



**PUBLIC
DEMOCRACY**

**YOU SHOULD SHARE IN
THE VALUE YOU CREATE**

WHITEPAPER

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Purpose Statement

“At Public Democracy, we believe that it is possible to align what is right with what works, and that technology should empower people, so that individual voices are listened to by those in power and so that their collective voices rightfully influence decisions that are made in the political, corporate, and community space.

Knowing the value of the data that will be created, we further believe that people should share in the value generated and insights created by their contributions throughout this process.”

SUMMARY

Public Democracy, Inc., is a for-profit data solutions and market intelligence company on a mission to align what is right with what works, and to develop better data and more meaningful AI systems that reflect users' values, support their priorities, and allow them to better share in the value of the data they create.

We got our start over a decade ago in political communications and organizing. We succeeded where others had failed by listening to the communities we were tasked to mobilize and persuade, and by taking a data-driven approach to inform our strategies. Most data is built to answer the question of, "What will people click on and what will keep them coming back?" We intentionally took a different approach, building our Values Data™, from the very first byte, to discover, "What do people care about and what will they do together?"

Our founder and president, Eric Sapp, was trained as a pastor, so he knew that people are best understood by their values and best engaged through empathy and listening. He understood that the best way to get people to engage was to understand what mattered most deeply to our audience and provide them with something of value. This served us well as we expanded our focus from politics into broader advocacy, entertainment, and community building. Inspiring someone to act—whether it was supporting a homeless veteran, taking the kids to a family film, or joining friends and neighbors to support a White House or UN initiative—always started with understanding what mattered most to our audience and then finding a way to give them an opportunity they'd value.

We understand that each data point represents a moment when we connected with a real person — where their willingness to engage provided a glimpse into their values, hopes, and sometimes fears. Every engagement recorded in our database reflects a point when a person believed that something we were offering them could make a difference and that their participation could matter.

We believe that through better data, and the more meaningful AI it creates, we can empower individuals, improve communities, and advance the common good. That belief is what drives our work. We have known for many years that we could sell our data for a large profit, but we believed that the paths to realize that revenue would undermine the data's true commercial value and not reflect the purpose of the users who generated it.

The Values Data™ provides insight into the core values that motivate Americans to work together and commit to make a difference in the world. These data segments, which can be modeled across the



entire population, represent actions taken by tens of millions of Americans over the past decade in response to civic, service, political, advocacy, community, and entertainment opportunities that support the common good.

We are already using this asset to advance our corporate mission to align what is right with what works, and to develop better data and more meaningful AI systems that reflect users' values, support their priorities, and allow them to better share in the value of the data they create. We are doing so through nationally recognized projects that have supported veterans with severe PTSD, developed tools to treat people at the earliest stages of opioid addiction, and informed investment strategies in low-income urban and rural communities nationwide through a partnership with the U.S. Census. But in addition to these projects that rely on Values Data™, we plan to use this asset in ways that will allow any American to harness the potential of Values Data™ by using blockchain technology. We believe that by developing the Umatr utility token and the Umatr crypto ecosystem that will power it, we can incentivize further engagement that will advance our mission and build towards greater impact.

Initially, we will allocate additional shares in our data as a permanent and irrevocable value foundation for the Umatr ecosystem. Then, we will also make a further assignment of shares to be held in trust within Umatr on behalf of the millions of Americans whose engagement is reflected in our data to ensure they can share in the value they helped create.

Umatr utility tokens will harness and store the value created by individuals through their contributions in family, community, civic, and social spaces—value that current fiat-based economies are very poor at quantifying and storing. We will use data as a value-bridge between crypto and traditional economies and build a system to allow ordinary people to engage in and benefit from the blockchain without even knowing it. And all of this will be within a crypto-economic system that is designed to reward empathy over vanity and collaboration over hoarding by establishing self-serving reasons for individuals to seek the common good.

This White Paper provides a roadmap for why and how we plan to do this, what we anticipate evolving to create the right conditions for these technological advancements, and where we hope to take things from there.

OUR STORY

Public Democracy is a mission-driven company with over a decade of experience building communities to advance the common good. We got our start in political communications and organizing and we succeeded where others had failed by listening to the communities we were tasked to mobilize and persuade. We understood that the best way to get people to engage was to understand what mattered most deeply to our



audience and provide them with something of value. This understanding served us well as we expanded our focus from politics into broader advocacy, entertainment, and community building. Our strategy of seeking to shape our engagement offering to meet our audience's need – as opposed to merely pursuing ways to get our audience to meet ours – allowed us to rapidly expand our reach and effectiveness. To date, our response rates from the communities we engaged far exceed those of our competitors and have been incredibly valuable for our clients; for instance, one group that worked with us was able to expand their national email list of activists a hundredfold and generate tens of thousands of phone calls and 900,000 petitions to Congress to end childhood hunger.

“Each data point represents a moment when we connected with a real person ... a point when a person believed that something we were offering them could make a difference and that their participation could matter.”

Every engagement recorded in our database reflects a point when a person believed that something we were offering them could make a difference and that their participation could matter. We believe that through better data, and the more meaningful AI it creates, we can empower individuals, improve communities, and advance the common good. That belief is what drives our work. We have known for many years that we could sell our data for a large profit, but we believed that the paths to realize that revenue would undermine the data's true commercial value and not reflect the purpose of the users who generated it.

Instead, we believe that it's our duty as stewards of Values Data™ to benefit people as well as earn a profit. From our earliest days when we began by storing our data in maxed-out Excel spreadsheets, we anticipated a time when computers would have the processing speed to put that data to use. From the beginning, we recognized the value of data as a ledger of historical actions with the power to create new insights that could help shape the future in meaningful ways.

That is a precious resource, a loadstone with great enough value to businesses, political leaders, and social institutions that they would bend toward the intent of the tens of millions of people who built it as those institutions sought to harness its value. We have known for many years that we could sell our data for a lot of money, but we believed that the paths to realize that revenue would undermine the data's true commercial value and not reflect the purpose of the users who generated it.

We now realize that the unique capabilities of the blockchain will allow us to do even more by staking the value of our database into a tokenized ecosystem built to trade a new currency of engagement. Our plan is to tokenize engagement in the blockchain, back the value of those tokens with our existing Values Data™ asset, and share the value of our token with those who create it. This new currency will quite literally be *of the people, by the people, and for the people*.

MAPPING THE JOURNEY THROUGH OUR WHITEPAPER

Now in version 2.0, this white paper has been in development over two years (and is based on over a decade of work building towards this effort), and we appreciate your interest in the Umatr project. We have broken this paper into four parts. The first part lays out basic ideas, economic theories, and assumptions at the foundation of the Umatr ecosystem. The second part explains the Umatr ecosystem we are planning to build. We are starting with our fundamentals and what we know we can build in Umatr, but we have designed Umatr and are building it for what will be possible. Accordingly, the third part of this paper lays out next steps and goals for future iterations of Umatr. The fourth and final part provides more information about our current team, our next hires, and includes our glossary.

GLOSSARY AND KEY TERMS

We use a number of terms in this paper which will be more familiar to some readers than others. And we introduce some new terms and redefine others. The purpose of our glossary (located at the end of the paper) is to provide an accessible dictionary of terms we believe will be useful to those interested in obtaining a high level understanding of our initiative. Although we will do our best to explain terms throughout this paper, we recommend review of our glossary in advance of this coming section and throughout when there are questions about the meaning of terms.

PART I: THEORY

WHAT WE ARE SOLVING FOR

At the most fundamental level, the Umatr project seeks to reform current economic systems that poorly harness the full value created by members of society as it relates to their meaningful contributions to the common good, by establishing a more equitable way to share the value of their data with them.

We believe that blockchain-based systems can improve upon our understanding of economic inefficiencies and create better ways to measure and store value. But along with that, we also aim to solve one of the most significant problems in the crypto space, which is adoption.

We recognize that ultimate success in the blockchain space will require more than sound theories and elegant cryptoeconomic models. We must create a system that can be understood and easily used by a mass audience. While utilization of blockchain technology is foundational to the functionality of the Umatr token ecosystem, our intent is to offer an interface that does not require users to know what the blockchain is, let alone that it is powering the ecosystem.

OUR THESIS

Modern currency is designed to measure and store value based primarily on what someone owns or what their employer is willing to pay them. These are valid measures of value, but they fail to reflect all the other significant contributions individuals make to society through their engagement in community, civic, and social spaces. This shortcoming skews incentives and is a major economic inefficiency.

Umatr will change that by tokenizing human engagement through the blockchain, securing those tokens with massive data assets, and ensuring that the people who created that value are able to share in it.

In doing so, we will harness the unrealized value of positive human engagement and increase that value by creating a liquid means to store and exchange that value. We will do all of this within a crypto-economic system that is designed to both address usability challenges currently hindering user adoption of blockchain technologies and to establish self-serving incentives for individuals to seek the common good.

ADDRESSING CURRENT ECONOMIC INEFFICIENCIES

Our current economic systems capture and quantify only a fraction of value created by individuals in society. For the purposes of our discussion, the three key conditions necessary for value to be quantified

and stored for exchange that have traditionally resulted in these incomplete measures but which we can now solve for are:

- A method to measure value (which has been very difficult at the micro-level, especially when that value is created outside closed institutions);
- A trusted impartial mediator of value (which is a challenge for contributions outside of a closed system, especially when value is being exchanged between individuals and groups or communities); and
- A trusted means of tracking network impacts of individual contributions beyond their first measure (again, something that has historically been nearly impossible outside of closed systems).

Current fiat currencies assume these barriers and the inefficiencies they create. For most people, fiat money is a store and measure for two types of value: value of labor and value of things. Fiat money is effective at storing value based on what someone else has decided our time and talents are worth and the value of the things we inherit, create, or purchase. These are important values to be able to store and trade.

But fiat is very poor at storing other types of value created by individuals and contributed to society, which leads to incomplete measures and economic inefficiencies. It also skews our economic incentives, laws, and social priorities toward those imperfect measures.

In other words, someone's "net worth" is a sum of income and possessions, even though such a measure fails to reflect the actual impact and value a person creates for their community, for society, or the economy.

These incomplete measures and assumptions even shape our laws and our sense of justice. For instance, to determine the value of an injury or life taken, we look at lost earnings, and so U.S. law (helped by actuarial tables) will determine that a lobbyist's life is worth more than the preschool teacher's, mainly because the lobbyist is paid a higher salary. In many ways, this yields economic systems that are skewed, incomplete, and unfair.

Yet, to paraphrase Winston Churchill, "our systems may not work well, but they are still better than the alternatives."

At least they were...

Three recent technological and social developments have created an opportunity to expand how we harness real-world value beyond fiat payments. They are:

- The increase in available computer processing power,¹
- The blockchain's potential as a democratizing force for value creation for social impact,² and
- The recognition that personal data is a valuable and abundant resource.³

Taken together, these three developments are transformational for how we value contributions to society, in ways that go far beyond the mere value of labor and value of things.

