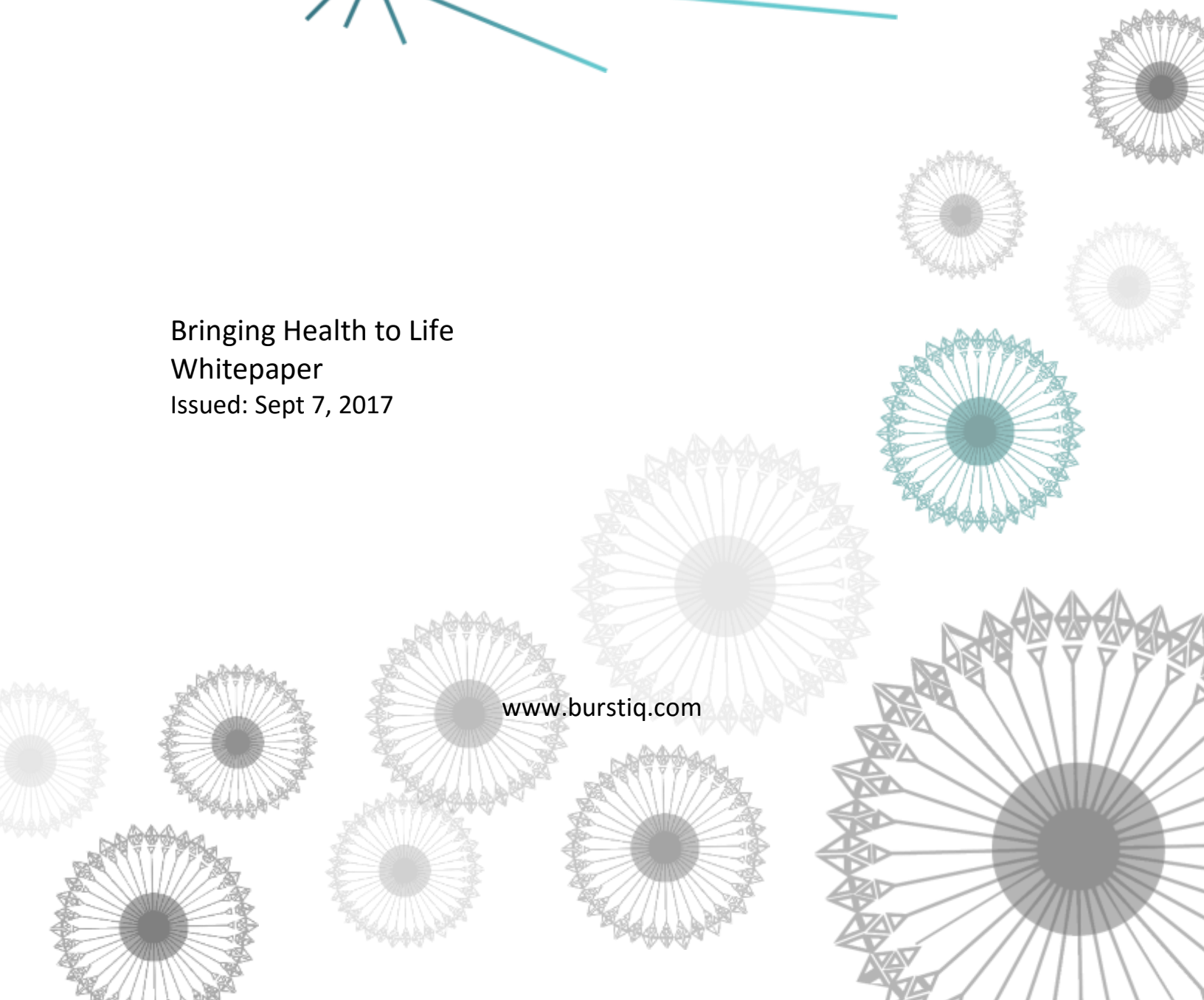




Bringing Health to Life  
Whitepaper  
Issued: Sept 7, 2017

[www.burstiq.com](http://www.burstiq.com)





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## EXECUTIVE SUMMARY

BurstIQ was founded in 2015 with the goal of solving three fundamental challenges in the healthcare industry:

- Health data lives in silos, with little or no integration to other data sources,
- HIPAA regulations, while valuable and necessary, make it extremely hard to efficiently combine and share data between people and organizations who need it or would greatly benefit from it, and
- People often have limited access to their own data, and it is often difficult to understand even if they can access it.

Given that the amount of health data generated by personal devices and the healthcare industry is expected to grow exponentially over the next five years, these challenges will become increasingly acute.

In the last two years, the BurstIQ platform has grown into a fully-operational platform, with sustainable revenue streams, multiple large business customers and hundreds of thousands of LifeGraphs™.

