

# WHITE PAPER

TEAMMATE  
BLOCKCHAIN SOLUTION





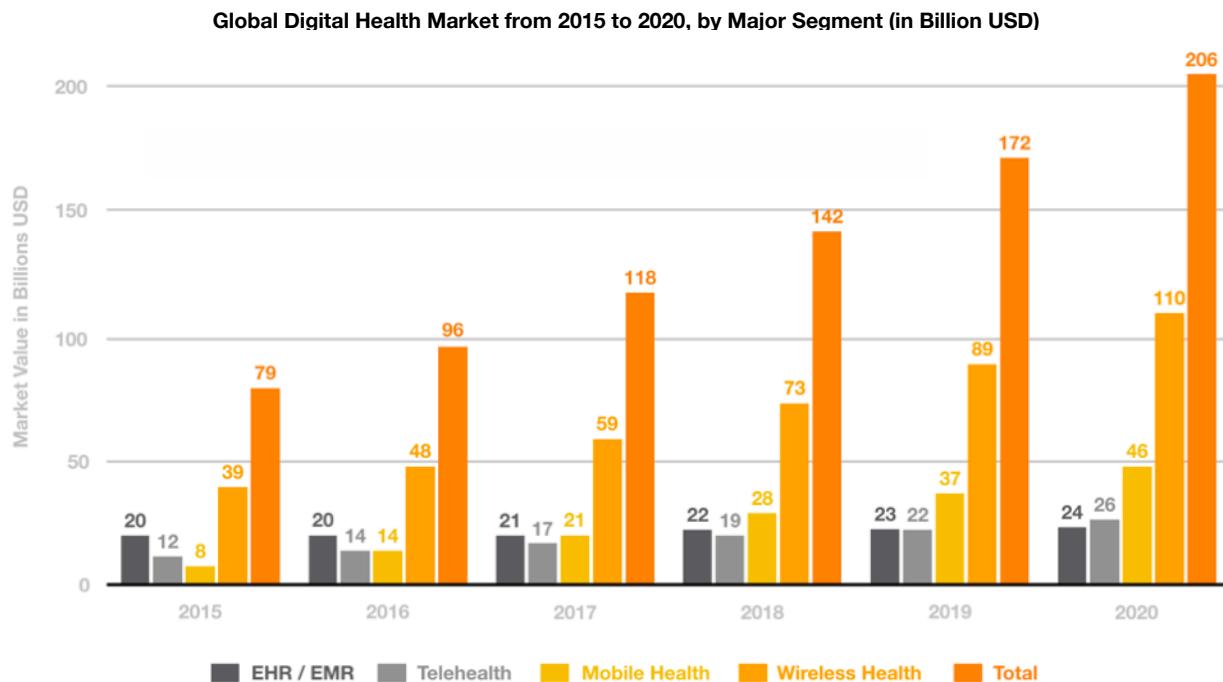
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# Summary

We are witnessing an evolution in healthcare: the emergence of fitness-related data as a vital sign. This is a natural evolution, as fitness-related data is more closely correlated with true health and wellness than traditional health data. Combine these two types of data, and new utilities emerge that are key to effective, comprehensive care. All of this data is generated in the Global Digital Health Market, which is still in its early, formative stages and projected to double over the next five years. Already, 2017 was a landmark year for this market, as mobile health & fitness app downloads topped 3.7 billion<sup>[1]</sup>, creating 118 billion USD in value<sup>[2]</sup>. The Global Digital Health Market is creating lakes of untapped and underutilized data that can be used to save lives.



TeamMate will optimize this market category by creating an e-commerce ecosystem that plugs into the mobile health & fitness landscape of the future - while providing meaningful improvement in the quality of human life. This ecosystem is built on incentive and verification systems that utilize three powerful mechanisms to achieve transparency and athletic evolution: gamification via the TeamMate Protocol, consensus algorithms via smart contracts, and human verification via social athletic activity. This gamified digital universe allows TeamMate to generate, collect, organize and share data in such a way as to maximize its utility to both the users who provide the data, and a health & fitness industry that depends on it to make informed business decisions. **This is the TeamMate Blockchain Solution.**



# Human Problems

Category optimization is a lofty goal, but it is our second priority; our first priority is saving lives. There is a **terrible trifecta** killing human beings in record numbers. These three deadly yet preventable pathologies are **obesity**, **physical inactivity**, and **loneliness**. Once we understand the profound human and economic costs associated with these problems, we realize that solving them is more than a tremendous business opportunity - it is a response to a clear and present danger.



**Physical inactivity** is a leading cause of preventable death and disease worldwide and causes as many deaths as smoking. Just 30 minutes a day of moderate-intensity physical activity reduces the risk of many leading causes of morbidity and mortality, such as cardiovascular disease, Type 2 Diabetes, and obesity, while also reducing the risk of various cancers, depression, and anxiety.<sup>[3]</sup>



**Obesity and poor weight management** have been described as a 'growing and disturbing global health crisis' affecting over two billion people around the world. 30 minutes of exercise per day can significantly curtail obesity, but the majority of sufferers do not exercise on a regular basis at all. Obesity is a major pathway to metabolic syndrome, and is a leading avoidable cause of premature death worldwide.<sup>[4]</sup>



**Loneliness** is a growing health epidemic that places our body in a chronic stress state. It is estimated that over 40% of adults in industrialized nations feel lonely.<sup>[5]</sup> Loneliness and weak social connections are associated with a reduction in lifespan similar to that caused by smoking 15 cigarettes a day, and even greater than that associated with obesity. Loneliness is also closely associated with reduced engagement and productivity in the workplace.<sup>[5]</sup>

This terrible trifecta has not always been so prominent in our lives. The advancement and proliferation of technology has increasingly displaced human-human activity, encouraging and often rewarding us for plugging into the internet, diving into our screens, staying indoors, and turning our backs to each other in the real world. The range of what we do online has expanded greatly, and now includes many things that we used to do in public settings, such as shopping, chatting, and competing with each other. Our phones can now do wondrous things, but they have also become TVs, and bring all of the negative side effects of TVs - including isolation, lethargy, and inactivity - into our pockets. Technology is solving very real problems at an astonishing rate, but we must also be clear-eyed about the negative side effects that come with it. This awareness will allow us to make better use of its power.



# Business Problems

The mobile health category that TeamMate is built to address exists at the intersection of two large, converging, high-growth markets: the ~\$90B Total App Market<sup>[6]</sup>, and the ~\$83B Total Fitness Industry Market<sup>[7]</sup>. Fitness-related apps are growing 87% faster than other apps & the fitness industry is going digital<sup>[8]</sup>. About half of all smartphone users already have at least one health-related app on their phones<sup>[9]</sup>, and fitness, activity, and sports trackers currently make up over half of the global wearables market with 61M users valued at \$3.28B.<sup>[10]</sup> By 2020, these numbers are projected to triple.<sup>[11]</sup> Yet this high growth category still faces significant problems.



**Fragmentation** plagues the mobile health & fitness category. As large fitness brands attempt to bring unity to the space by acquiring fitness apps, the result is merely continued fragmentation, as users are then intentionally walled off from competing brands. There is no neutral third party network that functions as a virtual town square, in which all parties can communicate with both brand-committed and brand-uncommitted users at scale. Users resort to forcing this interaction onto various social media platforms.



**Kinks in Data Flow** also plague the fragmented mobile health & fitness sector. There are currently hundreds of different devices and thousands of apps for collecting health & fitness data, but there is no common data layer where the aggregate of this data is accessible by users or service providers. This makes it difficult to optimize one's comprehensive fitness journey by devising data-driven solutions to health and fitness problems. A simple, elegant and intuitive user-interface that integrates with all third party applications and technologies, thereby unifying health & fitness data for the user, is sorely missing.



**Digital Business Development** is still in its infancy in the mobile health & fitness category. The problems highlighted above are further complicated by the inconsistencies in the health & fitness industry's ability to successfully reinforce business requirements and optimize member experience with technology-based solutions. There are lead generation tools, facility-client communication tools, and all sorts of decentralized technology-based solutions for empowering fitness professionals and their clubs that are being underutilized.