SCARCITY VS. USEFULNESS AS A DETERMINANT OF VALUE

Cryptoeconomic Models of Scarcity Fail to Realize Blockchain's Full Potential

To realize the potential from those three breakthroughs, however, we first need to tackle a current problematic assumption in much of the blockchain space: that value is determined by scarcity, rather than utility. Ironically, despite being one of the most transformative ideas⁴ of our age, many of the assumptions about value in the blockchain space (in large part because Bitcoin framed the conversation) depend on the most ancient economic measures of scarcity. Namely, something is valuable because we don't have enough of it to meet the needs and demands of those who wish to have it.

¹ We have always been fascinated by advances in computing power and memory storage. There has been a one trillion-fold increase in computing performance from 1956 to 2015, which we have witnessed over the course of our lifetimes. The guidance computer on the Apollo Mission had 4 KB of RAM and 2 MHz of CPU speed. Fifteen years later, when members of our team first defeated Bowser and saved the Mushroom Kingdom on our Nintendo NES systems, we did so with more computing power at our finger tips than the Apollo 11 astronauts had when they landed on the moon.

² Remember when you, or maybe your mom or dad, used to cut the UPC code off of the top of a cereal box or your back-to-school supplies and then send them in so your school would get a donation? That program was started by General Mills in 1996, and it continues today: you can get 10 cents for your school for everything from Tostitos Pizza Rolls to Ziploc Freezer Bags to Hefty Lawn and Leaf Bags. All told, the program resulted in over \$719 million donated to schools across America over the past two decades. As we explore elsewhere in this paper, we believe that it is possible for millions of people in the Public Democracy database to now share in the value that they were creating in this way. What if instead of just getting 10 cents per box top, parents might be rewarded by companies for all sorts of other good deeds in their communities? That is the opportunity we envision, and which we will elaborate on and provide additional case studies for throughout this paper.

³ There is a general recognition that data has value, and many of the 21st century's most successful companies draw much of their perceived value from the data they control. All of the largest and fastest growing companies in the United States, whose value creating activities have been determined by our markets to be the most valuable in the world, are built natively on technology and rely on data harvesting. Even the Cambridge Analytica scandal, which highlighted many of the abuses and misaligned incentives between data collectors and individuals whose actions generate it that we seek to address in this paper, was an indication that the public was finally beginning to recognize the extreme value of the data they create.

⁴ We believe it is better to think of blockchain more as a new economic and political system than a technology. There is very little technically or programmatically, at least at this point, that cannot be done more efficiently by a centralized database than through the blockchain. That will likely change with time, but we still believe that the greatest value in the blockchain is the different economic and political assumption baked into the system.

This is one of the most surprising developments in the blockchain's early history: a tool that depends on collaboration has been used to further scarcity as an economic ideal, encourage the hoarding (rather than the usage) of value created, and ultimately create a new system of haves and have nots.

“When an economic system assigns value based on utility rather than scarcity, incentives for individual actors change.”

Bitcoin was revolutionary, and Satoshi Nakamoto opened up a new world of possibilities in the blockchain space. But the pseudonymous author did so under the constraints of an old-world/scarcity economic model that fails to make the most of the new utility/abundance economic system that is possible with blockchain.

Bitcoin employed the attributes of the blockchain system to develop a model of scarcity that would benefit early-adopters who could hoard coins and capture value as prices increased. As a result, the collaboration required to mine 21 million coins so effectively will ultimately only yield scarcity. In the same way that Nakamoto was influenced by the economy he lived in, so too have many in the blockchain space been influenced by the economic assumptions of Bitcoin.

Scarcity as a measure of value reflects the primary goals of those who first established the basic rules of our economic system thousands of years ago. It has proven to be an effective means to preserve and store pre-existing value. But it is an inefficient way to grow, share, or build value.

When value is measured by scarcity, we create economically inefficient incentives for individual actors to hoard and concentrate resources because of an underlying assumption that value is determined by a zero-sum approach. It is in the self-interest of all those who hold a scarce resource to reduce the use, exchange, and availability of that scarce resource to ensure demand exceeds supply. Furthermore, if a resource is valuable because it is scarce, actors are generally incentivized to extract all the value they can out of it, rather than seek to grow more of it.

Measuring Value Based on Usefulness, Rather Than Scarcity

There is a better, if more challenging, way to collectively measure value: by assigning value based on how useful something is.

This usefulness measurement is how most of us assess the value of the things (and people) in our lives when we are not thinking in terms of fiat currency. When we talk about the “value” of something in our life, it is not because the thing is scarce or because the person is available only to us. When we are not thinking in terms of money, most of us recognize that value is based on how useful, comforting, or beneficial a thing or relationship is.

Furthermore, when an economic system assigns value based on utility rather than scarcity, the incentives for individual actors change as well. It is generally counterproductive to hoard something which is valued based on how useful it is. Whereas scarcity models generally reward individuals for holding and acquiring, usefulness/abundance models generally incentivize individuals to collaborate and contribute.

The challenge, however, with creating an economic system that determines value based on usefulness rather than scarcity resides in developing a means to quantify that usefulness and reach consensus on value. We believe that data provides a means of doing just that.

DATA AS A BRIDGE TO BETTER REFLECT VALUE IN THE BLOCKCHAIN SPACE

Blockchain technology is often described as a way to develop trustless consensus, but right now that consensus exists only within the very limited number of people operating within any single blockchain space. To reach scale and more easily access exponentially larger economic systems (and the pool of individuals who power them), we need a consensus bridge between the blockchain space and the regular economy, one that also operates under many of the same principles that are so attractive with the blockchain. We believe data provide such a bridge, and it is central to other crypto-economic solutions set forth in this paper.

There is a general recognition that data has value, and the corporations that current economic markets have accepted as the most valuable in the world right now draw much of their perceived value from the data they control. As a result, there are currently consensus markets that have established different ways to price data in fiat.

Yet data is very different from gold or other scarce resources. The valuation in current markets for the same data resource can vary significantly based on how it is being used and its usefulness to a specific buyer. “Using” data also does not use it up; rather, it generally makes that data more valuable. Furthermore, data’s value increases along an upward curve as it is compiled. In general, the sum of data can be much greater than each of its parts, which creates an incentive to combine data resources, rather than to split or hoard them.

SHARING DATA’S VALUE WITH USERS INCREASES THE VALUE

The problem with our current systems is that this asset, which draws its value from utility and leans toward an economic model of abundance, is restricted by current fiat-driven economies and assumptions about scarcity.

Each day, it seems there is another news story showcasing how companies approach data from a scarcity perspective. By focusing almost exclusively on short-term returns for a company’s *stockholders* who own scarce stock that supposedly reflects the sum value of the company, rather than a focus on the

company's *stakeholders* who grow that value over the long-term, most companies pursue business models that seek to commoditize the individuals who create that data.

Thus far, users have predominantly been treated as indentured servants who do the work and provide data to a company owner without direct compensation. In return, they receive housing (i.e., an online venue that users value, where their data is harvested) but not much more.

We believe there is a better approach, now made possible by the blockchain: treat users as optioned shareholders, by giving them a long-term stake and a real share in the complete value built from their data.

This all goes back to the different economic assumptions inherent in scarcity versus usefulness. It makes no sense under a scarcity model to “give value away” or share the value of data with users. Furthermore, because of the influence of scarcity assumptions on corporate law, directors of traditional U.S. companies seeking to do so could face legal repercussions for failing to meet their fiduciary responsibility to solely maximize profits for their shareholders.

Our solution is to: 1) become a Public Benefit Corporation that is certified by B Lab, with a legally-binding fiduciary responsibility to all our stakeholders, rather than just our shareholders; 2) develop a system that harnesses unrealized value in the economy through tokenizing engagement and secures the value of that token with data assets; 3) use revenues from our business, as it grows, to reinvest in the company to build that cryptoeconomic system and provide the initial influx of value to kickstart it using the massive values and behavioral dataset we have built, which we will contribute to the development of this new system and to those who help us build it.

Key Term: Public Benefit Corporation - Public benefit corporations are a specific type of corporation that allow for public benefit to be a charter purpose in addition to the traditional corporate goal of maximizing profit for shareholders.

Certified B Corps undergo a rigorous screening and review process by B Lab, the nonprofit behind the movement of “business as a force for good.” Every B Corp ascribes to the “Declaration of Interdependence,” which reads as follows:

“We envision a global economy that uses business as a force for good. This economy is comprised of a new type of corporation - the B Corporation - Which is purpose-driven and creates benefit for all stakeholders, not just shareholders.

As B Corporations and leaders of this emerging economy, we believe:

- That we must be the change we seek in the world.
- That all business ought to be conducted as if people and place mattered.
- That, through their products, practices, and profits, businesses should aspire to do no harm and benefit all.
- To do so requires that we act with the understanding that we are each dependent upon another and thus responsible for each other and future generations.”

BECOMING A PUBLIC BENEFIT CORPORATION

For over a decade, we have operated under a company mission of seeking to align what is right with what works, as the best way to bring about real and lasting change. Our transition to a Public Benefit Corporation and a Certified B Corp perfectly embodies that mission. It is a way for us to affirm the principles and values we hold so deeply, and we believe it is the best way to maximize the success of Public Democracy and the Umatr crypto ecosystem we outline in this paper.

As a certified Public Benefit Corporation, we are chartered and committed to this purpose statement:

“At Public Democracy, we believe that it is possible to align what is right with what works, and that technology should empower people, so that individual voices are listened to by those in power and so that their collective voices rightfully influence decisions that are made in the political, corporate, and community space.

Knowing the value of the data that will be created, we further believe that people should share in the value generated and insights created by their contributions throughout this process.”

Unlike traditional corporations, Public Benefit Corporations are legally required to consider the impact of their decisions, not only on their shareholders, but also on their stakeholders (e.g., the community, the environment, workers, suppliers, and consumers).

Certified B Corporations take that a step farther by undergoing to certification and monitoring process requiring higher standards of transparency, accountability, and performance, as well as helping build a collective voice through the power of the unifying B Corporation brand. According to B Lab, the nonprofit that awards the certification, “B Corp certification is to sustainable business what LEED certification is to green building, Fair Trade certification is to coffee, or USDA Organic certification is to milk.”

We believe deeply in the purpose-driven movement that this new class of corporation represents. We were able to quickly become fully-certified because we have been operating as a high-scoring B-Corp in all but name for over a decade, ultimately receiving an overall B Impact Score higher than many of the leading lights of the B Corporation movement, including Ben & Jerry’s, Athleta, Eileen Fisher, and Hootsuite.⁵



⁵ <https://bcorporation.net/directory/ben-and-jerrys>; <https://bcorporation.net/directory/athleta>; <https://bcorporation.net/directory/eileen-fisher-inc>; <https://bcorporation.net/directory/hootsuite>

We believe that the time has come for companies to take the value of data seriously, and as a Certified B Corp, we are committed to living up to the promise we have made to all of our users about the value of the data they create by working with us. We hope that by establishing a corporate structure legally required to operate under different rules and committed to transparency, we will be better able to establish the trust with users and partners that will be vital to Umatr's success.