***In the first 12 months of operation, the BurstIQ platform processed 25 billion data points.***

The BurstIQ platform leverages blockchain and machine intelligence to enable data from disparate sources to be brought together in a single, unified data repository, and to be shared quickly and easily while still maintaining HIPAA compliance. However, the platform goes beyond a simple health information exchange (HIE) or personal health record (PHR). BurstIQ has built an ecosystem where individuals can fully manage their data: they can share it or use it in exchange for access to products and services they care about. A platform where:

- Individuals can access all of their health data in one place, and control who sees it and how they can use it.
- Providers can see a complete view of their patients' history, including out-of-network encounters, prescription fills, and lifestyle information, and can eliminate the administrative burden associated with medical record transfers.
- Health systems can create more powerful decision support systems using comprehensive data, AI and deep learning. Patient acquisition and retention can be through targeted marketing of service lines.
- Insurers and self-insured employers can create personalized wellness plans based on deep learning and machine intelligence, saving costs, improving outcomes and increasing productivity.
- Biotech & pharmaceutical companies can find participants with the best genomic, proteomic or medical profile for their clinical trials and interact with them directly,



eliminating administrative challenges and significantly reducing trial risk. In-market products can be specifically marketed to highly receptive audiences.

- Researchers can find and access the people and data they need to support their research, and collaborate with other researchers to explore new ideas.
- Digital health companies can increase the intelligence of their products with deep learning and AI. Products can be marketed directly to the most receptive audiences.

Access to comprehensive health data is becoming increasingly critical in the healthcare industry. It drives decision support systems, defines research and clinical trial cohort attributes, informs insurance plans, impacts reimbursements, and provides the foundation for many consumer-facing and B-to-B products and services. Data will be the currency of the coming Health Singularity, and BurstIQ will be the marketplace.



## THE HEALTH SINGULARITY

Over the last decade, society has witnessed an explosion of health-related technology, from personal health trackers, to low-cost whole genome sequencing, to population health management tools. Currently, data from these sources is largely siloed – viewed and analyzed separately or using only cursory integration with other data sources.

The convergence of these data sources, effective management of complex data rights and application of machine intelligence will usher in a new era of health. One in which healthcare is customized to the individual based on their own unique genomic, proteomic, medical, demographic, socioeconomic and social profile: their LifeGraph™. This is the true vision of person-centric health.

This is the Health Singularity.





## DATA DRIVES THE HEALTH SINGULARITY

Data about you, what you do, how you feel, where you live, what you eat is the driving force behind person-centric health. Corporations want to own it, researchers want to study it, and every day, companies are finding new ways to collect more of it. Hackers know it's valuable too; 1 in 4 security breaches are health-related, creating a multibillion dollar black market for health data and a multibillion dollar economic remediation burden for health providers. Yet, we as individuals can't get to it, often don't understand it, and can't control who uses it.

At BurstIQ, we believe it's time to change this. We believe people should own their data and should be able to decide who sees it, when they can see it, and what they can do with it. We believe that instead of corporations and hackers profiting from your data, you should be able to protect and profit from your data.

That's why we created the BurstIQ Platform - a purpose-built platform for the person-centric revolution. A platform for the Health Singularity.

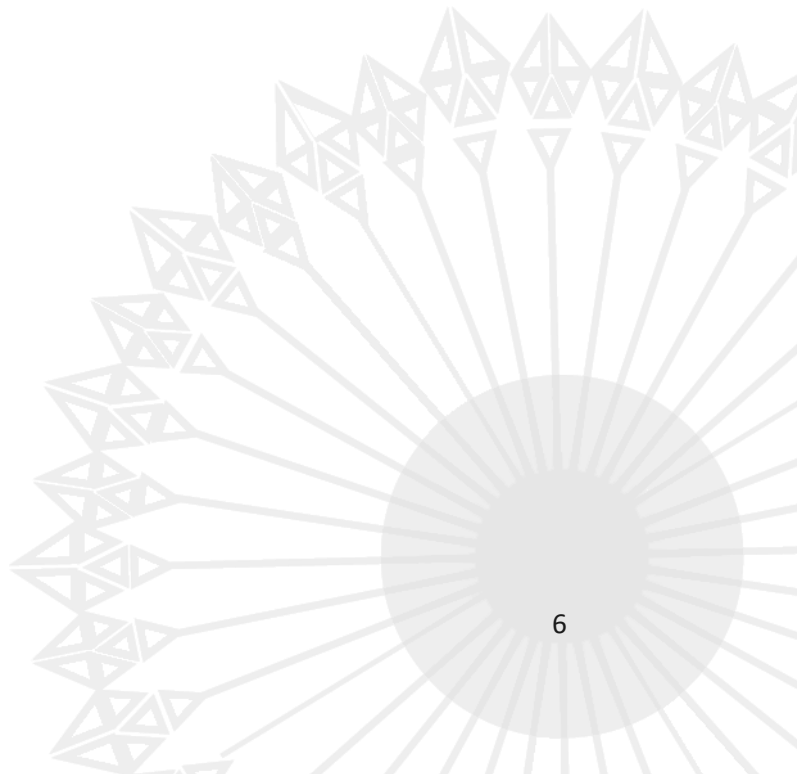
## OUR VALUES

At BurstIQ, we believe...

- ✓ You should own your data
- ✓ You should have access to all your data in one place
- ✓ You should have confidence that your data is safe
- ✓ You should be able to trust and understand your data
- ✓ You should be able to control who accesses your data
- ✓ You should be able to help society with your data

## OUR VISION

It's simple. Make the world a healthier place.





## OUR OBJECTIVES

### Empower people.

Establish a LifeGraph™ for everyone on the planet. Make it free, simple to access, easy to use and secure. Provide individuals with the power to own, understand, use, and share their health data.