The *technology alone* is not the problem; it's the lack of *synergy*. The status-quo is inefficient and disconnected, and the result is often poor user experience and failure to reach health & fitness goals. Consumers deserve a more connected and intelligent health & fitness industry.

 Solution

TeamMate is a mobile application and social discovery tool that learns how to identify and match optimal training partners according to each user's preferences, progress, and athletic evolution. The TeamMate Blockchain Solution (TBS) is a nonprofit liquid democracy that reorients the fitness industry within a new decentralized p2p ecosystem.

The TeamMate mobile application leverages convening technology by enabling individuals to meet face-to-face to enjoy healthy activities together in real life. Rather than seeking to replace workout partners or reduce them to digital avatars, the TeamMate mobile application provides a gamified ecosystem that incentivizes these real-life interactions through the use of TeamMate Tokens. TeamMate INC has many paths to monetizing the mobile application, but instead of hoarding users' data, it is donating that data (and by default, the value of that data) to the TeamMate Blockchain Foundation to be monetized and controlled by users themselves. In Phase 1, our Blockchain Foundation will implement a dual blockchain architecture that combines the benefits of Hyperledger Fabric and the Ethereum Platform. Our data repository will utilize the InterPlanetary File System (IPFS) as a permissioned data storage solution. By integrating a Token Curated Registry to access this IPFS data repository, the TeamMate Token will enjoy immediate utility through a partnership oriented list of actors wishing to utilize our data to their benefit. The TeamMate Blockchain Solution begins the inevitable process of unifying fitness, wellness and health data within HIPPA and GDPR compliance by putting users at the center of comprehensive data-driven health and wellness.

## A Frictionless Ecosystem

Data fragmentation, clogged data flow, and the lack of a comprehensive technology-based business-development platform can all be solved with a decentralized ecosystem that is a) open to all interested parties, b) facilitates traditional business development, and c) incentivizes consumer participation that is in-line with their core values. The TeamMate Network checks all of these boxes, providing the connected and intelligent architecture that the health & fitness industry needs. The TeamMate Network allows users to reward companies that efficiently solve real-world health & fitness problems. Because the TeamMate Network is an open API project, new companies and ideas will be able to compete with market leaders. TeamMate can monetize access to our fitness repository (with users' approval via consensus) by using a SaaS subscription-based hyperledger that is the single point of entry into our IPFS database. Beyond empowering users with the ability to choose when and how their data is shared, TeamMate also encourages user-participation and stickiness through tokenized incentives. This model provides for the most efficient and streamlined fitness, health & wellness ecosystem conceivable.



TeamMate uses the power of human collaboration and cutting-edge technology to create and evolve athletes by helping users map out their fitness journeys alongside others who want to do the same.

## Human Connection: The Ultimate Supplement

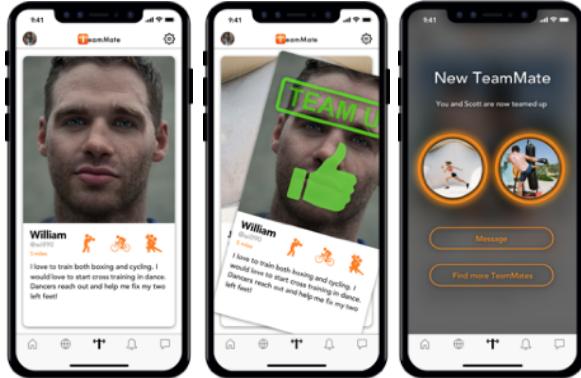
The human connection is not only the key to unlocking the power that technology offers the world; it is also the secret to unlocking an athlete's full potential. **Athletic performance can double when an athlete works out with a workout partner, and these higher intensity workouts result in much higher fitness gains realized over time.**<sup>[12]</sup> Working out with a partner has also been demonstrated to increase social skills, overall mood, health, life expectancy, exercise consistency, and enjoyment of athletic activities.<sup>[13]</sup> The TeamMate platform is designed to generate social touchpoints in every athletic domain, thereby increasing and diversifying users' social groups.

## Empowered Users

TeamMate gamifies athletic evolution via social capital and social diversification, using fitness communities as both a motivator for exercise and as a reward system. Athletes own their data, are rewarded for providing it, and gain influence in their fitness communities through providing and sharing it. By putting the economics of this system onto a decentralized ledger, the rules of this game become clear. Athletes at any level can work their way up to becoming the CEOs of their fitness lives, using each other to get to the next level. Data is the digital representation of the “self”. Treating the “self” as a project to be continuously improved is high-level gamification and empowerment, consistent with the “self-as-CEO” wave that is already transforming our societies as technological progress continues. We define this self-CEO as the individual who utilizes technology “to conduct his or her life... as a kind of enterprise, seeking to enhance or capitalize on existence itself through calculated acts and investments”.<sup>[14]</sup> To fully realize the “self-as-CEO”, technology must facilitate decentralized economics, free data flow, and individual responsibility for self-optimization. The new economic models being forged today in Silicon Valley require each individual to be a “node”, acting as a hyper-personalized epicenter of a micro-economy that plugs into and interacts with the macro-economy. By building a community of “nodes” and optimizing data-flow and value-flow, TeamMate provides users with the keys to currently locked doors of data-centric self-awareness and control.

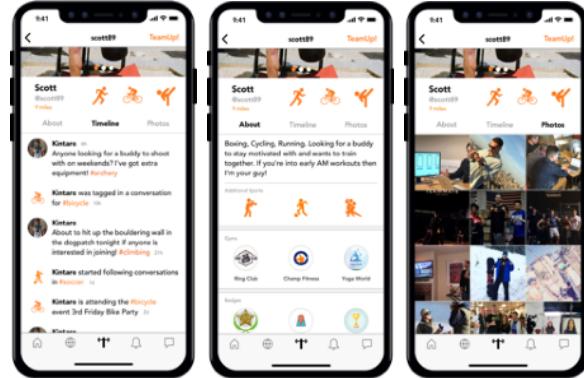
TeamMate is the first and only fitness-oriented social platform that provides a comprehensive and decentralized universe for the fitness, health & wellness space.

# App Preview



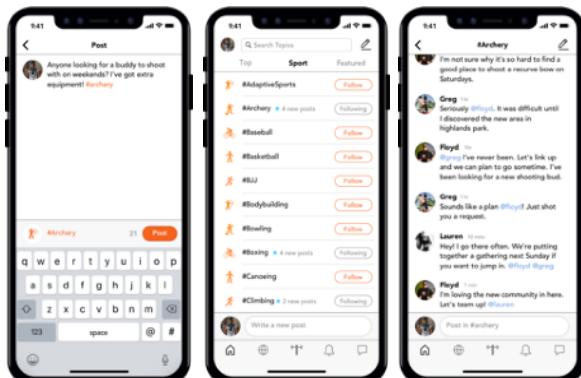
**Discover**

Find and match with new workout partners, fitness professionals, and new friends in your area



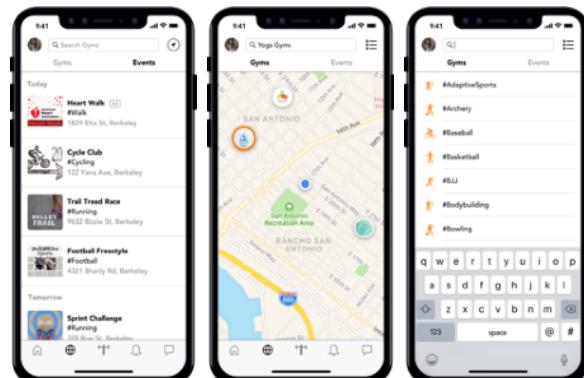
**Share**

TeamMate's extended bios are virtual gamified 'baseball cards'. Let the world know who you are - and share in your victories



**Discuss**

Localized, sport specific channels help you find out what's going on, and get into the conversation



**Explore**

Find out what fitness facilities, athletic events, and regional activity centers are in your area, and learn more about them

Wireframes above are for the TeamMate mobile application and are property of TeamMate INC. To preview additional TeamMate features, please request TeamMate INC's Business Plan or reach out to TeamMate's Business Development Team on the TeamMate Telegram Community.