Finally, one of the pieces that has most excited us about the blockchain is the potential to reimagine economic systems with rules and incentives that encourage the better angels of people's nature. As good as our intentions may be at the start, we know all-too-well how easy it is to lose sight of an original vision in the midst of deadlines and unforeseen challenges. In that spirit, we are committed to this corporate structure and the B-Corp accountability mechanism that will continue pushing us toward the ideals with which we begin this project to put our database to use for the greater good.

STAKING TOWARDS ENGAGEMENT AND GROWTH

Our goal with Umatr is not to create a digital and secure means to store wealth; instead, we seek to create a digital ecosystem that better captures a broader measure of value beyond a person's current fiat holdings and uses smart contracts and distributed systems to share that value with those who create it. This different set of goals necessitates different solutions from many previous cryptoeconomic systems.

Well beyond Bitcoin, scarcity-focused economic models affect a number of current assumptions in blockchain ecosystems; this includes the concept of staking. "Proof of stake," along with many early versions of token staking currently being experimented with across other blockchain systems, all approach staking from the perspective of staking *against* some future event or loss. In proof of stake, the way you prove you can be "trusted" not to abuse the influence you are being granted is to show you have too much to lose if things go wrong.⁶ In most systems, staking is also a way to lock up currency to help build scarcity and protect against velocity impacts.

There are two issues with this scarcity-based approach. First, it is more effective at preventing abuse than enabling growth. Second, scarcity concepts and cryptoeconomies import some of the underlying injustices in our current fiat-based economic systems of giving the greatest stake to those who can purchase the most coins or build the supercomputers to mine them.⁷

⁶ Although many people describe the blockchain as a way to build "trust," there is a difference between avoiding deceit and engendering trust. We believe it is more helpful to describe blockchain as a "trustless system" because the benefit is less that it allows us to trust others than to know we cannot be deceived by them. This is a subtle but meaningful distinction, at least at a human level when considering how communities form and interact. It is the difference between what can be done in a political system based on Mutually Assured Destruction (which is kind of what people assume in proof of stake) versus alliances (which is more what we are trying to build with our concept of staking *toward* something and *with* others).

⁷ The system most are using in proof of stake is basically an evolution of plutocracy. Those with the greatest concentrations of wealth make the rules. An interesting evolutionary parallel between current experiments with proof of stake is that they also

Our concept of staking is different. Umatr will enable participants to stake *toward* engagement and growth. Individual users and organizations will be able to stake Umatr to reward or incentivize behavior around some sort of engagement. This will act like crowdfunding, but instead of, “I have an idea and so please pay me,” it will be, “I have an idea or a problem and so please help me solve it.” In this way, we will be more in line with Gitcoin, Bounties Network, Task Rabbit (where multiple “rabbits” are working together), or countless micro-exchange X-Prizes.

While there is immense potential for blockchain to create abundance and shared value through its network effects, this potential has largely gone untapped. We believe the blockchain can become an empowering and democratizing force. But such a promise will never be fulfilled through cryptoeconomic systems designed around scarcity because they will always fail to be able to harness the massive value that exists outside of most current fiat measures.

Found Value

One of the early brainstorming sessions for this project explored the language we used to describe value created in economic systems, as a way to better understand the resultant impacts on collective perception and priorities. We contrasted how one “grows” a business (implying gain and expansion) but “gives” to charity (implying loss and constriction). From a societal perspective, unpaid work and donations to charity can often be the greatest contributions an individual ever makes. This is one imbalance Umatr seeks to address. But there was another realization, which solved a primary conundrum surrounding Umatr (or any new system developed out the crypto and tokenized space): how can you create value out of nothing?

We already have an answer and construct for understanding these concepts in the English language, which is captured in the idea of “founding a company.” We all know what that means. The definition of a “founder” is a person who created a new company. But if you just look at the word, it is a person who discovered something already in existence.

In a similar way, by using data as a bridge to fiat values and externally measured assets, along with the power of tokenization through the blockchain, we plan to harness value already out there that simply has not yet been realized. To do so, we will “create” a new form of currency: Umatr, the currency of engagement. By “finding” and quantifying that preexisting (yet thus far largely unmeasured) value, the Umatr ecosystem will both benefit from the value that is discovered in addition to what can be built out of that newly found value that can now be exchanged.

mimic the earliest democratic theories that expanded rule beyond just a single ruler or the wealthiest members of society to say that all landowners should be the ones with a vote. The justification in early democracies for letting educated land owners vote was because they knew what mattered, had most at stake, and would be engaged and look out for best of all of those in the nation because of their stake in it. This was better than monarchy and plutocracy, but still left most participants in the system without a voice.

Lev Case Study

At the Oslo Freedom Forum last May, Galia Benartzi presented a case study that illustrates how value not stored in fiat can both be “found,” and then how that found value can be used to grow additional new value. In 2013, she was part of a team that designed the “Lev Market” (or the “Heart Market”) to empower people in Israel to share in the value they create and be better incentivized to do more good.

“Choices about monetary and economic systems are more questions of ethics than questions of math.”

Over 20,000 Israeli mothers joined the experiment and were initially gifted and then rewarded for helping their community with a digital currency called “hearts.”⁸ Within a year, Bentarzi’s team reported that over \$24 million worth of value was created by the community through new economic exchange, as these moms traded services such as baking cakes for birthday parties, tutoring in math, giving guitar lessons, buying school supplies for others, picking up someone else’s child and bringing them home, and volunteering in schools or in after-school programs.

According to Benartzi, “Why wasn’t this commerce happening before the ‘hearts’ entered the scene? The answer was: these mothers didn’t have any shekels in their pockets. Specifically, these mothers were from low-income or at-risk communities, and all of the shekels that they had access to were allocated – to rent, to food, to school, to gas, to bills, and health insurance, and all of the other payments. There were no shekels left over at the end of the day to buy a birthday cake for a birthday party, or to buy new toys or new clothes, or things we might call discretionary spending. What was realized in this experiment was that when we injected a community with more ‘money’—and of course, that exercise involves trust and execution and user experience and all of those things—but when we injected a high-quality currency tool into a community, commerce happened. People gave to each other; people bought from each other; people collaborated around local needs and goods and services; and there was incredible abundance achieved in a short time.”⁹

In her Oslo talk, Benartzi closed with a very important point and challenge. She argued that since the most efficient fiat-based monetary systems often drive toward more efficient labor economies that drive down wages and concentrate wealth, “these economic questions are more about ethics than they are about math, because the technology itself, money included, is morally agnostic. And the designers of the technology, the people, are the ones to endow it with the morals that we choose...It would cost about \$4 trillion, according to the UN, to solve almost all of our existential problems. You guys are familiar with this list: human trafficking, water, safety, all of the basic human rights and basic human needs, \$4 trillion. But who is going to pay? And we look around, and I think all of us experience that deflationary feeling that no one is going to agree *ever* to contribute these \$4 trillion to solve these

⁸ <https://www.jpost.com/Business-and-Innovation/Tech/At-TEDx-in-Tel-Aviv-talk-of-advancing-crypto-currencies-like-Bitcoin-479559>

⁹ Oslo Freedom Forum, May 28, 2018, 9:45 to 10:44 <https://oslofreedomforum.com/talks/the-evolution-of-money>

problems...so ‘Why don’t we mint a new \$4 trillion? Why are we still relying on the old dollars, the old Euros, the old yens, the old money to solve our problems, when clearly it has been shown that the system itself gravitates towards the type of [negative] outcomes we see today.’”

We are not claiming Umatr will generate \$4 trillion in new currency or solve all the world’s problems. But we know that people all over the world are creating real value every day that our current economic systems do not have adequate means of measuring, storing, or exchanging. Data has begun to store that value. The Lev experiment points toward the economic models that could grow it.

Our plan is to take these concepts several steps further by beginning with the fiat-recognized value of data, by using blockchain and other existing digital technologies to better track network effects, and ultimately by sharing that new value back with all who created it. We believe this will ultimately create stronger and more valuable systems, but fundamentally, we also believe these designs are more likely to result in more just and equitable systems.

PART II: UMATR SOLUTIONS

SOLUTIONS: PUBLIC DEMOCRACY DATA AND CREATING THE UMATR ECOSYSTEM

Our ideal plan is to build a two-token ecosystem,¹⁰ secured by known and highly valuable assets, powered by existing technologies, entering known markets, and utilizing proven user engagement models. At the same time, we will design the Umatr ecosystem to be capable of rapid and scalable growth, built for collaboration, and flexible enough to respond to unforeseen problems and opportunities.

Key Term: Staking — participants in the Umatr ecosystem collectively commit resources towards an engagement outcome by creating a Umatr token pool. This is similar to placing some or all of their Umatr tokens in a time- or action-restricted escrow. By making individual commitments that are set aside for a predetermined period of time, users can incentivize engagement from the broader community with hopes of encouraging engagement from other Umatr ecosystem participants. Public Democracy will be the first to stake into Umatr, by committing data resources toward the creation and ongoing operation of the system.

Step 1: Staking Our Data Assets into the System

To help establish trust and adoption of our crypto-economic system based on utility and collaboration, we believe it is important to create a bridge to more broadly accepted and externally validated measure of value.¹¹ Before we ask people to believe in our crypto-economic system and trust us, we plan to demonstrate our belief in the system by building a data bridge that literally puts our money where our mouth is. We will do so by contributing significant ownership in our database to the Umatr project

¹⁰ The goal with the first security token (see below) is to create a means to share the value created in Umatr with both investors and users. The exact structure will need to be legally compliant, and there might be investors who prefer traditional “paper” securities or other ways to participate in the Umatr ecosystem. The structure will serve our strategic and philosophical goal though, and so we are not binding ourselves to any particular path until we decide to make an offer.

¹¹ As we will discuss below, we also believe that if one accepts the value of decentralized and distributed networks, then the more “nodes” that can be built into those networks, the stronger and more valuable they will be. In the same way that tokenization can create digital representation of real-world assets, there is no reason we need to think of network nodes merely as electronic connections between servers. Our network nodes can and should also be “tokenized.” Nodes connecting a blockchain network and ecosystem to a real-world market and value measure will strengthen the distribution and distributed hedges against risk within the system. As explained in Part 1, we believe that data can act as a bridge connecting blockchain and traditional economic systems, which could add a new dimension to a “2-dimensional electronic distributed network model/picture” that by all the theories of resilience and value in decentralized and distributed networks should make a multi-dimensional network stronger.

through three sets of shares (defined in the key terms), which will serve as a foundation for our tokenized economy.

Each set of shares will play an important role in Umatr’s long-term viability by establishing development capital, an externally referenced asset valuation floor for Umatr, and recruiting users to participate in Umatr in a way that reflects its core value foundation.