### Expand health access.

Make the latest health advances accessible to everyone. Establish an open marketplace where new technologies, precision medicine services, clinical research studies and wellness benefits are available and intelligently tailored to individuals based on their LifeGraph™ profiles. Enable individuals to control what they see and enable solution providers to target the right audience at the right time.

### Engage care providers.

Make it easy to leverage the power of data to optimize clinical outcomes and business operations. Minimize the effort required to incorporate new technologies into practice and utilize advanced analytics to create personalized care plans, increase patient engagement and drive down the cost of care.

### Enable research and discovery.

Create a deep learning environment that continuously expands the knowledge of an individual to improve relevance and impact. Inspire new research, facilitate collaboration, and foster an environment of fast-paced learning. Enable researchers to connect directly with the right participants, reducing the cost and time-scale of both academic and commercial research.

### Establish the authoritative secure data record.

Provide the framework for individuals and organizations to create secure, authoritative, and verified data sets. Provide a data marketplace where data owners can donate or sell their data, and purchase other data, without compromising security or ownership rights.

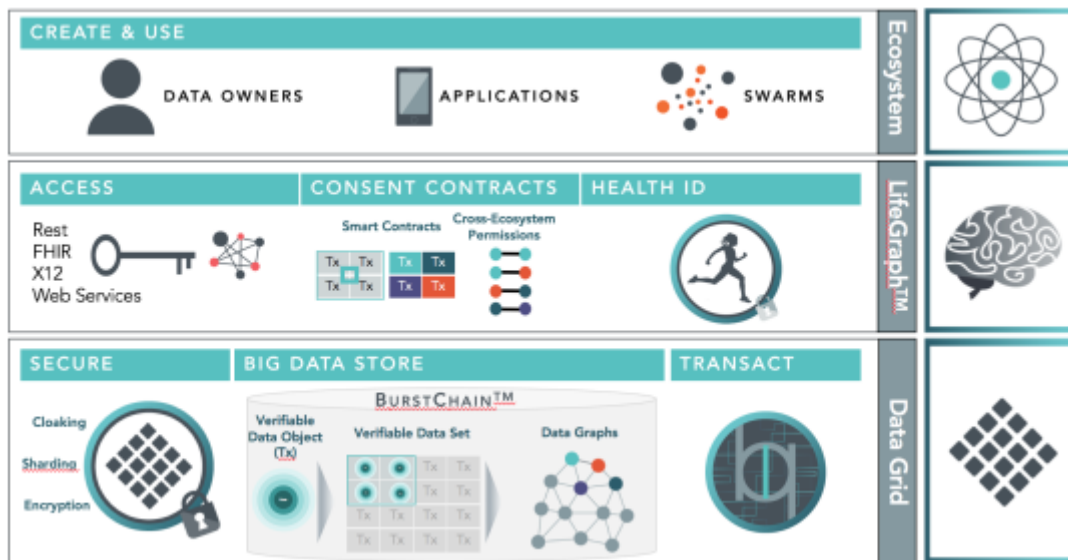


## THE BURSTIQ PLATFORM

The BurstIQ Platform stores, manages, transfers and analyzes large, complex data sets by combining three core capabilities:

- ✓ an innovative approach to securing data through extended blockchain constructs,
- ✓ complex data rights management using smart contracts and dynamic permissioning, and
- ✓ machine intelligence to empower continuous learning.

The platform consists of three distinct service levels: Secure Data Grid, LifeGraph™, and Ecosystem.



### Secure Data Grid

Securely managing, protecting, and sharing large, complex data sets cannot be done by simply exposing an interface to existing legacy systems. Such “data warehouse” models are unable to manage complex permissioning, secure and traceable data transfers, cross-system data integration, and a number of other essential functions.

A truly universal health data platform must provide end-to-end data rights management, secure data storage, an indisputable chain of custody and advanced security techniques for the data. Maintaining individual privacy throughout all levels of the platform is paramount.

BurstIQ’s Secure Data Grid addresses the specific data security, flexibility and cross-domain extensibility of a user’s data. This layer of the BurstIQ platform leverages blockchain, data cloaking, sharding and encryption services to securely manage data objects and stores. Data verification proofs are easy to share and direct access to data is easy to provide with the platform’s layered security access model. Data cloaking provides an additional layer of security that scatters and