# Fitness Data as a Vital Sign

The emergence of fitness-related data as a vital sign is a welcomed trend for human health & wellness. Fitness-related data is not currently subject to the same rigorous scrutiny that more traditional health data is subject to, but because the fitness data that TeamMate collects is arguably more closely correlated with *true* health & wellness, we are setting the bar higher. The TeamMate Blockchain Solution combines military-grade encryption, distributed secured storage, and open-source framework with a cutting-edge and market-tested blockchain protocol. We are taking the initiative and holding ourselves to HIPAA / GDPR standards, in recognition of the fact that the distinction between fitness data & health data is quickly vanishing. TeamMate is working with partners in the traditional health space as well as other blockchain projects that focus on traditional health data. The TeamMate platform will allow for cross-chain data migration with sufficiently encrypted decentralized systems, so that our users' fitness data can be added to their Electronic Medical Records (EMR) and electronic Protected Health Information (ePHI). This approach is consistent with emerging standards in the health & wellness space.

## Emerging Standards

The current state of medical treatment is dysfunctional due to its reactive nature; we have sick care, not health care. The American Heart Association (AHA) made its position clear in Q4 2016:

*Mounting evidence has firmly established that low levels of cardiorespiratory fitness (CRF) are associated with a high risk of cardiovascular disease, all-cause mortality, and mortality rates attributable to various cancers. A growing body of epidemiological and clinical evidence demonstrates not only that CRF is a potentially stronger predictor of mortality than established risk factors such as smoking, hypertension, high cholesterol, and type 2 diabetes mellitus, but that the addition of CRF to traditional risk factors significantly improves the reclassification of risk for adverse outcomes.<sup>[15]</sup>*

A system built on treating a problem after it has already occurred is inefficient. Health & fitness data will make inefficiencies **identifiable**, **quantifiable** and **categorizable** - and therefore easy targets for correction. Kaiser physician Robert Sallis, a leading advocate for fitness as a vital sign and co-author for this new AHA position, will be considered an early adopter for what will have become the new standard.

There is reason to think that the health care insurance industry will follow suit. Health care plans that are able to **identify**, **quantify** and **categorize** the definable health effects of fitness routines on their clients will outperform health care plans that pay hefty premiums to providers for overpriced procedures, prescriptions, and medicines. Incentivizing behavioral health counseling and regular fitness routines can usher in a renaissance in the health & wellness space.



# Mobile Health & Fitness Data: Opportunities and Shortfalls

What will drive this change? Mobile health & fitness data itself provides the economic incentive for innovation. Data has a quantifiable value, and that value adds up quickly. The five most valuable listed companies in the world are all data companies,<sup>[16]</sup> and as technology continues to proliferate and advance, data will continue to dominate. As societies increasingly focus on health, fitness and general wellbeing, the 500 million (and growing) users of mobile health & fitness applications will continue to generate high-quality data automatically when they use their favorite apps and devices.

But this data cannot remain siloed. Siloed data is never truly aggregated, and that is crushing the revolutionary potential of big data in the health and wellness space. The age of big data and artificial intelligence is the age of integrated systems and uniform orchestration - healthcare interoperability is the key to producing superior patient outcomes.

Why? Because data-driven solutions require aggregation at scale. To make *real* use of data in the mobile health & wellness space, massive cross-spectrum data aggregation is necessary. Something like the following 7 conditions could set the standard:

- 1) Financial responsibility for data storage is managed by owner of data
- 2) Owner of data can monetize data via third party aggregation or individual transfer; must opt-in
- 3) Data is tied to owner via unique encrypted identifier; identity default is anonymous
- 4) Data is accessible to fitness professionals and health professionals at each Point of Care (POC) echelon via Electronic Medical Records (EMR) or electronic Protected Health Information (ePHI); must opt-in
- 5) Data is collaborative, transparent and verifiable in nature
- 6) Data is secure and encrypted at point of origin and storage location
- 7) Data owner has ability to change preferences as desired

The World Economic Forum determined in 2011 that data should be considered an asset class, and the laws of individual nations are evolving in accordance with this declaration.<sup>[19]</sup> The GDPR and the recently passed California Consumer Privacy Act of 2018 further reinforce this growing consensus. Data aggregation becomes more difficult when legislation challenges the economic incentives for data storage itself; many companies that rely on centralized databases will struggle with compliance.

The legislation is a response to changing perceptions. But powerful economic and human health incentives, combined with profound technological innovation, are moving the health and wellness space towards collaborative healthcare interoperability without the help of legislation. Innovative companies that think outside of the box can profit in this system, while empowering their customers by strengthening their relationship with their data. These companies will be more resilient as public sentiment and legal frameworks shift to favor decentralized interoperability.

## HL7 FHIR & The Argonaut Project

Serious initiatives already exist to make this future a reality. HL7 FHIR compliant APIs can participate in a growing digital international health community. FHIR allows secure information exchange and can interoperate with mobile health & fitness applications, social media applications, payment systems, data enrichment services, health analytics innovations, and blockchain-based marketplaces. There is no financial barrier to entry, as access to the HL7 FHIR framework is free.

HL7 spawned the Argonaut Project, an alliance to advance the cause of modern, open interoperability standards across the healthcare industry. The goal of this ambitious HL7-led private sector initiative is a world in which a patient is able to aggregate all of their records on their device, and use it as a secure vehicle for sharing.[20] Notable participants in this project include some of the industry's top vendors and providers: Accenture, Cerner, Epic, McKesson, Meditech, Surescripts, The Advisory Board Company, Beth Israel Deaconess Medical Center, Partners HealthCare, and most recently, TeamMate and Apple.[21] The sheer weight of the addition of such a heavy hitter as Apple to this list is a game changer, and may be the catalyst to opening up health information sharing at scale. Apple's participation will allow for the iPhone to become a powerful tool of healthcare interoperability, and there is little reason to think that Apple's competitors won't soon follow suit.

## Security & Micro-Identities

As these initiatives and others continue to pop up across most market categories, the new economy unfolds before us in real time. Singular ownership, siloed information and resources, and isolated systems are being replaced by a sharing economy, redistribution markets, and collaborative systems. Blockchain technology has particularly exciting use-cases for health & fitness big data in a decentralized p2p world.

Future generations of blockchain solutions might provide conditional access to medical records and other health information, especially if they are integrated with data-gathering social networks. Data-driven social-mapping can allow users to find and connect with individuals with similar health & fitness

conditions, leveraging the combined power of health & fitness big data analytics. This “*find and connect*” feature can also be managed by personal trainers, doctors, and eventually artificial intelligence. By bringing communities together and learning from their interactions, better health & fitness outcomes become predictable and prescribable.

Blockchain technology paired with a social network also makes provider-to-provider data transfers within a trustless ecosystem possible. The current HL7 FHIR server system has gaps that blockchain solutions can solve, such as obtaining entity trust, accurately identifying individuals in a trustless environment, and requesting user information at the next point of care (POC).<sup>[23]</sup> The TeamMate platform requires users to have unique User IDs tied to unique blockchain wallets with their own encryption keys for each transaction, thus ensuring acquisition of the correct data in a secure manner. This system allows for not only identity verification, but also the sharing of fitness & health “event transactions” between entities. This multi-layered verification apparatus achieves trust while preserving anonymity, and leverages a robust suite of soft multi-factor authentication tools.

Well-executed blockchain solutions are complex systems in which truth and integrity are measurable and verifiable. The same cannot be said for traditional health & fitness data solutions.

*The Identity Theft Resources Center reported 572 data breaches, exposing 13,491,597 records as of August 2, 2016. Across banking, education, government and healthcare, healthcare was attributed to 206 of the breaches or 36.8 percent of all breaches in the first half of 2016. These healthcare breaches resulted in the loss of 4,962,136 health-related records. With almost 50 billion new devices scheduled for connectivity to the internet by 2020, this problem will amplify. At some point, virtually every health system will be compromised.<sup>[24]</sup>*

These breaches have real costs. A recent study from the Ponemon Institute estimated that “data breaches could be costing the healthcare industry \$6.2 billion per year”.<sup>[25]</sup> Blockchain solutions allow for both the owner as well as the health & fitness professional to prove that their client’s data has not been compromised. This new level of system integrity is possible thanks to the blockchain’s ability to establish data authenticity, and due to the chain of custody ledger built into the blockchain.