We will stake additional security tokens as an asset backing to the Umatr ecosystem and to set initial valuation for the first issuance of the Umatr utility token (see Step 3 below). Our hope is that this contribution will both foster trust in Umatr and establish an ongoing valuation floor for the Umatr utility tokens that can be priced and verified outside of that ecosystem.

Then, we will establish a claimable reserve of Umatr tokens within the Umatr ecosystem on behalf of all individuals who contributed to our original dataset. This will allow us to realize our longtime goal of returning value to individuals whose past engagements contributed to our original dataset, and it will serve as a powerful incentive to participation and recruitment into our ecosystem.¹²

Step 2: Data Token

Data Tokens will help us incentivize and onboard organizational partners (especially early on) by growing our user base and creating opportunities for meaningful and influential engagement. They will also serve as an early vehicle for distribution of new Umatr utility tokens to those with some of the strongest motivations to see the system succeed.

In essence, PD Data Tokens (hereafter referred to simply as “Data Tokens”) will share a number of traits with a dividend-paying stock. One of the foundational assumptions in our Umatr ecosystem is that those who build the value should share in it. Because Data Token holders will have played a key role in building the Umatr system by reinforcing the database valuation and providing capital, they will be rewarded with a distribution of Umatr utility tokens upon the system’s launch. However, it is important to note that the Data Tokens shall not follow the SAFT Project White Paper Framework,¹³ which would have them convert to utility tokens and likely trigger scrutiny from the SEC.¹⁴ Instead, the Data Tokens will remain security-backed assets, accruing value as the asset’s value grows, while also continuing to receive regular “dividend” payments in the form of Umatr utility tokens.

As the quantity and value of data from engagement grows—and, along with it, the amount of fiat stored within the Umatr ecosystem from the purchase of Umatr utility tokens—the Umatr ecosystem will generate additional Umatr utility tokens that will be distributed to Data Token holders and to those engaging within the system and growing its value (see Step 3 below).

¹² We have not yet settled the legal/tax question of whether we are permitted to give security tokens to our past users or if we will need for the entire system to be established and use those security tokens to generate Umatr utility tokens “dividends,” which will be held for the users.

¹³ <http://www.saftproject.com>

¹⁴ <https://www.proskauer.com/blog/new-sec-probe-of-ico-issuers-and-saft-structure>

Because these dividend payments will be a reflection of the network effects of the initial investment on the overall value of the system, Data Token holders will receive a larger relative share of all new Umatr tokens earlier in the Umatr ecosystem life cycle. As user participation and engagement increases, participants (both those who stake engagement opportunities and those engaging) will be rewarded with the majority of all new Umatr to reflect their larger contribution to the overall value of the system. But while Data Token holders will see their percentage share in new distributions decrease, we expect that this should be somewhat offset by the increased size of distributions as the system's value grows from usage and the fact that data increases with usage rather than being used up, as explained in Part I.

The combination of Umatr utility token value shares, along with the expected growth in the underlying value of the data asset secured by the Data Token, should place upward pressure on the valuation of the Data Token. Furthermore, the ongoing Umatr utility token payments to Data Token holders should expand the secondary market for Data Token holders and create a realistic exit opportunity (abiding by SEC-compliant means, of course) for speculative investors by creating a reason for individuals and organizations interested in staking engagement opportunities in the Umatr ecosystem to seek to acquire Data Tokens (this is described further in the next section).

Step 3: The Umatr Ecosystem Launch and User Growth

The Umatr ecosystem will provide the primary means and reason for the exchange and usage of the Umatr utility token.

At launch, we will seed the Umatr utility token into circulation in three primary ways. First, owners of the Data Token will automatically receive Umatr utility tokens as a reflection of the value their investment to the Umatr ecosystem. Second, individuals who have helped us build the Public Democracy database over the past ten plus years through engagements that the data reflects will have Umatr utility tokens reserved for them in the system, which they may claim following the launch of Umatr. Third, utility tokens will be available for purchase directly via the Umatr platform eventually.

After launch of the Umatr ecosystem, Umatr tokens will perpetually be created and distributed as the value of the Umatr ecosystem increases. This increased value can manifest in several ways, including value derived from new data created by the actions of the participants, new currency added to Umatr stores (see the subsequent section, *Umatr Storage*) from the sale of Umatr utility tokens, and the growth in stored data and cryptocurrency assets held by the Umatr system.

Since all of the new Umatr tokens will be shared with those who helped create the underlying value it reflects, new Umatr tokens can be obtained in five ways after launch of the Umatr ecosystem:

- Data Token holders can obtain tokens, to reflect their initial contribution in building the system (with their share of new Umatr decreasing over time as their relative contribution decreases compared to those engaging within the system);
- Individuals engaging within the system can obtain tokens, thus building on Umatr's internally referenced value from usage as well as an externally-referenced value of data generated by the engagement and any fiat staked into the Umatr ecosystem from utility token sales;
- Stakers¹⁵ and individuals who choose to restake¹⁵ their staked share can obtain tokens through value shares, as they will be the group who creates many future engagement opportunities;
- New users will also be able to obtain tokens by purchasing them from the Umatr ecosystem or on external exchange(s) by using fiat or other cryptocurrencies; and
- A special form of Umatr+ for those with high Karma scores, which engagers can access through staked pools.

Our eventual goal is to build an ecosystem that can scale quickly and become useful to millions of users who will build and share in the value created in Umatr. To accomplish this, we will build a system where many users will participate in the Umatr ecosystem via third party partners (and share in the value they create by doing so) without even knowing they are participating in the Umatr ecosystem or involved in a blockchain token exchange, although they will be aware of how their engagement is being tracked and rewarded (e.g., rather than just taking users' data for a third party's benefit, organizations can utilize user data in a way that benefits their users).

As society becomes more aware of and comfortable with the blockchain, we expect more users will engage directly. But we will build the Umatr ecosystem to enable partnering organizations to offer the benefits of participation to their members without those members needing to hold personal cryptocurrency wallets, access cryptographic private keys, or even be aware that the Umatr ecosystem exists.

UMATR: TOKENIZED SHARES IN THE VALUE CREATED

Following the launch of the Umatr ecosystem, we will issue new Umatr tokens to reflect the increased value of the Umatr ecosystem as measured by its data stores, fiat holdings, market demand for Umatr, and other such value measures.

We are not seeking to create a dollar-pegged stable-coin, but Umatr should exhibit an exceptionally high degree of stability due to the fact that each token will reflect of a piece of our dataset, the value of which can be externally verified. Each time new Umatr tokens are created, the Umatr token(s) will be distributed to those who built the value in our system (as opposed to just going to investors or miners), with small bonuses to those who engage with high-Karma (see below) users and a restricted type of

¹⁵ See Glossary for simple definitions of terms, which are all explained in much greater detail below.

Umatr bonus for those with Karma who are doing the most to encourage engagement and collaboration.¹⁶

Staking Toward Engagement Through The Use of Smart Contracts

Staking is a key component to the Umatr ecosystem. By providing a mechanism for a participant in the Umatr ecosystem to stake Umatr via a smart contract linked to the ecosystem that encourages a specific action, the broader user base can be efficiently rewarded for their participation at scale.

Organizations and more significant actors would be more likely to have the resources and willingness to buy the Umatr they need to stake. Likewise, it will be easier to work with corporate and non-profit partners to seamlessly integrate our token system into their current marketing and membership models. As the system and user base grows, we expect more individuals and groups of individuals to stake engagement opportunities as well or join as “co-stakers” by staking in an engagement opportunity created by someone else.

Through our current digital advertising and mobilizing tools, we already have confirmed many real-world engagements with electronic means; those should allow for relatively straightforward smart contract verifications. Building on this foundation, and by collaboratively working with organizational stakers early on, we will refine the smart contract system and rules around staking engagements as we scale. As this process is refined, we will then begin to introduce various staking methodologies to an increased number of partners and community member with an ultimate intent to empower all users to stake on the platform.

Restaking

Restaking is another important element of the Umatr ecosystem. Anyone who engages in a staked outcome will have the choice to allocate their Umatr reward from the staked activity to incentivize even more users to engage with the originally staked activity. Doing so will create a flywheel effect for future staked engagement opportunities, where the newly harnessed value of engagement can be reinvested in the engagement opportunity by those who have already engaged and are most interested in seeing others do so as well.

When viewed in traditional fiat and scarcity terms, it is hard to see the benefit of restaking. If the goal of the user is simply to get paid in Umatr, why would they reinvest that payment to “hire” others to do the same thing? Restaking would not be effective in a traditional economy as a means of hiring someone to

¹⁶ Cryptocurrencies currently reward miners with coins to reflect the value they add to the system. We will take that model to its next logical step by applying those same principles to reward the participants in our system who build its true value through their engagement. The Umatr token will power participation in our new Umatr ecosystem and we believe the best way to start is by designing the Umatr token in adherence to the ERC20 token standard. While we are confident in Ethereum’s long-term sustainability, we will design our token to be portable between blockchains to ensure Umatr’s success is not bound by or at risk from the underlying Ethereum technology. Portability will also allow us to move to alternative blockchains if a better choice than Ethereum evolves. Most importantly, we believe portability will be a first step toward a multi-blockchain existence of our ecosystem, which will allow for more efficiency, greater liquidity, and better alignment with the underlying strength of blockchain as a decentralized and distributed network.

sit at a cash-register (i.e., no employee offered a wage to sit at a cash register would do the work and then offer that wage back to the person on the next shift).

It is important to keep in mind that the dataset that is the core asset for Public Democracy represents not merely cold statistics to power code; instead, it is a collection of points of personal connection and understanding. If the staked engagement is a reflection of someone's values and ideals, they will be much more likely to restake. After all, most of the engagement value Umatr will be harnessing and sharing back with regular people is through harnessing unrealized value from the things people already do for no financial reward.

A simple example of how this could work is a non-profit that is trying to educate community members and mobilize them to call their elected officials to improve local schools. Traditionally, the non-profit might find a funder who would provide money to underwrite the outreach, and then the nonprofit would hire a consultant to buy ads with the intent of motivating the voters to take action. However, the ad buying process is not straightforward. The consultant has to hire an ad firm to create ads or buy ad space with the hope of reaching the intended target audience. Ideally, voters who eventually see the ads take action and then make an impact, but that can be very difficult to verify. Clearly, this process is inefficient. Not only does this process result in a big chunk of the funding being taken out in fees before the ads are even bought, but the citizens providing the value through the calls do not get any share of the significant financial investment made to generate those actions.

In a staked Umatr engagement, on the other hand, the full funding for the outcome would go toward a stake to reward those who engage. Using the example above, since many of those people would have been willing to call their elected officials outside of Umatr simply because they were passionate about the issue (i.e., without compensation), we can reasonably surmise that some would be open to reallocating the rewards they would receive to encourage others to take the same action.¹⁷ Rather than viewing the restaking as giving something up, many would find it empowering.

