boxed product has a non-trivial portion of its cost spent on packaging, manuals, and paper inserts. These are often lost, often thrown away, but mail-in registration postcards are still placed into product packages and paper manuals in multiple languages are printed because you can't ship a product without them.

Including a traditional USB storage device with a PDF of product manual, sounds like a great idea until the costs are considered, and it becomes apparent that this does not scale. Additionally, it currently offers no direct communication between the consumer and the brand.

Arkeytyp's™ key technology provides marketers a digital solution that solves this issue at a viable price. Any product, sold at retail or online, can have the cost of its printed materials reduced, its customers provided with better, more up to date product manuals and information, and product registration completion increased significantly using Arkeytyp™.

The solution works as follows:

1. A product is packaged with an Arkeytyp™ key (small credit card with a USB-key edge, with quick start instructions on the card or the key may be attached to the shell of the product itself) ensuring that the manual is always on hand;
2. Consumer inserts the USB-key and is transported to a product page that provides a registration form along with up-to-date product information, links to the support site, and a PDF of the manual, along with videos explaining how to install/use the product. Registered or not, the serialized key allows Arkeytyp™ to inform the brand of a direct connection with the customer;
3. Consumer engagement with the registration, product support and web site is analyzed in real-time with the user being encouraged to engage with the brand/product through a live chat or chatbot;
4. The consumer is offered the opportunity to create a Wallet, by downloading the Arkeytyp™ app, to store and earn rewards (if the user has an existing wallet the app will automatically load the rewards into the existing Wallet); and
5. Over time, the brand delivers, based on the data gathered and shared by the consumer and through the new customer relationship created by the AKT Key, either through email or the wallet, other offers, content and promotions that encourage the user to engage and post about the product on social channels.

Each of the actions taken above earn the consumer some form of reward which is then stored in the Wallet.

7.4 Post & Direct Mail

Direct marketing is a form of advertising which allows businesses and nonprofit organizations to communicate to customers through a variety of media including catalog distribution, promotional letters/postcards, newspaper, targeted television, email, paid posts on social media, banner ads, database marketing, text messaging as well as outdoor advertising. Among practitioners, it is also known as direct response.

Marketing trends continue to fuel increased spending on data-driven efforts, including the proliferation of media devices, audience engagement on those devices (and the growing expectation of anytime, anywhere relevant content), an ongoing shift to programmatic marketing, continued adoption of and investment in technology to support these insight-based efforts, and a growing supply chain of providers eager to guide the evolving strategies and demands of today's marketers.

7.5   Live - Experiential

Distribution at Live Events

Mass Transit
Sports
Music

7.6 Token Offering Marketing

-   YouTube: Daily Videos from team members and brand partners, Tutorials, Weekly Market Summary, Event Live Streams, Monthly and Quarterly Project Reports
-   Blogs: Weekly Project Updates, Industry Articles, and Developer Updates
-   Brand Partnerships
-   Events: Experiential presence at culturally relevant events including film festivals, concerts and conventions
-   Thought Leadership: Keynote Speeches, Panels and Whitepapers
-   Social Media: Slack, Telegram, Twitter, LinkedIn, Instagram, Facebook, Reddit

8. CHALLENGES

While the addressable market is large enough to justify the creation of a new ecosystem, there are several challenges that must be addressed. Potential customers use multiple devices, in fact on average there are 7.2 devices per household with 3 or more devices used daily. Brands also need to be able to communicate to the customer, not the device as many devices are shared or have multiple users and customers need to access not to a static location but have access wherever they may be. Ad blocking is another issue facing brands and marketers making direct digital communication difficult, and reducing its cost effectiveness. Fake ads and news, non-verifiable traffic, video interruptions are among other issues facing brand and marketers in the digital space. The Arkeytyp™ technology addresses each of these challenges in an elegant, simple to use and cost effective way.

9. USE OF PROCEEDS

Detailed White Paper
Clear technical descriptions of what is being built

Development Roadmap
Project is divided into stages, for which there is an allocation budget funds

Constituents receive transparent communication and reporting on progress, both financial and development

Open Source and Published Code
Code is open source and team contributes to the community, using well- known standards
Code that is private or overly centralized control may signal ulterior motives

Clear and Fair - Pricing in the Sale
Amount being raised

Developer Percentage
Developers are founders, own a percentage of tokens, and interests are aligned
Ownership percentage is consistent with best-practices in other early stage investing

Independent Review
Trusted technical experts vet the white paper and its claims
Security audits and bug bounties for code ICO rating and diligence agencies evaluate

The offering process
Promotions focus on the function of the network and the token as a clear utility
Token is not marketed as an investment with high speculative upside

10. TEAM

We have a team with many decades of experience in Technology, Finance, Marketing, Promotions, Print, Mailing and Intellectual Property.