## Integration

The key to the successful deployment and adoption of the TeamMate Network and the TeamMate Protocol is App-Network integration. The Protocol is stored in the digital wallet that is built onto the TeamMate app, and can be used in TeamMate’s in-app economy to purchase a wide range of goods and services, from new sneakers and gym memberships to virtual training sessions hosted by TeamMate PROs.



# Data Science + AI + Gamification

Artificial intelligence offers specialized cognition. TeamMate will deploy different “species” of artificial intelligence overlays designed to perform domain-specific specialized tasks that are beyond what we can do ourselves. The TeamMate Virtual Assistant Coach (VAC) is the first of these projects, and will provide specialized cognition in the health & fitness domain. The TeamMate ecosystem will create a large-scale network of users whose every in-system action trains the TeamMate VAC to be the optimal AI companion for athletes. The optimal AI companion does not replace a human coach, but instead augments the athlete (and the coach) by providing better insight into athletic performance, and smart tools to increase that performance.

TeamMate VAC will employ a network of synced recommendation engines that use contextual information to ensure that athletes are challenging themselves. This is important to both bolster motivation and to break through performance plateaus. TeamMate VAC makes use of a collection of AI techniques including CNN, deep learning, and signal analysis and prediction to produce superior recommendations for who to match with, which trainer to work with, which new sport to try next, etc. This is done with a proprietary patent-pending algorithm developed in-house by leveraging years of experience in AI, data mining and machine learning.

The interaction between the user and the TeamMate VAC is called the “TeamMate Game”. This is a lifelong interaction that gamifies health & fitness using the reinforcing loop of social engagement, real-world physical achievement and reward, and subsequent positive social reinforcement. This approach mirrors strategies of some of the most engaging games and apps on the market in 2018.<sup>[26]</sup> As this game is played, users are rewarded with cryptocurrency for the enhanced enrichment (and increased value) of the data that they generate. TeamMate VAC will become more intelligent, and more effective, the more that it interacts with users.

The full capabilities of future TeamMate AI solutions is impossible to forecast now. But in 2018, the training mechanisms for this class of domain-specific artificial experts has already been codified into a series of formulas; the “TeamMate Game” follows these formals, doubling perfectly as an AI training program. Adding strong AI to a human domain will result in something that we call the quantum mirror, which is a reflection of who we really are (in that domain) when augmented by nearly infinite data and intelligence. A shareable, encrypted, networked and viewable reflection of a users’ real-world health & fitness persona will be something that users will be motivated to improve. **Data Science + AI + Gamification = Retention.**



# Building an Economy

TeamMate is the decentralized solution for the fitness technology marketplace.

The TeamMate Network is a decentralized ecosystem that lives on the cloud and integrates into TeamMate's gamified social platform. Its goal is to maximize the utility of the TeamMate app, facilitate efficient value-transfers, and integrate synergistic technologies within the network.



## Light Wallet

The TeamMate Network is accessed via light clients installed on mobile devices. The clients do not consume significant resources, and will be built into iterations of the TeamMate app beginning in Q1 2019. TeamMate users will therefore be default wallet owners and the holders of their encryption keys, and will be able to store Protocol in the wallet. The client will also give all TeamMate users access to the TeamMate Network to transfer and receive Protocol, as well as interacting with TeamMate Network smart contracts, applications, and third party integrated technologies. The client will be designed in such a way as to streamline and simplify interfaces for all types of interactions on the TeamMate Network.

## Decentralized Third Party Solutions

TeamMate welcomes API integration and decentralized third party applications, and will offer a searchable registry and a predictive engine to promote fitness technology solutions that empower athletes and aspiring athletes. TeamMate will also be able to act as an exchange for other fitness technology cryptocurrencies and a hub for fitness-oriented blockchain-based projects.

## Rise of the Bots

Easy to build organic and third party bots will populate the TeamMate Network en masse. Bots will be able to transact exchanges, automate conversations on behalf of integrated fitness industry partners, initiate smart contracts on behalf of users, find workout partners, curate content on behalf of content creators, and more. Bots will be the worker bees of the TeamMate Network.

## Regional Channels

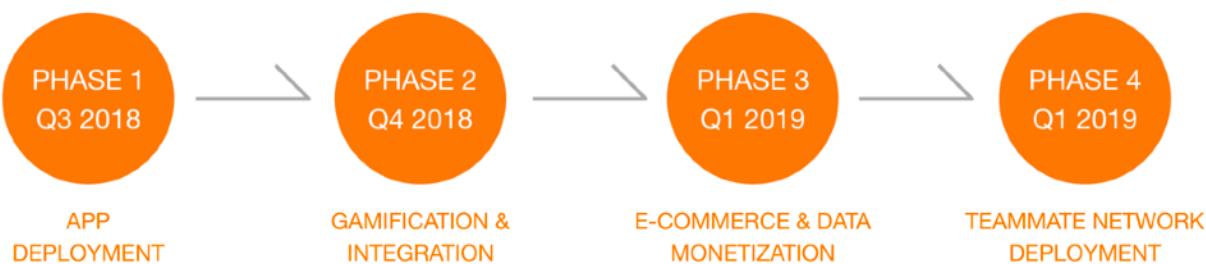
TeamMate's regional channel feature creates virtual spaces tied to real geographic locations where specific sports or athletic topics can be discussed. These channels can be monetized in a decentralized way using the TeamMate Network's ad exchange, in which interested parties can promote their projects within desired channels, and pay for the advertising space using the TeamMate Protocol via transaction bots. A similar process can be executed on b2b user profile cards, which are advertisements that are intermingled with user profiles in specific regions.

## Marketplace

The TeamMate Network is a decentralized marketplace that integrates with TeamMate's social network. TeamMate users will regularly generate a high volume of content, and they can monetize that content in various ways, such as subscription services or brand ambassadorship. Fitness events accessed through the portal in the TeamMate app, personal training sessions or group classes, and professional athletic competitions will all be able to integrate with the TeamMate Network to process payments. Fitness-related goods will also be purchasable through virtual storefronts set up on b2b partners' user profiles, managed by bots on the TeamMate Network.