The choice to restake will create a valuable data point (we will be constantly refining our knowledge on what leads a person to forgo a payment for work they did to support a cause they believe in). That way, even though the restaker is giving up their staked reward, restakers will still receive a Umatr reward from the system for the value they contributed to it, and as a result, they will still personally benefit even when they opt to restake the staked Umatr reward they are entitled to in support of the purpose they believe in.

¹⁷ These are the sort of campaigns we have run and participated in for over a decade. Where we diverged from many of our peers, however, and an area we learned and had reinforced the value or abundance thinking was that we traditionally have run our ad campaigns without margins, which allowed us to build our data much faster and more deeply because so much more of each buy went to generating outcomes.

Examples of Potential Staking Uses

Our goal with the Umatr system is to create a powerful and positive tool for our users who will undoubtedly discover new applications for staking. But to help flesh out how we expect staking to work, we have including some potential examples in this section.

Barter/Shared Talent Pools: There are a number of local community-based barter/shared talent pools where neighbors contribute time, talents, and chores into a communal exchange, similar to the Lev/hearts initiative. Any of these would be obvious fits for a currency of engagement that could more fully store that value, add greater liquidity and exchange beyond the community's immediate geography, and contribute the additional value from the data effects and bonuses.

Collaboration Between Partner Organizations: Membership organizations often operate heavily on a scarcity model, seeking to protect their member lists and resist collaboration with like-minded organizations out of a fear of losing members and worries about competition over funding. Staking can shift incentives so organization A has a reason to direct their members toward staked activities by organization B if that staked activity is of value to A's members. Organization B gets better engagement, Organization A shares in staked reward, and members make a difference and share in staked outcome.

Developing in Umatr: Umatr will likely stake development outcomes, but individual users could as well. For example a user or organization might think, "I wish the Umatr ecosystem allowed for x, or I wish it were integrated with y app on my phone or blockchain-base system, which I use all the time. So I'll stake Umatr tokens for anyone who can build a solution." An NGO could use Umatr to put up a stake requesting someone code a new app interface between their member app and Umatr or new smart contract to track an outcome they want. The system would work very similar to a simple bid for services, but allow for two important improvements. Staking allows for collaboration on both the funding and solution side. Anyone who sees a stake they like can add to the staked pool for those system upgrades, thereby making them more likely to be built. All who contribute to a particular solution get the engagement reward. And both the staker and engager would benefit from the additional Umatr they would be awarded for the value this staked engagement added to the broader ecosystem.

Health: Another example of how developing a currency to store and exchange the value of engagement can working especially well is the potential for staking toward health behaviors and outcomes. A health insurance company could stake physical activity or health outcomes with Umatr, which it could be applied toward reducing insurance premiums. Umatr also plans to experiment directly with staking health and activity outcomes for our members, creating clear paths to partnerships with activity-tracking companies who can validate the smart contract measures. And as a further example of how staking could expand markets and further collaboration, a membership organization for environmental conservation, who would generally not engaging in health-related activities, would have every reason to collaborate and inform their members of staked health and hiking activity. Doing so would make the climate group more valuable to its members, who would benefit from the activity they enjoy and staked reward which the environmental conservation group would share in, and with enough engagement, it would make sense for a group like Fitbit to take over the staking and offer to allow people to apply Umatr toward purchases.

Member Retention: A gym could stake Umatr for members whose attendance is dropping, perhaps encouraging them to workout at home, and accept Umatr as payment against the monthly membership. Under this scenario, the gym has a reduced monthly fee but is more likely to retain paying members.

Interoperability

At its core, the value of the Umatr ecosystem comes from creating engagement and data, not by “owning users.” To that end, we recognize the importance of designing the Umatr token and Umatr ecosystem to be as interoperable as possible with other technologies, platforms, and blockchain ecosystems.

We intend to take a different approach to understanding users than many traditional businesses. Instead of adhering to the notion that value is solely related to growing the size of a company’s user base as quickly as possible, we will instead focus on adding value by maximizing community engagement over the long-term.

Because our goal is to create valuable engagement opportunities for real people, it is much more important that we can entice people to do something meaningful at the point when they are ready to do it, regardless of whether they are interacting with the Umatr ecosystem directly or through a partner organization’s infrastructure. This is why ease of use and interoperability is so important in our system.

To use an analogy, our strategy is akin to setting up a bird feeder rather than building a bird cage to ensure songbirds are singing by your kitchen each morning. With a cage, the birds are “yours,” but you need to buy birds, keep them fed and protected, and are always limited by the health and number you can fit in the cage. The birds that come to a birdfeeder are not “yours,” but a birdfeeder will bring many more and a much greater variety of birds, and it will allow you to change the feed to attract different types of birds based on season. If the value in the birds is from their song (rather than your ability to say you own them), the feeder is the obvious choice. We believe this birdfeeder approach to user growth will result in many more engagers creating value in our system and greater flexibility to adapt strategies as our system grows and new opportunities arise.

One of the clearest lessons from our prior consulting efforts using big data for engagement and digital marketing is that the more places we can be, the higher the likelihood that we will be able to connect with individuals in the ideal way at the moment they are ready or are interested in our engagement offering. The more limited we are by any single system, app, or organization, the more we will be forced to push the person to do what we want at that particular juncture, which is more costly in the short-term and less effective over the long-term.

As a result, while we plan to build a Umatr interface and app to allow people to engage directly with Umatr, we are going to build an interface that other systems, apps, blockchains, and even tokens can connect to and leverage. **Our aim is not as much to have the Umatr app on every phone in America, but to have multiple apps on every phone in America powered by Umatr** with a backend trading in the Umatr token.

Creating a way to integrate with other blockchain systems and apps will help us build engagement and usage, which needs to be one of the highest priorities for any blockchain solution. We will be able to access users faster and lower the bar to engage in our system while returning unrealized value from

engagement directly to users and organizations. Because we will be dealing with personally identifiable data, we will also need to have links from public blockchains to our (and likely other) closed databases and privately held member lists from partnering organizations. Fundamentally, we believe that the key to long-term success in a distributed and open-source system like ours is to design an application and economy that can be as widely distributed as possible and that is as non-proprietary as possible.

Umatr Token Storage (and Exchange)

To allow for wider adoption and participation, the Umatr ecosystem will incorporate a token storage solution to hold Umatr utility tokens on behalf of participants and sponsoring groups who are not interested in maintaining their own cryptowallets. This token storage solution will have similar functionality to Xapo or Coinbase (which also serve as good examples for marrying private and secure databases to the public blockchain), but it will be focused on the Umatr ecosystem. Our hope is that by providing community members the option of personal holding of Umatr or having us hold it on their behalf, we will both benefit from and expedite the adoption of cryptocurrencies, as we move from the earliest phases of interest and adoption (by the very first innovators and early adopters) to more widespread usage (by the early majority), and then eventually mainstream adoption (by the late majority and laggards).¹⁸

By developing the capacity to hold users' tokens on their behalf and removing the worry over wallets and the idea of "crypto" being a dark web phenomenon that is used for illegal or illicit purposes, we can offer different options of token storage engagement that cater to many different types of potential users. If we are successful, it is reasonable to expect engagement for millions of users unfamiliar with crypto. Their user experience would involve a familiar interface with non-blockchain apps across a variety of systems, all which could treat tokens more like badges in gamified incentive scenarios. This will be just one of several ways in which we anticipate that Umatr will become a centralized element to speed adoption of the decentralized blockchain.

We are not naïve to some of the technical challenges we will face as we develop the Umatr ecosystem's token wallet. As will always be the case in the open source world of blockchain, it is much easier to be the second generation to adopt the best of the ideas that have been field tested before, and we plan to incorporate lessons learned from Xapo, Coinbase, Circle, Lightcoin, and others. Furthermore, the solution may very well be to find a way to work with a preexisting exchange that shares our values and vision, as long as they can meet our technical needs.

We also plan to use the centralized storage as a cryptoexchange to hold Umatr tokens owned by users and Public Democracy, as well as the external currency that was traded for Umatr tokens. As the storage mechanism will be designed to store multiple currency types, we will develop functionality that will empower users to convert their Umatr token holdings directly into other cryptocurrencies being held by

¹⁸ For more on the adoption curve for innovations, see Everett Rogers, *Diffusion of Innovations*, 1962.

the Umatr ecosystem.¹⁹ In a way, our storage facility will function similar to a local bank branch that holds a certain amount of foreign currency available for account holders to exchange for dollars. Like small banks, we won't guarantee unlimited exchange on demand but will be able to provide a zero-cost transfer from Umatr to other currencies we hold.

Having said all of that, our integration principles will still apply here. While we are prepared to develop our own centralized holding for tokens, if the opportunity presents itself where we can partner with another blockchain exchange or ecosystem that already has that capacity in place which meets our needs and match our values, we will explore that option. We want to lower the bar to engagement for the Umatr ecosystem community by offering a feature rich experience that is easy to use as possible.

Umatr "Karma"

We explored a number of other blockchain and social media systems over the past year while we researched, ideated, and refined the concepts reflected in this paper. We read countless white papers and studied a number of ideas for on-chain governance with the goal of using the unique properties of the blockchain to build an ecosystem that both reorients incentives away from scarcity and toward abundance and uses inherent human selfishness to focus individuals on the common good.

After a great deal of consideration, we decided to incorporate a status measure into our ecosystem, which we call "Karma."

We designed Karma as an integral part of our crypto-economic system both to prevent abuses and create selfish incentives for individuals to focus their attention on the good of others. Interestingly (and encouragingly) as we began to apply Karma to early crypto-economic models we were developing and gamed out its usage, we discovered other applications of Karma, which are all detailed below.

Before getting into the details of how Karma will work, we want to acknowledge the term's inspiration, which is Reddit. Although Reddit's karma scoring system is different from ours, some of its principles helped inspire the direction we chose to take. We have adopted Reddit's term for this centralized measure of internal engagement as an ode to that inspiration and hope that the Reddit's passionate community and employees share our excitement.

Karma's Purpose

The Umatr ecosystem's Karma score fixes many problems we identified with other early attempts to capture and reward contribution that resulted in undesired consequences in other apps and social media platforms. Karma does more than prevent problems and abuses, but our intent is to prevent bots from gaming the system, eliminate perverse incentives for users, and mitigate disputes in on-chain

¹⁹ Unlike exchanges where their entire business model and value is based on the ability to meet 100 percent of demand for exchange, we see this benefit as a byproduct of Umatr. So we will not guarantee reserves to meet 100 percent of demand, though we will evaluate the possibility of intentionally acquiring additional stores of certain cryptocurrencies that our users find valuable and where facilitation of exchange could improve access and use of the Umatr ecosystem.

governance and influence challenges that can arise from balancing the differentiating motives of investors from community.