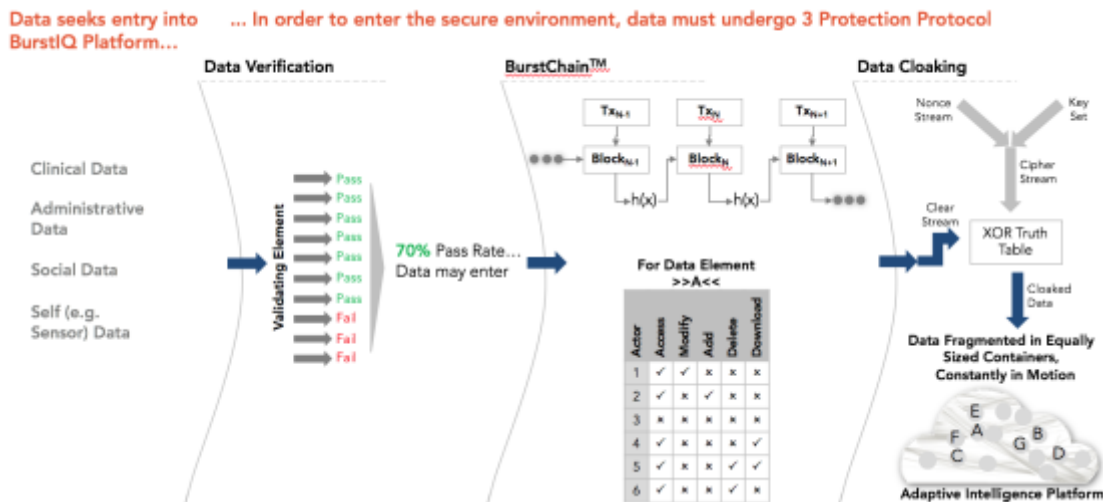


encrypts data packets across a nodal framework. The Secure Data Grid utilizes open source data management tools to ensure that data access is seamless and interoperable.

#### Security: Data Cloaking, Sharding and Encryption

Traditional blockchain does nothing to protect data; all data on the chain is open and transparent. In the healthcare context, this is a non-starter, as Protected Health Information (PHI) must be protected to comply with HIPAA requirements.

The BurstIQ Secure Data Grid is designed on the fundamental principle that data at rest is data at risk. It leverages cryptography and proprietary protection schemes to ensure that data is constantly in motion and encrypted at multiple layers throughout the environment. Individual shards are encrypted into secure data containers, and a multi-key management approach is used to protect against information loss and maintain strict access controls. Moreover, the platform's patent-pending approach enables permitted access to encrypted information without requiring the typical processing overhead associated with data-at-rest protection methods. Data cloaking allows varying levels of access to be provided across temporal and physical domains, supporting multiple secured communities of interest. These elements provide security and dynamic consent capability in one platform.



#### Scalability & Real-Time Analytics

Scaling within traditional blockchain is already experiencing issues. According to some experts, "its highest transaction throughput is effectively capped at maximum block size divided by block interval. ...Today's representative blockchain such as Bitcoin takes 10 min or longer to confirm transactions, achieves 7 transactions/sec maximum throughput."<sup>1</sup> This scaling challenge is driven by two factors. First, traditional blockchain requires a proof-of-work by untrusted nodes before a block is placed into the chain. This type of latency (on the scale of minutes) is an inhibitor to high-throughput data ingestion. Second, traditional blockchain data is stored as raw files on a disk.

<sup>1</sup> Croman, K., Decker, C., et. al. (2016). *On Scaling Decentralized Blockchains (A Position Paper)*. Retrieved from <http://fc16.ifca.ai/bitcoin/papers/CDE+16.pdf>.



While this approach is helpful for portability, it makes finding any one piece of data untenably slow. The only search mechanism that is natively available is a file system search for basic string (grep) matching; there is no support for complex Boolean algebra, set operations or GIS-based queries.

***The healthcare industry accounted for approximately 153 exabytes of data in 2013, and that number is expected to rise to 2,314 exabytes by 2020.<sup>2</sup>***

BurstIQ's proprietary BurstChain™ technology addresses both of these limitations. First, by replacing the traditional proof-of-work mechanism with a voting paradigm amongst trusted nodes and a consensus model at the persistence layer, latency is reduced to sub-second. The platform provides a frictionless data input and access layer that supports several interfaces (FHIR, HL7, XML, EDI, X12, JSON, CSV, XLSX and others) and has support for multiple transports (HTTPS, SFTP, Queue, Stream, WebSocket and others). Data can be received from multiple data sources (i.e. batch, streaming, IoT and others).

To address searchability, BurstChain™ includes an intelligent abstraction layer that supports various persistent data stores: a NoSQL-based blockchain protocol, industry standard blockchain protocols, Graph DB, traditional RDBMS, and NoSQL engines. This unique architecture allows for high-throughput scalability and near-real-time searchability, both of which are essential to support the large volumes of data generated by the healthcare industry.

***In the first 12 months of operation, the BurstIQ platform processed 25 billion data points.***

#### *Immutability & Auditability*

Traditional databases have no native capability to preserve changes over time to a set of data. Techniques have been developed to provide a historical view, but none have leveraged blockchain's immutable journal and provability.

BurstChain™ is a permissioned blockchain that ensures immutability and auditability through on-chain smart contracts, timer-based events, and on-chain analytics. Smart contracts can be written with the intent of creating new assets, transferring assets, and updating assets. When a data owner updates their asset, the platform is able to preserve the traceability of the change and allow only the current version to be used within the platform. This allows the platform to perform

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<sup>2</sup> No Author. (2014). *The Digital Universe Driving Data Growth in Healthcare* [industry brief]. Retrieved from <https://www.emc.com/analyst-report/digital-universe-healthcare-vertical-report-ar.pdf>.