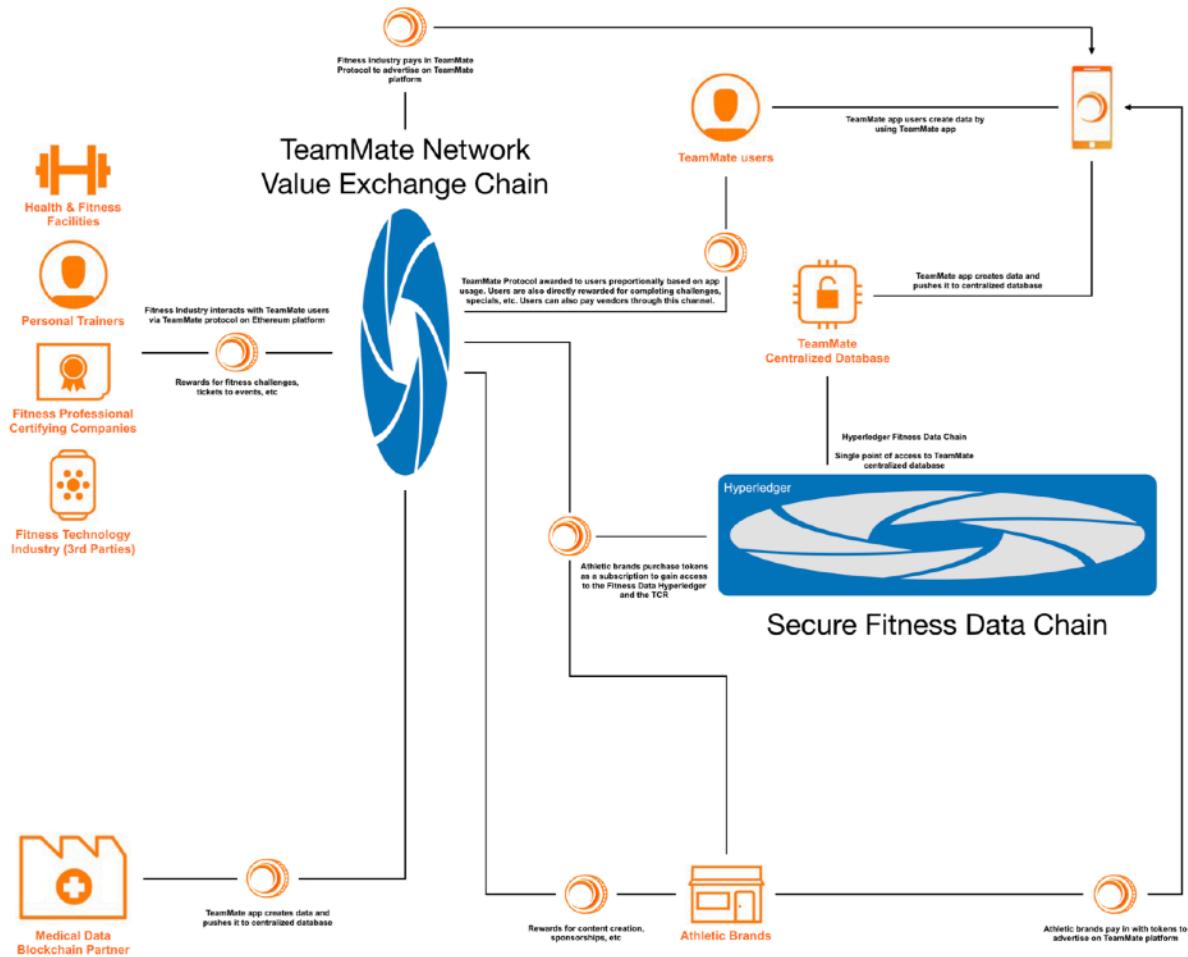
## Building a Tokenized Economy

TeamMate, the TeamMate Protocol and the TeamMate Network will come online according to a four stage deployment schedule. During each phase of the operation, rigorous testing and an agile approach will ensure that milestones are being met and that the technology continues to evolve in accordance with end-user needs and market demands.





# TeamMate Network



In Phases 1 and 2, TeamMate, TeamMate PLUS and TeamMate PRO will come online, introducing mechanisms for the TeamMate Protocol to be used as a method of payment for PLUS, PRO, personal training sessions, and other services. In Phase 3, TeamMate will begin to implement its data layer and multi-chain framework, as the project evolves into a mature blockchain-as-a-service (BaaS) solution for the health and fitness industry.

By the time the stable TeamMate Network is deployed in Q1 2019, TeamMate's target is to have over 1 million users. Updates to the TeamMate app in Phase 4 will incorporate a built-in lightweight TeamMate wallet to replace the standalone wallet, instantly opening up the TeamMate Network to all users of the app as soon as it comes online. Small token incentives per user will fast-track token adoption. Value flow within the TeamMate Network ecosystem will be seamless and automated by virtue of the Protocol, and TeamMate's smart contracts and AI engines will manage the system's gamification.



# App-Network Integration

## Secure Identification

Users of the lightweight wallet client are all TeamMate users; it is therefore possible for TeamMate to establish a secure identification system to streamline user engagement within the TeamMate ecosystem. After passing TeamMate's KYC (Know Your Customer) and AML (Anti-Money Laundering) onboarding, TeamMate users will receive a secure virtual identification which will allow instant access to all processes within the TeamMate Network that require user verification. This will massively simplify the value-flow and data-flow within the comprehensive TeamMate ecosystem.

## Gamification

Users' profile cards have extended versions that emulate baseball cards. These extended profiles allow users to display more information about themselves and their athletic accomplishments. To improve their profiles, users must do health-positive social activities in real life. Users' accomplishments from third party health & fitness apps and trackers can be posted directly to their feed - and shared with their TeamMates - via API integration. As the platform matures, specific in-app behaviors generate value (to insurance companies, to fitness companies, etc.) and this monetized activity (via the TeamMate Protocol) is delivered to the user, creating a very real incentive to continue using the app, participating in the ecosystem, and engaging in health-positive behavior.

## Human Verification

Because TeamMate is a geo-specific app, users must enable GPS access upon onboarding. This enables TeamMate's proof of presence and near field communication systems to authenticate two matched workout partners together in the real world. This is the heart of our Human Verification System. Upon meeting up for a workout, matched users each log into TeamMate and acknowledge the meet up through the user-interface of the app. TeamMate then logs the location and creates relevant data for user monetization. By Q1 2019 when TeamMate Network comes online, bots within the TeamMate Network (called Agents) will be able to automate the data / protocol flow in accordance with the relative value of each user. All users are not created equal; while some users will benefit from the workout more than their partner in terms of individual sport proficiency, the reward may be skewed to the more valuable athlete in the relationship (by Q2 2019 TeamMate "Agent AI" and TeamMate's data repository will be mature enough to start determining these values). The Human Verification System is a reliable method for authenticating in-app actions that have real economic consequences for users.



# Smart Contracts

TeamMate smart contracts are crypto-contracts that directly control transfers on the TeamMate Protocol, data value, and other specified information between parties under certain conditions in a trustless environment. As Network adoption increases, a multitude of smart contracts will be implemented in order to widen the use case for the TeamMate Protocol (TMP).

## ERC223 Token Standard

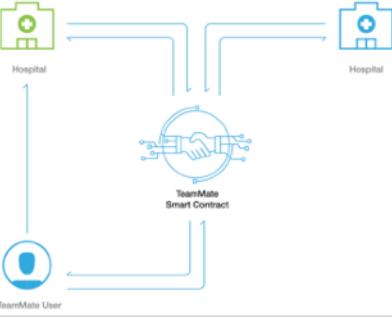
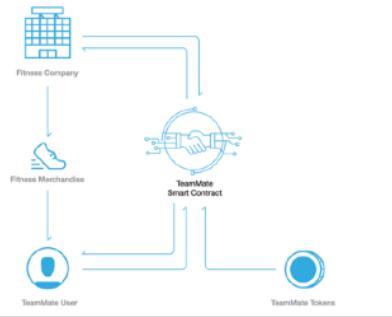
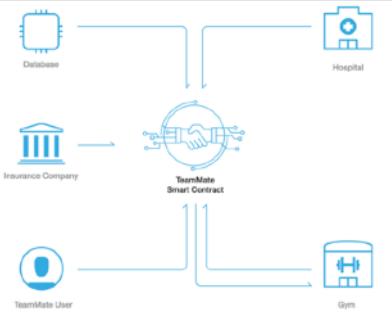
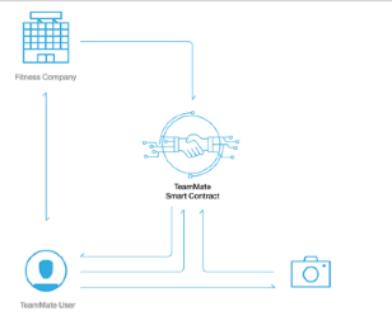
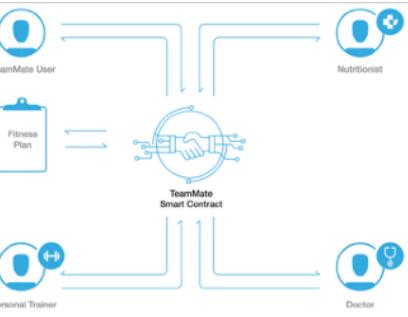
The TeamMate Protocol will operate as an ERC223 token. ERC223 tokens are backwards compliant and best illustrated by projects such as Expery and Axpire. ERC223 is a superset of the [ERC20](#) token standard. The ERC20 token standard suffers critical problems<sup>[27]</sup> (most notably the lack of event handling mechanisms) which have resulted in losses of approximately \$4,500,000 to date. ERC223 corrects the major shortfalls of ERC20, removing the possibility of accidentally losing tokens inside contracts that are not designed to work with sent tokens. ERC223 also allows users to send their tokens anywhere with one function, which will expedite the crowdsale process by removing the requirement for new users to have to learn how the TeamMate Protocol works in order to send tokens. Additionally, this standard allows contract developers to handle incoming token transactions. This is a safer standard, as it doesn't allow token transfers to contracts that don't support token receiving and handling.