Problems are far more likely to occur when status and influence within a blockchain system is based on holdings of the currency of exchange within that system. The same problems arise in traditional social media systems, where popularity votes and even upvotes from users are used to shape rewards because all of those can and will be gamed. We see these principles play out in the real world as well. The incentives and motivations of those who already have a lot in the economy can be different or more limited than the motivations and goals of the majority of the individuals participating in the economy. Rather than look at who has what to determine influence, we believe the measure should be who is building and contributing.

Historically, wealth has always granted some status and influence, but societies often function better when one's status is a reflection of other measures of investment and experience in the community -- whether it entails the social impact of a teacher who is not paid for the longstanding economic impact that results from someone's success decades after he or she leaves her classroom, or deeply-held values like honoring parents and respecting your elders. When one can easily trade influence over a system for personal gain enjoyed outside of it, incentives of the influencers can be skewed. This is the problem with using the liquid means of exchange (token) within a cryptoeconomic system as the measure of influence. Thus, with Karma we have set out to create a measure of one's contribution and commitment to the system which can be quantified and has value but cannot be traded or exchanged.

Engagement is our currency and where we derive value in the Umatr ecosystem, so those who are engaging the most should have more influence over what is seen and promoted in our system. This in turn should result in the broader community participating more with those who have participated and contributed the most already. So rather than creating systems of governance that depend only on how much of the Umatr token people have and hold, we will ensure that usage and earning of the Umatr token serves as a status and power indicator.

As the Umatr ecosystem does not exist in a closed ecosystem, it is important that community members have the ability to interact with traditional fiat systems. Just as they can purchase Umatr tokens with fiat currency, they can also exit from the Umatr ecosystem by converting their holdings into another currency. Even though we are hopeful that significant fiat capital will flow into the Umatr ecosystem, as the system matures, we want to make sure that entities are unable to purchase power in the system based solely on their financial ability. It is for this reason that influence and status in the Umatr ecosystem will be measured only by positive impacts on system. Earned Karma provides an elegant answer to this conundrum in theory; yet, with it, many other related considerations arise.

Inverting Selfishness

One of our greatest challenges comes in figuring out a valid measure and system where individuals are selfishly incentivized to see their score increase, but where all those selfish incentives keep pushing the individual to looking outward, participate, and helping others. How do we align egos with the

common good? Systems break down and ultimately devolve into an effort to game the rules or a destructive narcissism when individuals can trade and profit on their status measure.

Our solution with Karma is to establish two measures in our crypto-ecosystem where value and liquidity are tied to the Umatr utility token, but where status (which affects how much Umatr is dispersed) is tied to the illiquid measure of how much you participated and helped others. And central to aligning the values in our crypto-economic system with the theories of utility over scarcity is that the status achieved from Karma is its ability to increase one's giving and staking ability. Karma is a centralized scoring system that will make those with higher Karma more valuable, but a person with high Karma is primarily rewarded in as much as they can help others and the Umatr ecosystem.

Karma incentivizes people with status to help those with less. It also creates a gamified way for new entrants to "level up" quickly and receive bonuses from engaging with more experienced users. Because of how Karma can affect Umatr rewards, once you have Karma, you will want others to have it as well. Those with highest Karma have highest status and increased capacity to stake. But those with less Karma who engage with those who have more get the bonus Umatr for personal use. Both need the other and help the other.

At the same time, users with less Karma start with the most tangible and fiat convertible boost...the last are somewhat made first! Still, because there should be increased demand to engage with high-Karma users and increased ability to stake engagements, volume and network effect Umatr rewards should still result in those with more Karma receiving strong personal Umatr rewards from engagements with those who have less Karma.

Karma's Impact On Our Crypto-Economic Models

Our intent with Karma is that it will have two primary impacts on the ecosystem that will affect the outcomes above and lean our ecosystem toward collaboration and empathy rather than narcissistic and competitive tendencies. We set out to create the first, and the second evolved as an obvious byproduct of Karma as we began to imagine it within our system.

Karma to Encourage Self-Interested Collaboration

First, when people engage with opportunities created by high-Karma stakers or collaborate in staked events with high-Karma engagers, they will get a bonus in all their Umatr rewards (both the share that results from staking and the share from Umatr that results from the value of their engagement) *and* they will see increases in their own Karma score. As a result, engaging with users who have high Karma gets you more Umatr and more Karma.

This makes users with high Karma more valuable to everyone else in the system, which in turn will incentivize organizations, companies, and other individual stakers to be active in the Umatr ecosystem and build up their Karma scores, because their stake rewards will be more valuable to those they are trying to mobilize.

Put another way, if you want to use the Umatr ecosystem to get others to do things, you will be more effective if you are heavily engaged in the Umatr ecosystem yourself. Due to the bonus from network effects of staked outcomes, individuals and organizations that stake opportunities the community responds especially well to will see their Karma increase and be made more appealing in the future when they stake activities. Karma thus creates a very strong incentive for users to engage heavily within the system and create value for others engaging in the system - making collaboration in everyone's self-interest.

Umatr+ to Encourage Community-Building

Second, as we designed our crypto-economic models, we came to realize that Karma should generate a special type of Umatr (Umatr+) that can't be sold or exchanged but can be staked (after which point, it converts to normal Umatr). So people with higher Karma will get more Umatr to *use*, but the Umatr they get from their Karma can only be given away.

In this way, Karma is more reflective of a Reddit moderator or Wikipedia editor than Facebook algorithm deciding who sees what based on how many likes something gets. But it also corrects for the challenges that arise in those moderator-led systems where decisions can be too concentrated in the hands of a few people who perhaps care too much, because Karma is also awarded to the more casual (but larger community) at smaller rates.²⁰

Other Possible Uses for Karma

A final point that we are excited about with Karma is that we believe it could be a very good path for exploring on-chain governance. Karma addresses one of the biggest current challenges with on-chain governance: the problem of speculators and big whales twisting the priorities of "crowd-wisdom" through a one coin / one vote system.²¹ If governance votes are based on the measure of engagement and creation of value within the system, rather than the ownership of that system, the system much better aligns influence with the users who are most engaged and who are most likely to have their interests aligned with the best interests of the system.

There are other ways we might use Karma to improve and incentivize the user experience. Karma status incentives could include special access to beta designs and on-chain governance (potentially in choices on development priorities and platform decisions).

Karma also could give users more influence, and it creates significant opportunities in data modeling that will add value to the Umatr system as well. It lends itself easily to gamification to unlock more

²⁰ These are the sort of campaigns we have run and participated in for over a decade. Where we diverged from many of our peers, however--and an experience that helped develop and reinforce our theories on usefulness and value as better measures than scarcity--was that we traditionally have run our ad campaigns without margins. This allowed us to build our data much faster and more deeply because so much more of each buy went to generating outcomes, which resulted in greater success and more opportunities.

²¹ This also likely will address concerns about apathy and participation since those with Karma get it by being the most engaged and committed.

features and access and rank based on how much Karma one has. This could incentivize use or collaboration in development, but we know that we will have to be careful with this and ensure we avoid creating that desperation feel of chasing level ups. Karma needs to remain an incentive and boost, rather than the goal.

ADDRESSING EVIL INTENT AND ABUSE IN UMATR

The world is not as we all wish it were. No matter our intent and goals, there is no question that if Umatr is embraced by users and delivers on the promise we see in it, some will try to abuse it. We have listed a number of ways Umatr could be used to bend the economic arc of history in justice's direction and support the common good. But how do we keep people from staking an engagement of placing a burning cross in a neighbor's yard?

There answer is not simple, but it is necessary. A challenge in building any tool—especially one designed and built of the people, by the people, and for the people—is how to allow open and free usage while still preventing abuse and reducing the possibility of harm. Along with continued diligence and a commitment to weigh harm caused against value gained as we grow this system, we are taking a series of steps to prevent abuse. These come in two forms: design and oversight.

First, we are designing our system to be less effective at generating truly harmful engagements. To go back to the tool analogy, an assault rifle and a spade can both be used to kill someone, and they can both be used to dig a furrow to plant a crop. But each is better at one of the tasks than the other. Umatr is, by its intentional design, a spade.

To begin with, the data in the Public Democracy database that serves as a foundation to our system was collected and tagged in such a way that it is very effective at predicting and eliciting communal actions and engagements based on hope and contribution, but less effective at predicting fear and tribalistic tendencies. Furthermore, the Umatr cryptoeconomy rewards collaboration and staked activities that the community values. When value is based on contributions into the system, rather than narcissistic ones or the ability for a user to be sold to advertisers, the economic incentives and obstacles are different. None of this prevents abuse or harm, but it makes it more challenging, less profitable, and easier to spot.

Second, we are going to set rules and monitor behavior. Stakers who violate our usage policy will lose their staked pool and face expulsion. Any who seek to engage with a staked activity that is in clear violation will likewise face expulsion. We will establish a means for any user in Umatr to flag a problematic staked activity or pool for review. As the system grows, we will explore ways to build additional protections into the smart contracts governing staking.

We do not plan to regulate ideology or beliefs; the NRA and Planned Parenthood will be equally welcome to stake. And so we will start by focusing our restrictions in the community standards and user

agreements on engagements directly targeted at individuals or meant to intimidate vulnerable communities. We do not expect we will get it 100 percent right the first time; no modern technology platform ever has. However, we have intentionally developed our dataset over the past decade with the common good as our driving force, and we have intentionally designed the Public Democracy platform and all of the systems that make it possible to achieve the mission described in our purpose statement.

As stated earlier in the paper, we expect that at launch, most staked pools will be created by organizational stakers in a more curated environment that will allow us time to develop rules of engagement that work best. As we expand, we are committed to maintaining transparency, listening to constant input from users, and demonstrating our willingness to continue to refine our community standards and the rules that govern Umatr. Getting this right, over the long-term, will not be easy. But it will also not be optional.

PART III: GOALS FOR FUTURE

THE CAMBIO MODEL: DESIGNING FOR SOLUTIONS THAT DO NOT YET EXIST

Wayne Gretzky famously said, “Skate to where the puck is going, not where it has been.” In similar fashion, if we build and design the Umatr ecosystem to integrate with the best blockchain solutions that currently exist, we will always be behind. Given the rapid pace of technology development, we cannot wait until all the pieces are in place to start assembling the puzzle; we know that the final pieces of Umatr will require building what has not yet been discovered or solved. In this spirit, we plan to pursue an approach to development and ecosystem design we are calling the **Cambio Model**, named for the original architect of Florence’s famed Santa Maria del Fiore cathedral.



At the dawn of the Renaissance, Arnolfo di Cambio proposed a revolutionary design for a new cathedral in Florence, incorporating a gigantic open dome as the architectural focal point to draw all eyes up to heaven. It was a design unlike any ever imagined, in large part because when Cambio proposed it in 1294, no one had solved the engineering problem of how to construct the dome Cambio envisioned. But Cambio and the leaders of Florence believed such a dome was possible and that a solution would emerge as Italians benefited from the fruits of a renewed pursuit of knowledge and innovation.