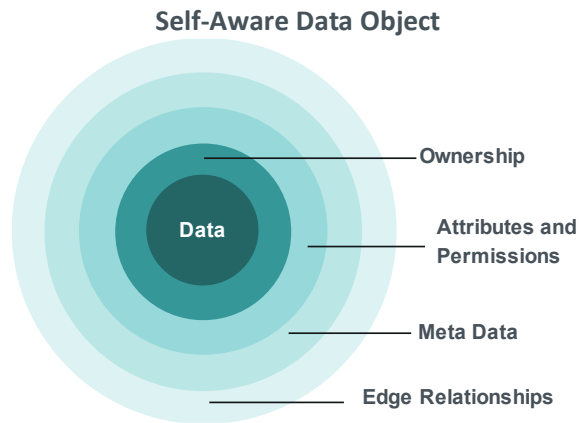


two essential functions: update an asset without violating immutability, and provide an audited transaction trail of an asset.

#### Data Rights Management / Ownership

Within the BurstIQ platform, ownership of assets is strictly enforced. Data is only available through implicit access via ownership definitions at the data object level or explicit access via owner-created Consent Contract(s).

To achieve this, BurstChain™ utilizes Verified data elements built upon a Self-Aware Data Object model. The self-aware data object model couples the core data with ownership and use profiles that drive data relationships. Utilizing this approach enables the BurstChain™ to grant implicit access and rights to the data elements through data element itself rather than through a table or database.



These features, from the security mechanisms, to Big Data scaling and analytics, to immutability and auditability, to advanced data rights management, all position the BurstIQ Secure Data Grid as the only solution that meets the unique needs of the healthcare industry.

<b>SECURITY</b>	Immutability	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Data Cloaking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Data Privacy	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>SCALE</b>	High Throughput (Horizontal Scaling)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Low Latency	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	High Capacity	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>ANALYTICS</b>	Basic Queries	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Complex Queries	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Schema on Read	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>ACCESS</b>	Complex Data Consent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Escrow Based Asset Transfer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Create and Transfer Assets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



## LifeGraph™

The LifeGraph™ sits at the heart of the BurstIQ platform. The average American adult has, on average, 16 doctors over their lifetime, and data from these and other health interactions is spread over a myriad of different, non-coordinated systems<sup>3</sup>. This is the core challenge that BurstIQ seeks to solve. Therefore, it is fundamental to the BurstIQ platform that users are able to construct and manage data across different domains.

Managing data sets across different domains is enabled through BurstIQ's Consent Contracts. Consent Contracts are built on the principle that most people want their medical and other health information to be private and secure, and that we want to control other's access to our information. Consent Contracts give individuals the ability to control their health information and sets rules regarding who can access their information.

At a structural level, LifeGraphs™ are built using a machine learning capability that creates a relational map of authenticated data objects (i.e., an individual's health data). Data use permissions, security, and value attributes are embedded into each data object. Consent Contracts provide the mechanism for overall data rights management, enforcement, and security for individual data elements and data collections. A comprehensive API and management interface allows data owners to create and manage Consent Contracts.

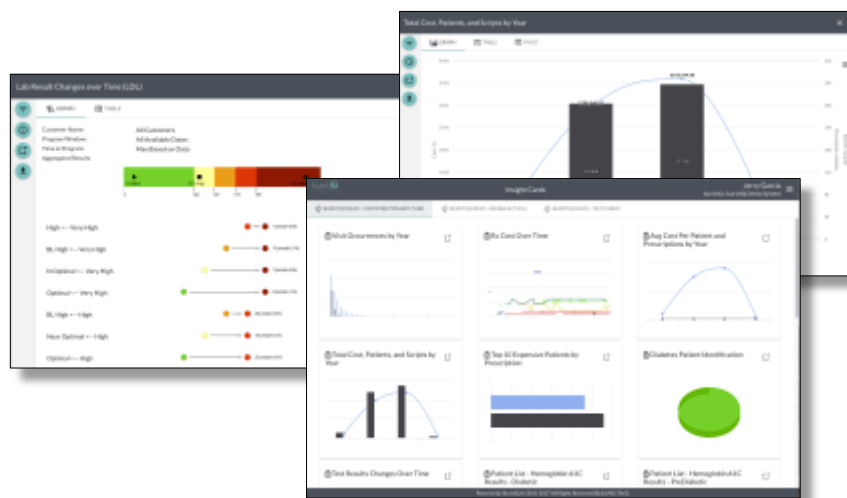
The platform's ownership and Consent Contracts structure requires a strong mechanism for creating and managing individual identity. To meet this need, the BurstIQ platform creates a unique Health Identity for each person; this identifies and protects an individual's identity across multiple repositories.

## Ecosystem

The BurstIQ platform includes a purpose-built platform service layer to facilitate development of third party products and services that leverage the underlying data and technology. These service layer solutions can be highly diverse, from deep learning tools to business analytics to chain of custody management to clinical research solutions. Solutions can range in complexity from a data processing engine to a fully formed front-end UI that provides a full stack application using the platform protocols. Organizations and individuals can partner with each other and with data owners to create new business opportunities, design new care models, test research hypotheses, and optimize business operations. Together, these partnerships and solutions define the Ecosystem.