## Growth Escrow Pool

The TeamMate Growth Escrow Pool will act as a tentative staking pool. TeamMate will host airdrop programs and will provide users with the option to stake their Protocol from the crowdsale in exchange for a calculated airdrop based on the amount of Protocol staked. With this strategy, we encourage strong long-term support for the sale from the beginning. Whereas all private sale participants will be required to participate in a mandatory vesting period, early adopters will be eligible to participate in monthly, quarterly, semi-annual, and annual airdrop programs. Participants of the Protocol Release Contract will help to secure the network while simultaneously increasing their TMP stake. Beyond the technical logistics, TeamMate will also be hosting monthly AMAs to determine any possible upgrades or improvements to the protocol economy. As the blockchain space continues to develop, we will monitor popular consensus mechanisms such as Delegated Proof of Stake, Proof of Authority, and Byzantine Delegated Fault Tolerance, and we plan on exploring different options to help switch to a staked system once new platform projects have displayed their ability to support new DApps within their ecosystem.



# Smart Contract Use Cases

	<h3>Know Your Customer (KYC)</h3> <p>Protection of user data is paramount. The entire TeamMate Network will be operated on a trustless basis.</p> <p>To gain access to the Network, all entities will verify their identity.</p> <p>Identities will be verified with governing bodies and institutions.</p> <p>Identity will be linked to each entity and can only be altered through the same process which created the identity.</p> <p>Identity and entity type will be visible with all requests and interactions. Entities can have multiple identity types (i.e. a doctor can also be a patient).</p>
	<h3>Decentralized Access to Marketing Data</h3> <p>Fitness, health and wellness companies use market data to make informed business decisions. The TeamMate Network generates large amounts of valuable data. Companies must purchase this data from the users that generate it.</p> <p>In exchange for access to data, companies pay into TCR via token. Value flows back to users via token.</p> <p>In exchange for content creation, companies can elect to offer discounts on merchandise through the TeamMate Protocol. Users can review discounts and offers, and decide to participate.</p> <p>Company can now incentivize the "sharing" of this merchandise via ambassador campaign management example above. These decisions can be data-driven and the process can be automated via bot.</p>
	<h3>Sharing of Hospital Records</h3> <p>As fitness becomes considered a vital sign, TeamMate Smart Contracts will become valuable vehicles for Medical Record sharing. Interchain cooperation with other projects will streamline this process, and partnered projects will have access to TeamMate's data at user's discretion.</p> <p>Example: a user enters Hospital 1. Hospital 1 requests medical records (including fitness data). User receives and approves the request. User's regular hospital (Hospital 2) receives patient-approved request, and completes a smart contract that allows Hospital 1 to access medical records. When needed, comprehensive fitness data can also be shared in this manner. Loneliness can also be tracked and treated in this manner, due to TeamMate AI's ability to track social exercise.</p> <p>This system allows a user's medical record to remain complete.</p>
	<h3>Ambassador Campaign Management</h3> <p>Fitness, health or wellness company wants to run an ad campaign using user-created organic content. Company requests model characteristics and offers compensation.</p> <p>TeamMate user matches criteria and sees request.</p> <p>User reviews request and approves.</p> <p>User does requested action using company's branded material, and posts as a Highlight, a post in Conversations, or a profile image.</p> <p>Action confirmed by company and payment made to user via TeamMate Protocol. This entire process can be automated from company's side with a bot in the TeamMate Network.</p>
	<h3>Comprehensive Health &amp; Wellness Approach</h3> <p>Users will be able to bring together healthcare providers and fitness professionals to create a comprehensive health and fitness plan.</p> <p>Doctors, personal trainers, nutritionists and anyone else that users want to include, can be connected. Connected parties receive information deemed pertinent as authorized by user.</p> <p>Connected parties can provide input, guidance and feedback, as well as customizable datasets based on activity. TeamMate AI can assist connected parties with making use of these datasets.</p> <p>User can adjust health and fitness plan, as well as connected party access, at any time.</p>

The table above is merely a snapshot of some of the TeamMate Smart Contract use cases. To see additional use cases, refer to the Use Cases document on the TeamMate website ([teammate.ai](http://teammate.ai)).



# Protocol Use Cases

The TeamMate Protocol will be generated in Q3 2018. Between Q3 2018 and Q4 2019, utility functions of the protocol will be implemented, including:

- Tipping within the app and sponsoring content through the Conversations feature
- Compensation for user-created sponsored content, purchased by health, fitness and wellness companies
- Compensation for user-generated data, purchased by health, fitness and wellness companies
- Used as hyper-efficient value exchange to purchase goods and services on the TeamMate Network
- TeamMate PROs can stake Protocol as a bonus incentive to clients
- Health insurance companies can incentivize a regular fitness routine as preventative care with TeamMate Protocol discounts or givebacks
- B2B partner fitness facilities can incentivize new memberships with TeamMate Protocol discounts or givebacks
- Used as value exchange to TeamMate PROs for custom content / services
- Communities will be able to stake their TeamMate Protocol to crowdsource funds for sponsoring fitness events and intramural sports leagues, or even starting their own gyms
- TeamMate Protocol can be staked as prizes for sponsored sporting events or competitions
- TeamMate Protocol will be used to pay for in-app purchasable upgrades, and also for personal training sessions and other fitness professional services through TeamMate PRO.



# Governance & Security

In order to protect the TeamMate Network, users will have the option to either generate a unique private key upon installation of the app, or import their keys from an existing Ethereum wallet. All public keys on

the TeamMate Network will be non-custodial in order to prevent losses in the event of a DDoS attack. All data generated on the TeamMate platform will be securely stored on the [IPFS Decentralized Server](#). TeamMate will strongly recommend the usage of two-factor authentication with an alternative option to access the app through a passcode.

A precautionary notice: no member of the TeamMate team will ever ask for funds directly. Any indication to send ETH or any currency to a direct address is an obvious phishing attempt and should be reported immediately to [support@teammate.ai](mailto:support@teammate.ai) Users who report fraudulent activity will be rewarded with TeamMate Protocol directly from the Bounty Pool.

Upon launch of the TeamMate pre-sale and crowdsale, the official contribution address will only be shared in the TeamMate announcement channel and will be confirmed with a picture of our CEO holding up the contact address along with the current block height. Only verified whitelist addresses will have the ability to contribute to the crowdsale and our ERC223 standards will prevent spammers from clogging the network. Additionally, these standards will allow us to deny income funds sent from exchanges to prevent loss of funds due to negligence.

Users who opt-in to the Protocol Release Contract will have their Protocol locked via a multi-signature wallet to ensure that no outside party has the ability to access and modify the Protocol. The Protocol will be programmed into the smart contract to be unlocked and returned to the virgin wallet upon completion of the listed release contract. In this sense, the Protocol is effectively being used to validate the network without direct input from the users themselves. This will prevent malicious behavior as over 51% of all TeamMate Protocol will be held in reserve by the team and respected release participants.

The choice to operate as an Ethereum-based protocol was made in part due to companies such as Consensus and the Enterprise Ethereum Alliance who are keeping a close eye on the Ethereum network to prevent bad actors from impacting the overall ecosystem.<sup>[28]</sup> Core Ethereum developers are currently working on building out a [sharding system](#) in which bad actors are punished for trying to double-spend or manipulate the network. TeamMate plans to integrate this sharding system into the TeamMate Network once live on mainnet.

With a keen focus on continually improving our platform, TeamMate will regularly encourage developers to identify any bugs on the platform or within the contract via technical bounties. TeamMate smart contracts will be vetted on a monthly basis by the TeamMate Blockchain Foundation to ensure a smooth integration within the app. These results will always be shared publicly as we welcome any and all support and criticism from participants on our network.