Like Gretzky skating forward to intercept a ricocheted hockey puck, they understood that if they waited until a solution to the dome was found to even begin construction, the physical foundation would not be ready to support the dome when it was time to begin its construction.

So, in 1296, they began a hundred-year project to build the cathedral to support a dome no one yet knew how to construct. Because they did, the foundation was completed just as Brunelleschi devised an architectural solution for Cambio’s massive unsupported dome. For the 450 years that followed, until

the advent of modern steel construction, Florence's dome of Santa Maria remained the largest in the world.

Public Democracy is launching Umatr with a hope and faith in the future not too dissimilar from that of the early builders of Santa Maria. We are experts in building extremely powerful and meaningful data and harnessing the value of positive human engagement. While we know there is much that we and others will learn in the years ahead, we also recognize that waiting until we have all the answers to start building for them will relegate the Umatr ecosystem to a perpetual state of ideation or leave us merely to follow the paths others have shaped.

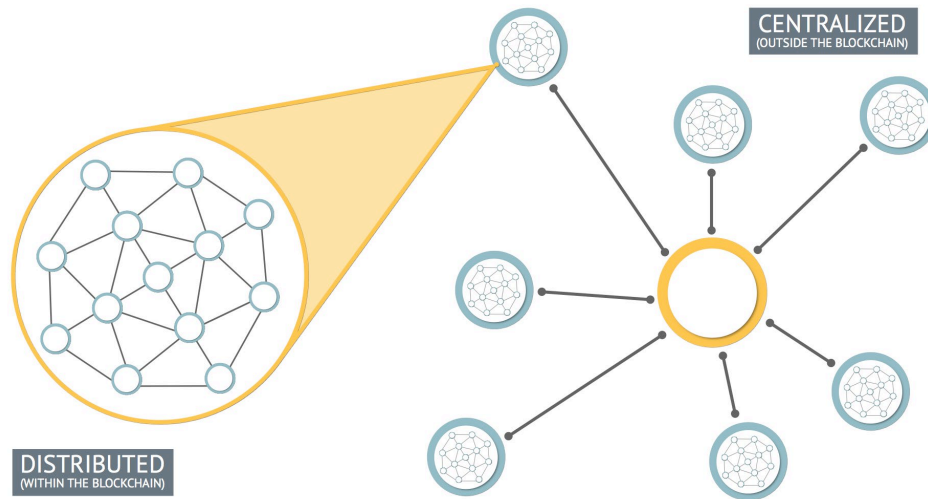
Our intent is to start with a foundation we know we can build upon, which has taken a decade to set, and then build the Umatr ecosystem with a flexibility that will allow us to try new things that cannot currently be done. Some of them will not work. Others will require multiple corrections to get right. This next section of the paper is meant to convey our current strategies and theories while also outlining key areas where we anticipate challenges, risks, opportunities, and rewards.

UMATR PARTNER ECOSYSTEM

We are building a business and an ecosystem that will succeed by working with others to build and share greater value. We welcome criticism and ideas that could help the blockchain better capture unrealized human value and share it back with those who created it.

While we hope to contribute to the blockchain's and tokenized ecosystems' future success, we are even more excited to play a meaningful role in unlocking the blockchain's incredible potential for greater good and real-world solutions.

On the next page, we describe a few of the Cambio goals we will build toward.



MULTI-BLOCKCHAIN EXISTENCE

Currently, many different blockchain-based tokens exist as separate proverbial islands, with centralized, tolled, and censorable exchanges acting as bridges.

We believe that this system will eventually evolve in to a multi-blockchain existence where interoperable blockchains and tokens will exist. As such, we will start with the Umatr token on a single chain, but our plan is to build it to eventually integrate across a variety of exchanges.

POSSIBILITIES OF DATA AND OTHER CURRENCY STAKED TO UMATR

Umatr tokens will serve as the currency for staking engagement outcomes within the Umatr ecosystem, but we also plan to stake data assets and cryptocurrency used to buy Umatr utility tokens as a hedge within our system (see Part 3). Again, our goal is not to extract value from our system but to grow it. Having seeded the initiative with data, systems, and strategies, Public Democracy will own and hold a large number of the Umatr utility tokens when the ecosystem launches; however as the ecosystem evolves post launch, Public Democracy will not enjoy any special rights in terms of utility token distributions and will accrue them the same way that everyone else who contributes to the Umatr system does. As an equal participant, this will align everyone's mutual interests over time, to ensure the stability and controlled growth in value and usage of the Umatr token. We believe that creating this externally referenced and fully transparent and auditable backstop of value is an important way of doing that.

In this context, we realize that having those assets staked into an independent blockchain system like Umatr also creates some very interesting possibilities. Data is a special type of asset that does not lose its value after a certain amount of use. On the contrary, when you take smart approaches to data, you can generate ongoing revenue in a way that profoundly *increases* the underlying value of the asset itself.

The proceeds Umatr receives from curated data sales will come back to Umatr as staked currency. This will add the new currency value to Umatr, and the proof of revenue should strengthen the value of the data assets held by Umatr - or even increase its valuation significantly as the data improves.

Once Umatr achieves a multi-blockchain existence, we plan to increase our holdings in the underlying cryptocurrency of each of those blockchains, which would turn Umatr into a costless bridge and mechanism of exchange between blockchains. This would increase Umatr's exposure to price fluctuations in those other currencies, but we believe those risks can be managed and will be worth the gains from greater integration with the broader blockchain ecosystem.

IDENTITY AND BIOMETRICS

Umatr will need to solve the challenge of establishing single and known identities for our users. The Public Democracy database currently does this through links to postal records and voter files. We need to develop a similar system for Umatr, and one that can grow outside of the United States as we expand globally and can positively impact more people with greater needs. Some combination of two-factor authentication, identification verification, and biometric identification are the most likely ways to solve the problem of proof of identity and password security, and we will build toward that reality.

Challenges exist in securing that biometric data and spoofing. There could even be new security concerns if a person's body becomes the only way for criminals to access massive stores of wealth. Even so, unique human identifiers without significant barriers to usability must be found for blockchain and for all of us to interact in an increasingly hyperconnected, globalized, and digital era.

MICROLENDING

Another exciting potential application for our system is in the microlending and unbanked lending space. We believe this could be an early usage case for Umatr, which could harness the value of data attained by the microloans as a hedge to lower the rates and risk of making those loans. Allowing part or all of the interest from a small loan to be paid in Umatr would incentivize both lender and lendee to support a higher valuation of the Umatr utility token and rewarded lendees for paying back principal and proving credit, which establish powerful data points.

Microloans traditionally default at low rates, a fact which has been popularized through the work of Nobel Prize winner and social entrepreneur Muhammad Yunus. Microlending is also a practice that has existed in communities, across most cultures worldwide, through money pools / lending circles around the globe. Yet, as many fintech enterprises have identified (including the pioneering work of new blockchain solutions such as

“Microlending and other financial services are especially well-suited for blockchain adoption ... 1.2 billion people have digital IDs through the Aadhaar program in India.”

WeTrust), these communities also suffer from lack of access to capital and liquidity, which drive up rates and leave significant viable markets untapped. As with the Lev experiment in Israel (see Part 1), Umatr could trade data for new currency for microlenders to use, with the usage of that currency creating extremely valuable data throughout developing nations, a credit history (and/or alternative credit scores) for lendees, and the capital they need for their small enterprise. These new enterprises could be incentivized toward continued engagement with the Umatr ecosystem and utility token, which would in turn encourage further adoption in those developing economies. Umatr could also potentially work as a better means to track loans and evaluate outcomes.

As stated above, Umatr plans to place a significant amount of capital from our data and currency assets into an escrow staked to our system as a guarantee to the system’s minimum value. We plan to explore ways to put those assets to greater usage, perhaps by partnering with groups like Kiva or Microplace, or even less well-known groups that could help us diversify Umatr’s staked assets through microloans that will be generating engagement as the way to grow the asset value while allowing all the fiat value to be reinvested by the microlender in lowered interest rates and new loans. As the international microlending vertical continues to evolve and improve, we hope to become a part of the conversation and solution. After all, microlending and other financial services are especially well-suited for blockchain adoption, as evidenced by India’s highly efficient (and corruption-resistant) direct benefit transfer programs, which are possible now that 1.2 billion people have digital IDs through the Aadhaar program in India.²² As Public Democracy expands globally, access to capital will be able to positively influence more lives in more ways than we can fully grasp at this point.

INTEGRATION WITH OTHER TOKENS AND SYSTEMS

In addition to working toward a multi-blockchain existence, we also maintain a vision where Umatr will serve as system that can power other platforms. Microlending coins and social investment coins are

²² For more on India’s digital IDs and other cross-sector partnerships that deliver innovative, inclusive, and long-lasting solutions – all areas where we see significant potential for Public Democracy over time – see *Social Value Investing: A Management Framework for Effective Partnerships*, 2018, by Howard W. Buffett and William B. Eimicke: <https://sipa.columbia.edu/svi>

natural examples where our ability to harness the value data value of engagement beyond the initial fiat investment to acquire the coin will make those coins' usage more valuable. We also believe that Umatr can replace many badge and gamified member reward programs, adding measurable value and liquidity between reward programs. We intend to build the currency of engagement which embodies a level of ubiquity and trust that is held to the highest of standards. We believe this is possible, and so we will build for it.

ON-CHAIN GOVERNANCE

As stated in the Karma section of Step 3 above, we believe Karma provides a very promising path for exploring on-chain governance. We plan to explore this usage for Karma for prioritizing system upgrades and making decisions on how to invest and utilized the assets staked to Umatr, perhaps creating mini-DAO's within Umatr based on and having learned from the original Ethereum experiment. Although other ways to test governance exist, we do not think it is unreasonable that governing bodies of different blockchains will begin to formalize ways of interacting with each other and developing best practices for the broader community as well.

CHARITABLE GIVING AND GIVING UMATR TO NONPROFITS

While several initiatives exist that purport to employ blockchain to better track donations and provenance of charity, we believe the Umatr ecosystem has the potential to provide significant additional value. Not only will Umatr empower charities to better understand the source of donations, but they will also be able to answer questions related to their underlying motivations of why they decided to give.

In a related manner, we plan to experiment with our own charitable giving of Umatr to NGOs and programs in developing nations to seed value. For example, we are fascinated by the possibilities of partnering with the Indian government to give Umatr to all Aadhaar participants. Although we would need to be careful of the impacts on the broader system, perhaps using an initial coin closer to Umatr+ that required some direct engagement in Umatr before the value could be converted, this is an idea we plan to explore. The expansion of the user base, data, and overall engagement generated from such a partnership for Umatr would be astronomical, justifying the Umatr paid to Indian citizens. The same idea could be explored on smaller scales with different nonprofits or even corporations; while the notion of giving tokens away would never work with Bitcoin or another scarcity-based currency, the theory is sound in a system where value is based on usage and utility.