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<sup>3</sup> <https://medium.com/mit-media-lab-digital-currency-initiative/medrec-electronic-medical-records-on-the-blockchain-c2d7e1bc7d09>



Application developers can build directly on the Platform using a variety of protocols (e.g., REST, FHIR, SDK, CLI, etc.). Applications can make direct use of the Verified data elements in accordance with the Consent Contracts and the underlying data rights. Each solution provider is able to define the business model for licensing or reselling their application to other entities without dealing with the complex implementation issues of platforms, databases, connectivity, etc. For individuals whose health data is held in the platform, access to and control of their own data will always be free. People can have confidence that the ownership and access rights they define are always enforced.

With this foundation in place, BurstIQ is uniquely situated to support the broader theory of collaborative intelligence. By leveraging the combination of our distributed architecture, advanced data security, and machine intelligence, we are able to create dynamic intelligent data APIs that can drive deep learning and artificial intelligence solutions. This results in a distributed learning environment where individual actors contribute specific insights but collectively produce a highly intelligent “swarm.”

***BurstIQ was recently identified as one of the top Artificial Intelligence (AI) companies in Health by CBInsights.<sup>4</sup>***

The BurstIQ platform provides the technological foundation to dramatically reduce barriers to assemble, evaluate, and analyze data for millions of individuals over long periods of time. To accomplish this required not only a new approach to store data, but a variety of complex algorithms that enable privacy, security, and ownership. The platform enables and drives a marketplace where individuals, organizations and researchers can buy data, sell data, create new business opportunities, test research ideas, optimize business operations, and collaborate using large, complex health data sets that are protected and secure.

<sup>4</sup> <https://www.cbinsights.com/blog/artificial-intelligence-startups-healthcare/>



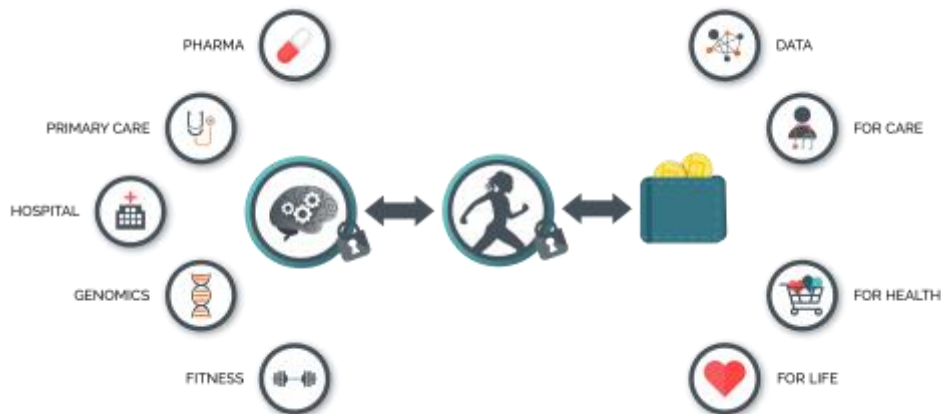
## USE CASES

### Use Case 1: Putting you in control of your data.

The BurstIQ platform enables you to access and control your own health data. This includes not just medical (EMR) data, but genetic / molecular diagnostic data, behavioral health data, pharmacy data, fitness device data, nutrition data, etc. The platform allows this data to be combined with other data sources such as behavioral, socioeconomic, and environmental data to provide you with an end-to-end picture of your health. All of this data becomes the basis for your HealthWallet™: a single view into all of the data that relates to you, and the ability to share, sell or use this data as you see fit.

At a basic level, you can use your HealthWallet™ to share your medical history with care providers you interact with. For example, when you switch to a new primary care provider, you can grant that provider access to your entire medical history quickly and seamlessly, even if that medical history includes data from previous primary care providers in two separate practices, your private practice dermatologist, your local pharmacy and the ER that you visited three years ago.

However, the possibilities extend far beyond medical record sharing. Solution providers may develop applications in the BurstIQ Ecosystem that use your data to provide you with: insights into your risk of developing certain diseases, intelligent lifestyle coaching, social networking with other individuals with similar health conditions, personalized health benefits, clinical trials that are of interest to you, etc. The possible applications are endless. If and how you choose to share your data with these solution providers, and who pays who for these services, is up to you.





## Use Case 2: A marketplace for accessing cutting-edge treatments.

The BurstIQ platform enables companies to reach the right customer at the right time. For example, a company may offer a Precision Medicine test that identifies markers for the development of ovarian cancer. They may want to market this test to women who have a family history of ovarian cancer. Using the BurstIQ platform, the company can directly reach individuals who fit this profile and who are interested in receiving information about cancer testing. This significantly increases conversion rates, reduces marketing overhead, and increases the ROI of the product as it reaches the customers who need it most.

As the marketplace grows, the opportunity to bundle complementary products and services allows companies to build incremental value, increase their reach and drive sales through bundling and co-marketing partnerships with other solution providers in the BurstIQ Ecosystem.

For individuals, the marketplace offers access to the latest cutting-edge products and services – tailored just for them based on the data they make available.

Together with our partners, BurstIQ is already proving the value of this model. BurstIQ has created a distribution and delivery model for physician-prescribed precision medicine (PM) testing, offered as part of employee wellness plans. The PM test is bundled with a comprehensive employee benefits package that includes telehealth consults, additional lab panels, and the creation of an individual HealthWallet™ to provide long term access to the test results.