Nicholas Lyons, Founder Chief Arkeytyp™ Officer
Founder of Arkeytyp™ Experienced in the Public and Private Equity Capital Markets. Nick is financial marketing expert that believes Trust Transparency are the key to Real Relationships. Nick has raised over US$85bn of Equity during his 20 year career. Director of Equity Capital Markets Syndication at Robert Fleming Merchant Bank, VP Financial Sponsors Group ECM JP Morgan. Head of UK Institutional Advisory PFG, JP Morgan. Founder of Crescent Technology & AdAstra (Bayesian Machine Learning) Systematic Hedge Fund (sold to Aspect Capital). This is the third company Nick has founded or co-founded.

Olivier Andre, Chief Operating Officer
Expert in AKT Key Manufacturing Technology with deep experience in procurement, logistics and Asian contract manufacturing. A results-driven product development and production specialist based in Hong Kong responsible for Operations and Manufacturing.

Ian Leaman, Chief Financial Officer
A senior finance executive, Deloitte-trained Chartered Accountant and former CFO of LSE quoted business. Leader of over 50 M&As, he is a seasoned executive, versed in risk, growth and cash generation.

Edmond Cunningham GM USA
Edmond is a former Senior Partner in PA Consulting's IT and Sourcing businesses and most recently has been Head of Procurement for a multi-$-billion healthcare provider. A systematic and intuitive problem solver, he has led projects in strategy, innovation, business design, manufacturing processes, information technology, sourcing and service management

Advisory Board

Erich L. Spangenberg
A recognized US leader in patent monetization and protection. Erich's reputation is sufficient to ward off would-be infringers and to comfort partners and clients of the strength of our IP position.

Jeremy Touboul
Jeremy Asset Manager (US$20bn+ AUM) specializing in trading and chart analysis and one of the largest Currency traders in the World (US$150bn annual trading Volume). Previously at CAAM where he was a derivatives trader before becoming an investment manager.

David Shorr
Founder Cashnet USA and seed investor in Avant; Former Systematic Hedge Fund Manger and CBOT Pit Trader.

Strategic Partners

Walton

Founded in 1995, Walton Advanced Engineering Inc. is a memory assembly and testing service provider located in Kaohsiung Export Processing Zone (K.E.P.Z), Taiwan. With more than $500m investment, Walton now is rated as top 3 memory backend provider in the world. The end turnkey service Walton provide is from IC packaging , final test, burn-in for finished goods, to drop shipment for end customers.

IPAK

IPAK, Inc. is a fast growing, privately held federally certified Women Owned Small Business (WOSB). Since 1993, the company has been providing highly differentiated, cost effective marketing, education, strategic communications and distribution solutions for Fortune 500 and government clients.

Big Block

Part production company, part design boutique, part entertainment group. Based in the creative/media hub of Los Angeles and using its roster of award winning creatives, Big Block conceives, produces and distributes engaging, effective digital content.

Appendix

References

1. The Experience Revolution - Digital Disappointment - IBM Institute for Business Value
2. ANA & PQ - Brand Activation Forecast (2016-2020)
3. Crypto Currency will refuel the Attention Economy - William Mougayar
4. The Dangerous Seduction of Lifetime Value Formula - Bill Gurley
5. Token Network Effects - Michael Karnjanaprakorn
6. The Search for Stable Crypto Currency - Vitalik Buterin
7. Trusting 3rd Parties with Digital Identity is a Bad idea, JP Buntinx
8. Digital Identity Today is Broken—But We Can Fix It - Dan Elitzer IDEO Co Lab & MIT Digital Currency Initiative
9. Tokenomics - William Mougagyar
10. Fundamental Analysis of Crypto - Adam Ludwin, Chain
11. USPS - Postal Facts 2017
12. Bureau of Labor and Statistics
13. Security Keys: Practical Cryptographic Second Factors for the Modern Web: Google Lang et al.