PART IV: OUR TEAM

Our team brings a together a diverse set of talents and business experience, having developed one of the largest values and behavioral databases in America, successfully launched multiple IPOs, run national political campaigns, developed a top-rated iPad game, led international NGO coalitions campaigns toward successful bilateral and UN treaties, and produced award-winning movies.

We all come to Public Democracy from careers which align what is right with what works in politics, entertainment, and business. We balance all to which we aspire with the reality of what is in pursuit of real-world solutions that support the common good.

ERIC SAPP

PRESIDENT, CO-FOUNDER, AND BOARD MEMBER



As an entrepreneur, faith leader, and political advisor, Eric Sapp has spent his career supporting communities all over the world in their efforts to promote the common good.

Eric co-founded Common Good Strategies, later the Eleison Group, which led outreach to faith and rural communities for top Democratic candidates in 2006 and 2008. He has since pioneered the use of new technologies in successful campaigns on issues ranging from poverty and national security to grassroots efforts supporting veterans, hungry children, and victims of terrorism. Through these efforts, his team developed one of the largest voter response databases and most sophisticated digital advertising platforms in the country.

Eric graduated from Davidson College and earned a Master of Divinity and a Master of Public Policy from Duke University. He lives in northern Virginia with his wife and their son and daughter.

ROB LALKA

BOARD CHAIRMAN



Rob is Professor of the Practice at Tulane University's A.B. Freeman School of Business and the Executive Director of the Albert Lepage Center for Entrepreneurship and Innovation. Prior to Tulane, he served as Director of Strategy and Partnerships at Propeller, a New Orleans-based startup accelerator and community development fund. He served in that same role at Village Capital, a global startup accelerator and seed fund. He is the co-founder of Medora Ventures, a consulting firm that supports investments with returns for shareholders, the local community, society overall, and generations to come.

Rob moved to New Orleans from Washington, DC, where he was a senior advisor at the Howard G. Buffett Foundation and a Presidential Management Fellow in the U.S. Department of State's Office of Global Partnerships. He also served on the Secretary of State's policy planning staff, where he coauthored the president's cross-sector partnerships strategy. Rob graduated from Yale University, *cum laude*, and earned a Master of Public Policy from Duke University. He, his wife, and their son reside in New Orleans' Broadmoor neighborhood, where he serves as a Commissioner for the Broadmoor Improvement Association.

ADVISORY BOARD

We have engaged a number of outside experts to advise on the crypto-economic models in Umatr during the development phase, who will be announced as their relationship with Public Democracy becomes formalized.

CHIEF TECHNOLOGY OFFICER

The Chief Technology Officer will oversee the hiring and coordination of our blockchain programming team. The CTO will also tackle the technical challenges of integrating our database and current digital tracking systems into a smart-contract driven crypto-economy.

DIRECTOR OF MARKETING

In the future we will also be developing a team tasked with growing the market for Public Democracy's current data and the data produced by Umatr in a responsible manner that supports the values and intent of our users and abides by our Public Benefit missional commitments.

ERICA SAVAGE WILSON

DIRECTOR OF OUTREACH



As Director of Outreach, Erica spearheads our partner outreach program and has been a lead in our data tagging program. She also oversaw the execution of the Iraq War Fund campaign, where she trained and managed teams responsible for reviewing and researching extensive data specific to Iraq War veterans and their impacted family members.

Prior to Erica's employment with Eleison Group, she served nearly a decade with the Department of Defense. She entered federal service and attained permanent work status through completion of her Accounting degree and successfully matriculated to a Financial Analyst, responsible for managing accounting data and briefing the Commanding General monthly.

Erica is a former Congressional Assistant Campaign Organizer for Congressman Sanford Bishop, a graduate of both Georgia's WIN List Leadership Academy and the Congressional Black Caucus Foundation Leadership Institute, an NPR Political Rewind Voter Panelist, and a Southwest Georgia 40 Under 40 awardee.

HALEY MCDUGAL

DIRECTOR OF DIGITAL COMMUNICATIONS



As the Director of Digital Communications, Haley manages social media accounts and is a lead on developing communication campaigns for Public Democracy partners and clients, playing role in database and content development. She joined Public Democracy because of her desire to connect voters with issues and communities they care most about.

Haley was raised in Kings Mountain, North Carolina and considers herself a Tar Heel born, bred and dead. She graduated from UNC, where she studied political communication and learned to communicate with a global audience through her work at UNC's Global Relations office. At UNC, she led with a campus ministry and traveled to Sweden for a summer as an intern, quickly leading to her admiration of the Swedish culture (and its desserts). Through these experiences, Haley gained a passion for connecting people around the world through common ground and values-based conversations, which she now happily pursues each day at Public Democracy.

LEDUAN REINA

MANAGER, INFORMATION TECHNOLOGY SYSTEMS



As Manager of Information Technology Systems, Leduan optimizes Public Democracy's technological capacities and provides network administrative support. Born and raised in Cuba, Leduan has a passion for optimizing systems and extensive experience and training in IT, having served as a consultant for major membership bodies and academic institutions for over a decade. He also served as a senior interpreter for American mission programs and logistical coordinator for the church planting movement of home churches in Cuba before immigrating to America.

Leduan received certification in internet networking and computer hardware from Sur Automatización & Control, holds a GED from the Spanish American Civic Association in Lancaster, Pennsylvania, and studied Theology and Missions at Havana Baptist Theological Seminary. Leduan currently also serves as a church planter in Washington, D.C. and pastor of the Annandale Bible Church congregation.

Special Thanks

Adam Zuckerman, who played a central role in helping hone and edit the ideas reflected in this paper. His blockchain expertise and strategic thinking were invaluable to the final form of this white paper.

Simeng Wang, who took the lead on our updates for the version 2.0, tirelessly integrating refined ideas and new market understandings into the overall crypto economic framework and core values that make Umatr special.

Glossary And Key Terms

B Corp – B Corp certification is part of a global movement started by B Lab, a nonprofit organization that serves to redefine success in business so that all companies compete not only to be the best *in* the world, but the best *for* the world. B Corp certification is basically a way to certify that Public Benefit Corporations are not just following the law in their charter, but also the spirit of full responsibility to its stakeholders. According to B Lab, the nonprofit that awards the certification, “*B Corp certification is to sustainable business what LEED certification is to green building, Fair Trade certification is to coffee or USDA Organic certification is to milk.*” Certification applies a much higher standard than corporate filing, and B Corp scores companies to reflect how completely they have embraced the principles B Lab exists to promote.

Data or Security Token—see PD Data Token.

Engagers – People who participate in the Umatr ecosystem, often through engaging in a staked activity.

ERC20 token – A token that abides by a set of rules created by Ethereum, allowing it to be exchanged and interact with other tokens on the Ethereum blockchain. Unlike other tokens like Bitcoin that exist on their own blockchain, ERC20 tokens “piggyback” on the Ethereum network, are hosted by Ethereum addresses, and are sent using Ethereum transactions.

Fiat – Fiat currency is traditional currency like the dollar or pound, where the price is set by fiat of a centralized government.

Karma – a score applied to users in the Umatr ecosystem that is a reflection of their engagement and contribution to the Umatr ecosystem. Karma determines a user’s status and affects the formula for value share rewards and the distribution of Umatr+.

Multi-blockchain existence – A yet-to-be realized (but we believe inevitable) state where tokens and cryptoecosystems can exist simultaneously on multiple distinct blockchains.

On-chain governance – The way by which blockchains and cryptoecosystems are governed and decisions made.

PD Data Token – Our security token, which will represent a share of ownership in Public Democracy’s multi-million-dollar values and behavioral database.

Public Benefit Corporation – Public benefit corporations are a specific type of corporation that allow for public benefit to be a charter purpose in addition to the traditional corporate goal of maximizing profit for shareholders.

Regulation CF – A relatively new vehicle for fundraising, established in Title III of the Jobs Act of 2012 and going into effect in 2016, which allows companies easier access to smaller capital raises (capped at \$1,070,000) and allows smaller investors earlier access to investment. Prior to Reg CF, private companies could only raise capital from wealthy “accredited investors” (see Reg D). The CF stands for “Crowdfunding,” and Reg CF now allows private early-stage companies to raise from all Americans as long as they follow disclosure and other guidelines set forth by the SEC.

Regulation D – The traditional way smaller privately held companies have raised capital, allowing them to sell equity or debt securities without having to register those securities with the SEC but under strict guidelines. One of the most significant restriction of Reg D is that it is only available to accredited investors, who must either be able to demonstrate a net worth over \$1 million or that individual income has exceeded \$200,000 for the last two years (\$300,000 for a couple filing jointly) and is expected to remain at that level.

Restaking – When an engager uses reapplies their staked share back into the staked pool to drive further engagement. Even though the engager contributed their staked share, the valuable data generated by that act and network effects from those who engage with that newly staked pool will result in the restaker still receiving a value share.

Smart Contract – A self-executing contract with the terms of the agreement bring directly written into the lines of the code and existing on a blockchain network. A key feature of the blockchain, smart contracts permit “trustless” transactions which are generally, traceable, transparent, and irreversible.

Stable Coin – A type of cryptocurrency that is pegged to a stable asset, such as gold or fiat currencies; stable coins are usually linked to a decentralized autonomous organization (DAO) that controls issuance and pricing.

Staking – A strategy where participants in the Umatr ecosystem where users “stake towards” and engagement outcome by creating a Umatr token pool to draw and incentivize engagement from the broader community with hopes of encouraging engagement from other Umatr ecosystem participants.

Staked Activity – The action, contribution, or other engagement that fulfills the terms of the smart contract that will award a staked share.

Staked Pool – A collection of Umatr, deposited by a staker or collection of stakers into an “escrow” governed by a smart contract controlling a staked activity with the intent of driving engagement.

Staked Share – One of the two primary ways that people can earn Umatr. When someone performs a staked engagement activity, they are awarded a share in the staked pool based on the rules of the smart contract governing that staked activity.

Staker – A person, group, or entity who contributes to a staked pool.

Token – Tokens are a special kind of virtual currency that reside on their own blockchain (see ERC20) and represent an asset, utility, or money. The term generally applies to the thing created and traded in the blockchain and exist as entries on a blockchain/ledger. Increasingly, the term token is being used for virtual assets or utilities and cryptocurrency and “coin” is being used for primarily financial tokens.

Umatr – The new currency of engagement. Our utility token, which will be a reflection of human engagement and backed by the value of data created by that engagement.

Umatr+ – A special kind of Umatr utility token only given to users with high Karma scores as a bonus value share. Umatr+ can only be used for staking and converts to regularly Umatr utility tokens when distributed as a staked share.

Umatr Ecosystem – The crypto-economic system that will utilize the Umatr token to measure and encourage engagement and collaboration and then store and share that value back with those who created it.

Value Share – One of the two primary ways that people can earn Umatr. The value reward is a reflection of the additional value created in the Umatr ecosystem from individual engagement (primarily through staking and engaging) and is awarded by Umatr to those who created it.