### Use Case 3: Driving the Triple Aim for healthcare systems.

The volume and distribution of data generated by the healthcare industry, and its increasing importance in driving care and operational decisions, is forcing healthcare systems to rethink who they are, and to transition to a more data-centric mindset.

The BurstIQ platform is purpose-built to support this transition. Providers can send and receive patient records with immediate transfer of the data – eliminating administrative overhead and reducing lag time. Records can be automatically shared across a distributed enterprise or affiliated networks. Because the platform underlies existing systems, it is invisible to providers – no ramp up time, training, or workflow changes are required. This enables providers to see a more comprehensive view of their patient and informs both point-of-care decisions and decision support tools.

The platform's Ecosystem layer allows health systems to develop an application layer that replaces multiple siloed systems – performance improvement tools, analytics / BI, patient portals, CRM systems, pharmacy management, CTMS, patient education tools, etc. – all built on a single API and leveraging a unified data source. This significantly reduces both licensing costs and internal IT overhead.

However, the platform goes beyond IT enablement. The BurstIQ marketplace allows health systems to offer targeted treatments to managed care populations and understand whether these treatments have a positive outcome: cost ROI. In addition, the marketplace enables healthcare systems to market research opportunities and specialty service lines to targeted audiences – driving patient acquisition and retention.

All of this drives patient satisfaction, improved clinical outcomes, higher quality scores, lower cost, increased market share and positive brand recognition.



REDUCE COSTS



IMPROVE OUTCOMES



DRIVE QUALITY





#### Use Case 4: Targeted research and discovery.

The BurstIQ platform provides the ability for researchers to create an initiative, solicit funding, intelligently identify potential participants and solicit their participation without compromising the individual's anonymity. In addition to reducing administrative burden, the platform allows researchers to extend their research into underrepresented geographies and populations, build large-scale research cohorts that not previously been possible, find and collaborate with researchers working on complementary studies, and share all or part of their results without compromising intellectual property ownership.

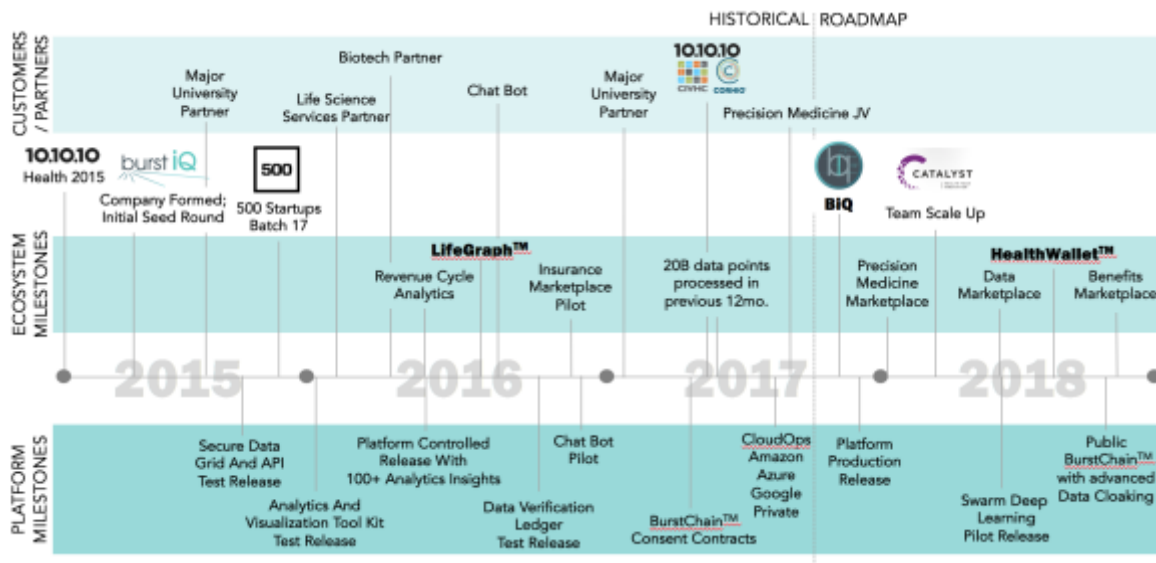
Similarly, commercial biopharma companies can use the platform to reach potential clinical trial participants, targeting their recruitment efforts to individuals who fit a certain medical history or genomic profile. This significantly reduces the time and effort required for participant recruitment, reduces the dependency on health systems as intermediaries in recruitment, enables longitudinal tracking of participants, and most importantly, reduces risk and increases efficacy of trials by tailoring participation to specific health or genomic profiles.

Equally importantly, individuals have become more engaged in healthcare and health research, more connected and organized through social media, and more proactive in seeking better treatment options and cures for themselves and the people they love. The BurstIQ platform enables the creation of new communities of individuals who have a desire to connect with others that share a similar condition, learn about treatment options, share their experiences, and participate in research. For example, individuals can browse the BurstIQ marketplace and request to participate in a research initiative or patient community. Additionally, individuals have the option to donate or sell their data to a research initiative or population data repository.