# Protocol Distribution

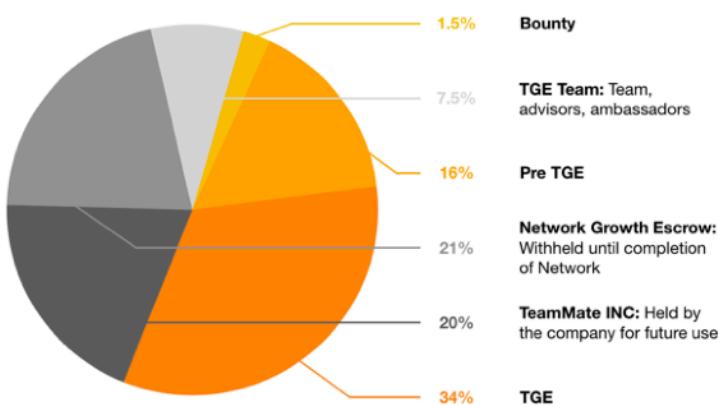
The TeamMate Protocol (TMP) will act as the primary utility when transacting within the TeamMate Network. TeamMate will open a crowdsale to public purchasers upon completion of the private pre-sale. TeamMate aims to raise roughly \$24,000,000 USD as a fundamental runway for our first 24 months of operation. The base conversion rate for TMP is 1 ETH = 10,000 TMP. Please note that all US participants must be registered as accredited investors and all Chinese mainland citizens are prohibited from participating in the crowdsale. Whitelisted US residents are required to submit proof of income for 2 years or net worth before being eligible to participate in the sale.

**Whitelist Date: April 1st**

**Pre-Sale Date: TBD**

**Token Generation Event (TGE) Date: TBD**

Our whitelist will operate on a tiered basis in which participants with the highest amount of referrals will be eligible for the highest personal contribution caps. Additionally, top whitelist participants will be granted bonuses from the Bounty Protocol Pool in descending order.



	Token Available	Stage	Price (TMP / ETH)	Discount
Pre TGE Sale	162,000,000	Flash Sale (1st 24 hours)	16,250	63%
		Stage 2	15,000	50%
TGE	338,000,000	Week 1	12,500	25%
		Week 2	11,875	19%
		Week 3	11,250	13%
		Week 4	10,625	6%
		Week 5 until sale end	10,000	0%

- 20 percent (200,000,000) of the Protocol will be retained for growth and enhancement of the TeamMate Blockchain Solution.
- 7.5 percent (75,000,000) of the Protocol will be distributed to the TeamMate TGE Team as reward for labor. This Protocol will be subject to a 2 year lockup with half becoming transferable after 1 year.
- 16 percent (160,000,000) of the Protocol will be exchanged in the Pre-TGE token sale.
- 21 percent (210,000,000) of the Protocol will be withheld until completion of the TeamMate Network. These tokens will then be slowly released into the Network via third party partnerships.
- 1.5 percent (15,000,000) will be used to incentivize TeamMate Protocol ambassadors.
- 34 percent (340,000,000) of the Protocol Pool will be exchanged in the TGE token sale.



# Protocol Release Contract

In order to demonstrate the benefits of an ERC-223 standard, TeamMate is following the example of Aion's TRS program and implementing a Protocol Release Contract that will reward early adopters. This staked reward pool is completely voluntary. Participants who contribute to the reward pool will receive a portion of the released Protocol every month. The team will allocate 50% of the Growth Escrow along with a portion of unsold TGE Protocol to be distributed as a bonus to contributors over the course of 12 months. With the implementation of an ERC-223 standard, users can be confident that TeamMate developers will always have the ability to secure and retrieve staked Protocol at any time.

The goal of this program is to fuse the long term interests of TeamMate supporters with the long term interests of the TeamMate Blockchain Foundation; we want to build a strong core network of individuals who hold the same passion for the project as we do, and want to see it grow to its full potential. The TeamMate Network will not be built overnight, and the Protocol Release staking pool creates a long-term incentive for community members to follow and engage with the project throughout its development. This program will only be offered to TGE purchasers who purchase TMP off decentralized exchanges prior to any major exchange listings.

Participants who opt-in to this program will be subject to a minimum 12 month release period relative to their stake. All initially staked Protocol will be returned to their original wallets evenly over the course of the 12 month reward period. The monthly bonus is determined by the total amount of Protocol allocated to the reward contract. At a minimum this will include 50% of the Growth Escrow (100,000,000 Protocol). A portion of unsold Protocol will also be added to this pool following the completion of the crowdsale. Final percentages will be calculated and announced once the sale has been completed. If 100% of Protocol is sold and allocated to the reward contract, contributors will receive a ~22% additional bonus on their Protocol; if less is allocated to the contract, contributors will receive a higher bonus.

	Percentage	Protocol		Example Scenario	
TGE Exchanged Protocol	100%	500,000,000		Individual Initial Contribution	10,000
Unsold Protocol	0%				
Estimated Contribution		500,000,000		Monthly Reward	166.67
				Contribution Dispersement per Month	833.33
				Total Monthly Distribution	1,000
Contract Protocol Pool		100,000,000		Annual Protocol Distribution	12,000
Reward Period		12 Months		Annualized % Reward	20%



# Use of Funds

Funds from the TGE will be used for the continued development and enhancement of the TeamMate app and the TeamMate Network. The comprehensive TeamMate ecosystem will serve as a launchpad for the TeamMate Protocol and will promote the Protocol as the blockchain solution for the health & fitness industry. TeamMate and the TeamMate Blockchain Foundation will coordinate early on, and as the ecosystem matures, TeamMate will assume a smaller role in Protocol strategy, as further growth provides for a fully realized decentralized user-experience. TeamMate will work with all relevant third parties that wish to offer services on the TeamMate Network, or that wish to integrate the TeamMate Protocol into their application, system, or website in order to facilitate the use of those entities by TeamMate users. The TeamMate Network is to be an open platform that prioritizes free-data-flow at the discretion of the user.

## Track Record

In 2017, TeamMate spent ~80% of its budget on equipment, bandwidth, and development. The other 20% was spent on personnel and user acquisition. As TeamMate seeks to ramp up growth, this allocation will shift with a proposed spend of 40% on customer acquisition in 2018 and 60% in 2019 which should facilitate the growth of the TeamMate ecosystem to 2 million monthly active users by Q3 2019. The funds from the TGE will provide enough runway to continue to operate TeamMate for at least 24 months without accounting for revenue streams or future investments.

## Engineering, Research and Development: 32.5%

These funds will cover all necessary costs associated with launching the TeamMates app and integrating the Protocol into the platform. This will include developer salaries, technical on-boarding, multi-language conversion, and other costs associated with technical scaling.

## Partnerships and Incentives: 20%

Funds will be used to incentivize new partnerships within the TeamMate ecosystem. This will include all travel expenses as well as roadshow, hackathons, and fitness-oriented events. Additionally, this pool will be used to onboard early participants that relate to trainers, gyms, and intramural sports leagues.

## **Marketing & Community Development: 20%**

TeamMate and the TeamMate Blockchain Foundation will be launching full marketing campaigns upon completion of the pre-sale. Funding will be allocated towards social media campaigns, onboarding of marketing professionals, and working with public relations agencies to ensure that awareness is generated about the project.

## **Operations: 17.5%**

Funding will be used to pay for salaries. This pool will fund our 24 month runway and allow for the onboarding of new developers, human resources personnel, customer support, and a top-tier sales team. TeamMate plans to open its first international office in Q1 of 2019.

## **Advising: 7%**

Every project can attribute its success to a strong advisory board. We are conscious of the role all-star advisors play in generating hype around a project. We plan to use 7% of our funds to increase awareness about the crowdsale by leveraging the experience and insight from experienced individuals in the crypto-space, and in the mobile-health space. We plan on onboarding more blockchain advisors and more fitness industry experts to help vet our overall business structure.

## **Legal & Compliance: 2%**

Funding will be used to ensure that TeamMate is acting within full legal compliance standards. For more information, please contact the TeamMate team via our Telegram Community or via email at support@teammate.ai.

## **Bounty Programs: 1%**

Bounty Programs will be used to incentivize freelance developers to identify bugs within our platform. Social media campaigns will be launched to grow our community and early adopters will have an opportunity to opt-in to TeamMate-sponsored campaigns and suggest platform improvements.