## BUSINESS & TECHNICAL ROADMAP



## LEADERSHIP TEAM

### Core Team



#### Frank Ricotta

CEO, Founder

Frank is an accomplished CEO and Impact Entrepreneur with over 30+ years of experience empowering people, building companies, and creating innovative solutions. Frank founded BurstIQ with the mission of making the world a healthier place, one connection at a time. Frank's achievements span multiple industries, including Defense, Health Care, Cyber Security, and Finance. He holds numerous patents in fields of cyber security and machine intelligence. Frank served in the U.S. Air Force and holds a B.S. in Computer Science from the United States Air Force Academy and a MBA from St. Mary's University.



#### Brian Jackson

Operations, Co-Founder

Brian has played a key role in the development of the BurstIQ platform, and leads network engineering and technical operations for the company. An expert in security and enterprise cloud infrastructure platforms, Brian has been published in numerous works and has mentored large-scale Engineering, DevOps, and Development teams. Prior to joining BurstIQ, Brian led Cloud Engineering for an enterprise healthcare solution provider and provided consulting



expertise to numerous Fortune 500 companies. Brian has a B.S. in Information Technology from Kansas State University.



**Tyson Henry**

**Data Science**

Tyson has developed many of the key technological advances for the BurstIQ platform. He specializes in cryptology, blockchain, high-performant data services (multi-threaded and distributed coordinating nodes) and data analytics and visualization. His products and services span various industry verticals, including Air Force Space Weather Forecasting Center, Air Force Research Labs (AFRL), Health Care, Telecommunications, Broadband/Cable, and Financial. Prior to joining BurstIQ, he led data analytics for Recondo Technology. Tyson has a B.S. in Computer Science from the University of Colorado, Colorado Springs.



**Jeff Webb**

**Platform Architecture**

Jeff is a full stack architect and software engineer with more than 20 years of programming and application development experience. He is well-versed in multiple languages and has advanced skills in blockchain architecture and cloud and enterprise application development and architecture. Jeff has a deep understanding of cryptographic technologies and holds a patent for using client certificates to communicate trusted information. Prior to joining BurstIQ, Jeff led cloud architecture engineering for Blackhawk Networks and led web, API, and data analytics projects in the telecommunications, software, energy, and financial services sectors. Jeff has a B.S. in Computer Science and Engineering from the University of Colorado, Denver.



**Brian Huber**

**Web Development**

As the lead developer for BurstIQ's custom user interfaces, Brian plays a central role in the user experience and development of the platform UI. Brian brings a broad-ranging skill set, including full stack web development, graphic design, user experience, product management and systems support. Before transitioning to web development, Brian developed, managed and launched financial accounting software and analytics engines. Brian holds a B.S. in Business Administration, Finance and International Business from Colorado State University.



**Amber Hartley**

**Corporate Development**

Amber oversees corporate development and marketing activities across BurstIQ's markets. With almost 20 years' experience managing strategy and partnerships across the healthcare, technology and biotechnology industries, Amber brings a unique understanding of how to optimize interactions between these industries. Prior to joining BurstIQ, Amber led operations and strategy for the CHI Institute for Research and Innovation, and held business development, licensing and research positions in the technology and biotechnology sectors. Amber has a B.S. in Animal Physiology & Neuroscience from University of California at San Diego and a Master of Biotechnology from San Jose State University.



**Dallas Haselhorst**

**Security**

Dallas oversees BurstIQ's overall security vision and strategy as well as compliance and regulations relating to the platform. An expert in security and enterprise cloud infrastructure platforms, Dallas has performed enterprise consulting in healthcare, financial, and other critical infrastructures. Dallas has several security certifications including CISSP, GSEC, GCIA, GCCC, GCPM, GPEN, GMON, and GCIA. Dallas has a B.S. in Information Networking & Telecommunications, a B.A. in Computer Information Systems and will receive his M.S. in Information Security Engineering from STI/SANS in 2018.



**Mike Gionfriddo**

**Strategy**

As Chief Strategy Officer, Mike plays a key role in defining BurstIQ's technical and product development strategy. Prior to joining Burst IQ, Mike was CTO for Blackhawk Networks, where he led the growth of the company to a \$2B market cap. Mike's experience spans multiple industries including FinTech, Energy, Media, and Technology. Mike was awarded the Distinguished Engineer title at Sun Microsystems, holds multiple patents, and has authored numerous publications. Mike holds a B.S. from Carnegie-Mellon in Mathematics and Computer Science.



**Ben Yablon**

**Compliance**

Ben oversees BurstIQ's regulatory and compliance activities and is the Chief Strategy Officer at Salt Lending. He has fifteen years of legal expertise centered on emerging financial technology platforms and regulatory compliance as a partner at Atlas Law Group. Benjamin holds a Bachelor's degree in History and English from Saint Lawrence University and earned his Doctor of Jurisprudence from the University of Denver Sturm College of Law. He is a published author and a frequent speaker on emerging technology.



## Advisors



**Bill Miller**  
Managing Partner,  
PV Ventures  
Board of Directors



**Aaron Stachel**  
Principal, PV Ventures  
Board of Directors



**Mike Biselli**  
President, Catalyst HTI  
CEO, Amplify Labs  
Advisory Board Chair



**Zackary Lewis**  
Founder & CEO,  
Say Allo



**Mark Hughes**  
Investor



**Tom Base**  
Managing Director -  
Healthcare,  
Boomtown Accelerator



**Jay Allen**  
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