# Team



**Kristopher Floyd**  
Co-Founder & CEO @ TeamMate  
Founder @ TeamMate Blockchain Foundation

- Captain, United States Marine Corps; infantry company executive officer
- Former high-level personal trainer / fitness professional
- Experience in multiple startups



**Ryan Hennessy**  
Co-Founder & COO @ TeamMate  
Founder @ TeamMate Blockchain Foundation

- Captain, United States Marine Corps; experience as company commander
- 3+ years experience in information security
- Specializes in formulating data-driven solutions



**Andrea Mariotti**  
CTO @ TeamMate

- 19 years cloud-computing, 9 years R&D
- Patent-holder in distributed systems, machine learning, document management and mobile technology
- Experience executing Location Based Services and Augmented Reality systems



**Rick Lemberg**  
VP of Sales @ TeamMate

- 25+ years enterprise-level sales experience in Silicon Valley
- 17 years experience at SVP level
- Responsible for designing and scaling TeamMate sales strategy



**Selina Smith**  
CFO @ TeamMate

- BBA in Finance
- 10+ years experience in finance including investment portfolio management and consulting
- Serial entrepreneur, business owner, and investor



**Will Prescott**  
Executive Producer @ TeamMate

- 7 years experience in film production
- 21M views on YouTube
- Responsible for design and production of all TeamMate media projects



**Joseph Miguel**  
Data Scientist @ TeamMate

- MS Data Science
- 10+ years in tech and big data
- Currently building TeamMate's convolutional neural networks



**Sean Kushi**  
Director of User Experience @ TeamMate

- 8 years experience in fine art and design
- Experience working in Agile atmosphere
- Designed and executed all UX and UI concepts for the TeamMate mobile application



**Aleksandr Basalilov**  
Full Stack Developer @ TeamMate

- Full-stack React, Node, Redux, Solidity developer
- Experience deploying smart-contracts and blockchain-based crypto-currencies
- Experience in multiple Silicon Valley startups



**Sumi Shan**  
Creative Director @ TeamMate

- 10+ years in photography & high-end retouching
- 5+ years of Creative Direction, advertising and branding experience
- Responsible for TeamMate imagery, ad campaigns and visuals



**Robert Prescott**  
Project Manager @ TeamMate

- SCRUM coach / SCRUM master
- Experience in Silicon Valley agile tech environments
- Responsible for TeamMate app project management and SCRUM processes



**Cooper Turley**  
TGE Director @ TeamMate Blockchain Foundation

- Veteran TGE Analyst (analyzed over 300 successful TGEs)
- Responsible for ERC223 adoption
- Detailed analysis of Protocol distribution, fund allocation, and additional crypto-structures



**Lucas Campbell**

Smart Contract Project Manager @ TeamMate Blockchain Foundation

- 1+ year working with blockchain consensus protocols, distributed ledgers and tokenized ecosystems
- Strong understanding of token velocity and general crypto-economics theories
- Lead design for Contributor Reward Program



**Cooper Kernan**

Project Advisor @ TeamMate Blockchain Foundation

- BA Computer Science
- CU Blockchain Founder
- 4+ years experience in cryptocurrency and tokenomics



**Mason Yeager**

Growth Hacker @ TeamMate Blockchain Foundation

- 1+ year analyzing TGEs & blockchain projects
- CU Blockchain Member
- Experience in social media management



**Jackson Chessman**

Analyst @ TeamMate Blockchain Foundation

- Marketing and Spanish degrees from UC at Boulder, certificate in International Business Operations
- Supply chain, consumer analytics, and sustainable business development consultant
- Blockchain integration enthusiast/evangelist

## Partners



**Mithqal**  
Capital



**Recidivistes**  
Identity | Design | Animation

**balehu**

**CHIVALRIC**  
PICTURES





# Advisors

**Phil Schlein**

Growth Strategy Advisor @ TeamMate

- 11 year CEO of Macy's
- 40+ years of experience in venture capital, retail, and technology
- Former Board of Directors at Apple, former advisor to Steve Jobs

**Michael Clark**

Technical Advisor @ TeamMate

- VP of Engineering at VSCO
- 20+ years experience as CTO, founder, mentor, partner
- Provides guidance and review of TeamMate mobile application front-end development and UX

**Paul Martens**

Protocol Compliance &amp; UX Advisor @ TeamMate Blockchain Foundation

- Head of Brand & UX at Lendroid
- Software developer, founder and CEO of Cora Connect
- Provides general guidance about regulator compliance, KYC, AML, and CDD

**Kent Makishima**

Blockchain Project Advisor @ TeamMate Blockchain Foundation

- Managing Partner at ZS Blockchain
- Experience in VC, startup advising, with companies raising over 300k in funding, and as a founder
- Provides insight in blockchain implementation, marketing and business development strategy

**Slaton Carter**

Digital Marketing Advisor @ TeamMate

- Director of Digital Marketing at TheRealReal
- Experience as director of digital marketing, senior marketing manager, and global marketing manager
- Specializes in e-commerce environments and data-driven behavioral marketing

**Franca Ciambella**

Protocol Legal Advisor @ TeamMate Blockchain Foundation

- member of the Singapore Fintech Association, CryptoFriends and CryptoClub
- Awarded the Sovereign Medal for volunteerism and leadership by Canada's Governor General
- 20 years corporate/commercial law, M&A, and foreign direct investment

**Rick Saletta**

Marketing Strategy Advisor @ TeamMate

- 10+ years sales and marketing experience at the executive level
- Executed successful marketing campaigns for data science, AI, SaaS, and fitness tech companies
- Provides general guidance about marketing strategy

**Julie Monniot-Gaillis**

Localization Advisor @ TeamMate

- Former MyFitnessPal localization coordinator
- Deep experience bringing a fitness-technology mobile application to foreign markets
- Assistance with localization strategy planning and execution

**Eric Miliken**

Legal Advisor @ TeamMate

- Attorney at Sutter Law in San Francisco
- Deep experience in Silicon Valley startup ecosystem
- Provides general legal guidance and specialized guidance as needed

**Bryant Green**

Gamification Advisor @ TeamMate

- 11+ years leading flagship games, apps and interactive web experiences for top game publishers and startups
- 13+ years leading full-scale localization for entertainment products in 25+ geos / 17+ languages
- Consultant for game theory in TeamMate ecosystem



Q4 2015	Idea generated
Q1 2016	TeamMate Business Plan v1 completed
Q2 2016	1st TeamMate prototype completed
Q4 2016	2nd TeamMate prototype completed
Q1 2017	TeamMate INC incorporated in Delaware
Q2 2017	TeamMate beta launched in App Store
Q3 2017	Media partnership with Chivalric Pictures
Q3 2017	Featured at Silicon Valley Innovation and Entrepreneurship Forum
Q4 2017	TeamMate Blockchain Solution primer published
Q1 2018	TeamMate Whitepaper V1 published
Q1 2018	Context-based recommendation engine provisional patent filed
Q2 2018	Token Reward Program implementation
Q2 2018	Whitelist registration
Q3 2018	<b>TeamMate Foundation established</b>
Q3 2018	<b>TMP Smart Contract deployed</b>
Q3 2018	<b>TeamMate alpha released in App Store &amp; Play Store with wallet integration</b>
Q3 2018	<b>TMP pre-sale opened</b>
Q3 2018	<b>TMP Token Generation Event</b>
Q4 2018	<b>TeamMate PLUS &amp; PRO introduced</b>
Q4 2018	<b>TeamMate Network testnet launch</b>
Q1 2019	<b>TeamMate Network deployed</b>
Q1 2019	Deployment of first TeamMate Network bots
Q1 2019	Multi-chain integration - health data
Q1 2019	Secondary Token Reward Program
Q2 2019	Protocol upgrade
Q3 2019	Introduction of all variants of domain-specific AI
Q4 2019	Launch of full two-sided data marketplace
Q1 2020	<b>TeamMate Network expansion &amp; improvement</b>



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Any communications or inquiries relating to this Whitepaper should be referred to TeamMate INC as follows: TeamMate INC, 400 Derby Avenue, Suite 18, Oakland, CA, 94601 ATTN: Kristopher J. Floyd, CEO. Phone: 1 (210) 701-9695. Email: [floyd@teammate.ai](mailto:floyd@teammate.ai).